Management Opposition, Strikes and Union Threat

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Unions are not particularly popular...

...at least not among employers.

- Spying
- Threatening
- Firing
- Establishment closure
- Outsourcing
- Discrimination in terms of wages, promotions or other working conditions.

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Germany's industrial relations system

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Legal separation of union voice and wage bargaining

- Works councils provide a voice at the firm level.
- Unions bargain for wages and working conditions.

Germany's IR system is eroding.

- This is true for all dimensions of the IR system.
- Union density has fallen in almost every country.
- There are several explanations for this decline.

● Union Membership	◆ Works Councils
▲ Collective Agreements	■ Employers' Organisation'
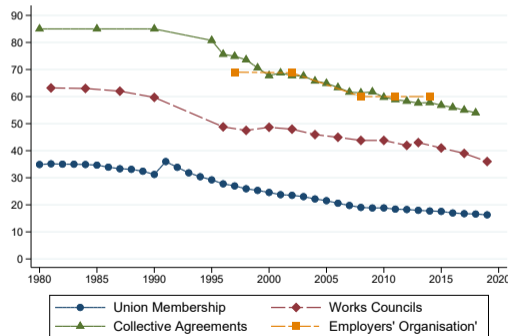
Source: J. Visser, ICTWSS Data base. version 6.0. Amsterdam: Amsterdam Institute for Advanced Labour Studies AIAS. November 2019.

Questions and Empirical Strategy

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Research Questions:

- Is there hiring discrimination against union members in Germany?
- How is hiring discrimination related to Germany's industrial relations system?

Empirical Strategy:

- Correspondence experiment sending 13000 fictitious job applications.
- Merge data of the German Socio-Economic Panel and of the Federal Employment Agency.
- Exploit regional and sectoral variation of labor disputes.

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In a nutshell

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Is there hiring discrimination against union members in Germany?

- Union membership decreases callbacks on average by 15% (up to 50%).
- These results are robust independent of the way information are provided (CV & social media).

How is hiring discrimination related to Germany's industrial relations system?

- Hiring discrimination: ↑ with firm size, ↑ with union density and ↑ with labor dispute exposure.
- The industrial relations system is mainly eroding where management opposition is low and unions no longer have threat potential.

What do we know already?

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Unfair treatment of union members has been a topic for a while.

Unions organizing

- E.g., Bronfenbrenner (1997), Behrens (2009), Aleks (2015), McNicholas et al. (2019), Heery and Simms (2010), Dinlersoz et al. (2014)

Management opposition

- E.g., Lawler and West (1985), Cooice (1985), Freeman and Kleiner (1990), Gall (2004), Behrens and Dribbusch (2018), Weinberg (2018), Wang and Young (2022), Kallas et al. (2023)

Hiring discrimination

- E.g., Leap et al. (1990), Saltzman (1995), Baert and Omey (2015), Kreisberg and Wilmers (2021)

But how representative are these observations?

Challenges to Measure the True Extent of Opposition

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Limitations of previous literature

- Potential bias due to survey demand effects and social desirability.
- Organizing literature: Faces selection issues (organizing is not random).
- Management opposition literature: biased due to selective measurement (unobservables).

This leads to difficulties in the quantification of overall opposition in an economy.

Correspondence experiments as a potential solution.

- Baert and Omey (2015) send 560 fictitious job applications in Belgium. (**Find Discrimination**)
- Kreisberg and Wilmers (2021) send 1025 fictitious job applications in the US. (**No Discrimination**)

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Experiment 1

Revealing Union Membership in the CV

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Design of the Experiment

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The basic idea is...

- Send pairs of fictitious job applications to real vacancies.
- Monitor the callback rates of firms.

With low equal costs of opposition for all firms, we should be able to quantify the overall extent of opposition.

The experiment was carried out between August and October 2017, 2018 and 2019.

The main sample consists of 8714 applications (4357 firms).

Table: Overview of the Experimental Design

Regions	2017	2018	2019	Occupations	2017	2018	2019
Berlin	X	X	X	Office Clerk	X	X	X
North Rhine-Westphalia	X	X	X	Hotel Manager	X	X	X
Hamburg	X	X	X	Logistic Worker	X	X	X
Bavaria	X	X	X	Sales Manager	X	X	X
Saxony		X	X	Mechatronic Technician		X	X
Baden-Wurttemberg		X	X				

The Design of the Applications

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The applicant

- Male applicants (27 to 28 years old)
- 10 years of work experience.
- With vocational training.

Application aspects

- Two applications were sent to each firm.
- Comparison with real applications.
- Randomized **union membership** (0/1)

Example resume ▶ Figure

Example Resume

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Example Resume

Random assigned
Union Membership

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Experimental Results I

Is there Hiring Discrimination against Union Members?

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First Results

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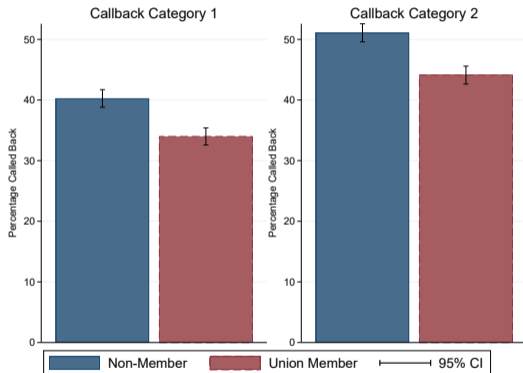
Callback Category 1 when it is a clear invitation to a job interview.
Callback Category 2 when firms asked for further information.

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Multivariate Results

Focus on a linear probability model.

$$Callback_{it} = \beta_0 + \tau Union + \mathbf{X}'_{it}\beta + \epsilon_i \qquad (1)$$

● Callbacks 1   ◆ Callbacks 2

Robustness Checks

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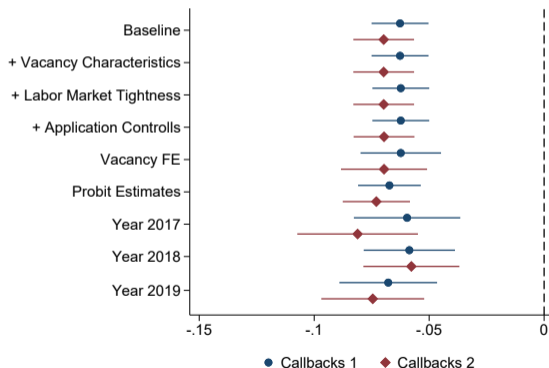
Heckman critique ▸ Results

- Differences in unobservables could bias experiments on hiring discrimination.
- Applying the Neumark Correction reveals no bias.

Weighting ▸ Results

- Raw experimental data could give a wrong picture of management opposition.
- Limited differences in outcomes. (Small downward bias.)

Alternative signaling

- Revealing a union membership in a CV might be a misleading signal. (Readiness for conflicts or simple naivety?)
- New experiment reveals union membership via a Twitter account.

Experiment 2

Revealing Union Sympathy via Social Media Accounts

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Design of the Experiment

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Baseline:

- Standard application. (N = 579)

Treatments:

- Union membership in CV. (N = 571)
- Email signature with Twitter Account. (N = 1696)
- Email signature with Twitter Account revealing a pro-union sentiment. (N = 1685)

Table: Overview of the Experimental Design

Regions	2017	2018	2019	2021	Occupations	2017	2018	2019	2021
Berlin	X	X	X	X	Office Clerk	X	X	X	X
North Rhine-Westphalia	X	X	X	X	Hotel Manager	X	X	X	
Hamburg	X	X	X	X	Logistic Worker	X	X	X	
Bavaria	X	X	X	X	Sales Manager	X	X	X	
Saxony		X	X	X	Mechatronic Technician		X	X	
Baden-Wurttemberg		X	X	X					

The Twitter Accounts

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Account Creation

- The Twitter accounts were created and active for 13 months before the begin of the experiment.

Account Activities

- Both Twitter accounts liked and retweeted news and content related to hobbies.
- The pro-union account regularly liked and retweeted from union accounts.

Table: Twitter Activity Schedule

	Monday	Tuesday	Work Week Wednesday	Thursday	Friday	Weekend Saturday	Sunday
Breakfast			9:00 to 9:15 AM				
Lunch			12:00 to 12:30 PM				
End of Work			After 5:00 PM				

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Experimental Results II

Is there Hiring Discrimination against Union Members when we reveal a
Pro-Union Sentiment via Twitter Accounts?

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Results - Social Media Accounts

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$$Callback_i = \beta_0 + \beta_1 Union_{CV} + \beta_2 Union_{Twitter} + \beta_3 Twitter + \mathbf{X}'_{it}\beta + \epsilon_i \quad (2)$$

► Table

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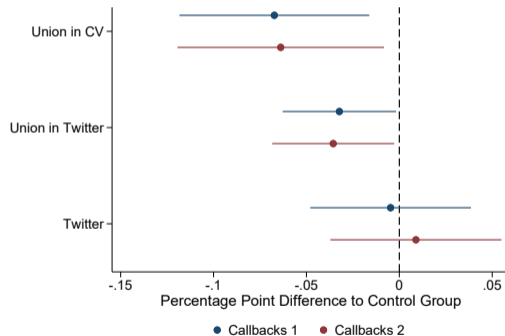
Experimental Results III

How is Hiring Discrimination related to Germany's Industrial Relation System?

1. Where do we observe hiring discrimination?
2. Do labor disputes affect discrimination?
3. How is it related to collective agreements?

Sector Specific Management Opposition

Strong variation of management opposition between sectors.

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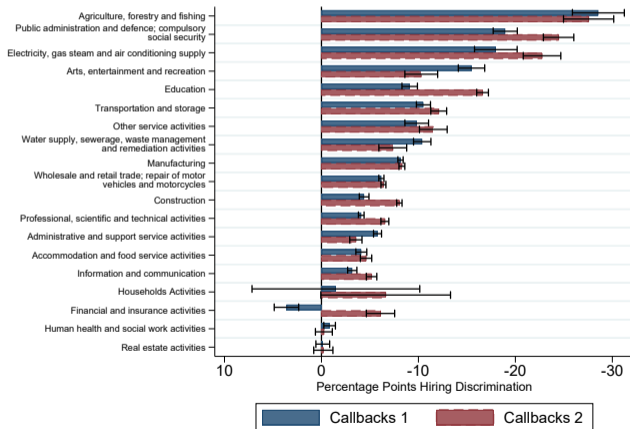
- What explains this variation?
- How is this linked to the industrial relations?

Union Threat

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Union Threat is...

...the threat of the potential unionization of a firm and potential improvements in wages and working conditions.

Union threat is commonly approximated by variables of unions bargaining power such as...

- ...Union density.
- ...Firm size.

A common reaction to the union threat is to improve wages and working conditions.

Potential Determinants I

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Firm size

- Taken from vacancy information.

Contract type

- Taken from vacancy information.

Labor market tightness

- $\frac{Vacancies}{Unemployed} Ratio$ based on data of the Federal Employment Agency.

Sector specific union density

- $\frac{Union\ Members}{Sector\ Employees}$ based on the German Socio-Economic Panel.

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Potential Determinants II

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Table: Potential Determinants

	(1)	(2)	(3)	(4)	(5)	(6)
Union	−0.0745***	−0.0756***	−0.0353***	−0.0369***	−0.0496***	−0.0473***
	(0.0099)	(0.0104)	(0.0122)	(0.0128)	(0.0141)	(0.0150)
Firm Characteristics						
Union × Collective Agreement	0.0350**	0.0367**			0.0330**	0.0339**
	(0.0164)	(0.0171)			(0.0164)	(0.0171)
Union × Temporary Contract	0.0015	−0.0155			−0.0008	−0.0163
	(0.0159)	(0.0171)			(0.0160)	(0.0172)
Firm Size (Reference Category: 6 to 50 Employees)						
Union × Smaller 6 Employees	0.0374**	0.0515**			0.0342*	0.0482**
	(0.0189)	(0.0202)			(0.0189)	(0.0203)
Union × 51 to 500 Employees	0.0059	−0.0022			0.0110	0.0030
	(0.0146)	(0.0156)			(0.0149)	(0.0158)
Union × Larger 500 Employees	−0.0361	−0.0704**			−0.0297	−0.0643**
	(0.0299)	(0.0320)			(0.0302)	(0.0322)
Labor Market Conditions						
Union × Union Density			−0.2332***	−0.2804***	−0.2197**	−0.2498***
			(0.0880)	(0.0933)	(0.0899)	(0.0945)
Union × V/U Ratio Normalized			−0.0017	0.0083	0.0014	0.0076
			(0.0063)	(0.0063)	(0.0062)	(0.0063)
Observations	8714	8714	8714	8714	8714	8714
Adjusted R^2	0.068	0.075	0.069	0.077	0.070	0.077

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

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General Threat or Actual Disputes?
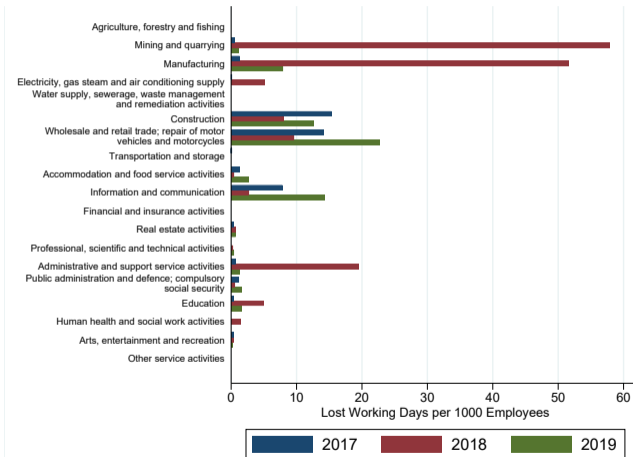
Notes: *Days not worked due to industrial action (per 1000 employees).*
Source: *Statistics of the Federal Employment Agency; Own Calculations.*

Effect of Strike Intensity on Hiring Discrimination

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Table: Strikes effects on hiring discrimination

	Sector Variation		State and Sector Variation	
	(1)	(2)	(3)	(4)
Union	−0.0582***	−0.0646***	−0.0573***	−0.0655***
	(-8.57)	(-8.13)	(-10.02)	(-8.28)
Lost Working Days per 1000 Employees (Sec)	-0.0006	-0.0005		
	(-1.42)	(-1.23)		
Union × Lost Working Days per 1000 Employees (Sec)	-0.0005	-0.0005		
	(-1.54)	(-1.27)		
Lost Working Days per 1000 Employees (Sec State)			−0.0006**	-0.0005
			(-2.48)	(-1.47)
Union × Lost Working Days per 1000 Employees (Sec State)			−0.0006*	-0.0005
			(-1.67)	(-1.45)
Callback Rate Control Group	0.403	0.511	0.403	0.511
Observations	8714	8714	8714	8714
Adjusted R^2	0.075	0.086	0.075	0.086
Dependent Variables				
Basic Callbacks		✓		✓
Strict Callbacks	✓		✓	
Controls				
Baseline Controls	✓	✓	✓	✓

$* \ p < 0.1$, $** \ p < 0.05$, $*** \ p < 0.01$.

External Validity

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Hiring Discrimination is stronger in sectors, with a high coverage of collective agreement, but not in firms with a collective agreement.
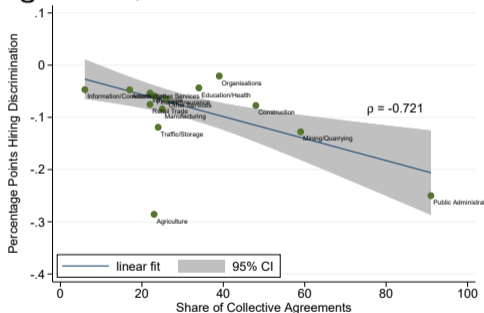

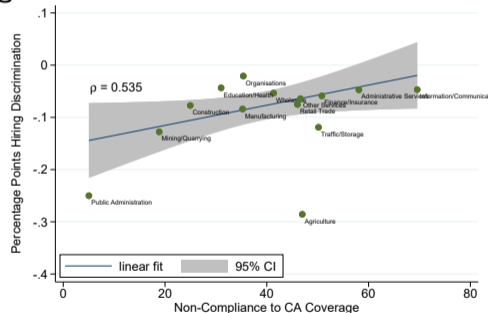Figure: Share of Collective Agreements

Figure: Share no orientation on Collective Agreements

Notes: Based on Callback Category 2; Collective agreement coverage of firms based on calculations of the IAB Firm-Panel for 2018 by Ellguth and Kohaut (2019).

Conclusion

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Is there hiring discrimination against union members in Germany?

- Union membership decreases callbacks on average by 15% (up to 50%).
- These results are robust independent of the way information are provided (CV & social media).

How is hiring discrimination related to Germany's industrial relations system?

- Hiring discrimination: ↑ with firm size, ↑ with union density and ↑ with labor dispute exposure.
- The industrial relations system is mainly eroding where management opposition is low and unions no longer have threat potential.

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THANK YOU FOR YOUR ATTENTION!

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🌐 https://sites.google.com/site/patricknuess

Appendix Overview

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Robustness Checks

- Difference in Reservation Wages ▸ Results
- Heckman Critique ▸ Results
- Weighting Sensitivity ▸ Results
- Social Media Experiment ▸ Results
- Firm Size Effect ▸ Results

Other Aspects

- Application Example ▸ Results
- Sectoral Growth ▸ Results
- WSI Works Council Survey ▸ Results
- Labor Market Conditions ▸ Results

Follow-Up Experiment

- Outlook Follow-Up Experiment ▸ Results

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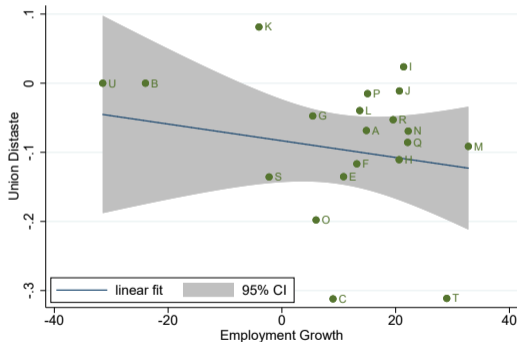

**Random assigned
Union Membership**

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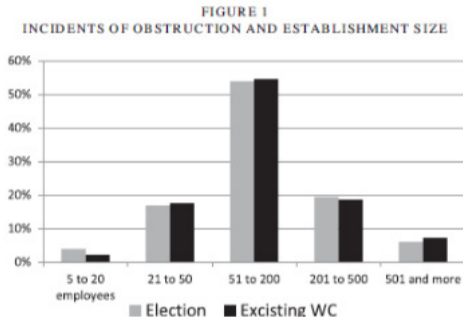**Could Management Opposition be the result of sectoral growth?**

- No

Appendix 3 - Relevance of Works Councils ▶ Back to Appendix

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FIGURE 1
INCIDENTS OF OBSTRUCTION AND ESTABLISHMENT SIZE

Source: Second WSI survey on management hostility towards works councils (2015).

- Management opposition against unions increases with firm size.
- Opposition against works councils does not (Behrens and Dribbusch, 2018).

Appendix 3 - Relevance of Works Councils ▶ Back to Appendix

Table: Employers Opposition to Works Council Rights

	Participation (1)	Restricted Information Access (2)	Any (3)
Constant	0.3911***	0.1550***	0.4351***
	(0.0673)	(0.0535)	(0.0667)
Collective Agreement	−0.0871***	−0.0576***	−0.0892***
	(0.0171)	(0.0137)	(0.0170)
Firm Size (Reference Category: Smaller 20 Employees)			
20 to 49 Employees	0.0335	-0.0107	0.0181
	(0.0643)	(0.0520)	(0.0638)
50 to 499 Employees	0.0902	-0.0076	0.0668
	(0.0619)	(0.0500)	(0.0614)
Larger 499 Employees	0.0474	-0.0265	0.0331
	(0.0646)	(0.0519)	(0.0641)
Union Density	−0.1146**	−0.1407***	−0.1272***
	(0.0462)	(0.0350)	(0.0460)
Union Density of the Works Council	0.1961***	0.1283***	0.1965***
	(0.0309)	(0.0243)	(0.0308)
Observations	3666	3666	3666
Adjusted R^2	0.032	0.014	0.030
Controls			
Sectoral FE	✓	✓	✓

$*$ $p < 0.1$, $**$ $p < 0.05$, $***$ $p < 0.01$.
WSI Works Council Survey 2015.

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Appendix 4 - Labor Market Conditions ▶ Back to Appendix

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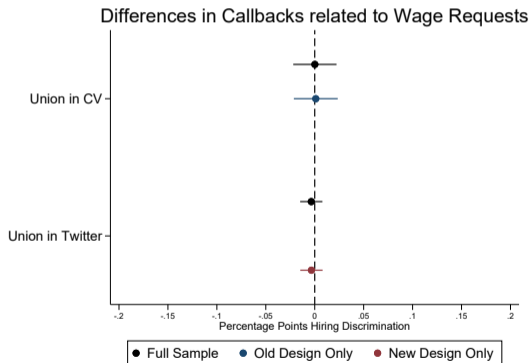Christian-Albrechts-Universität zu Kiel
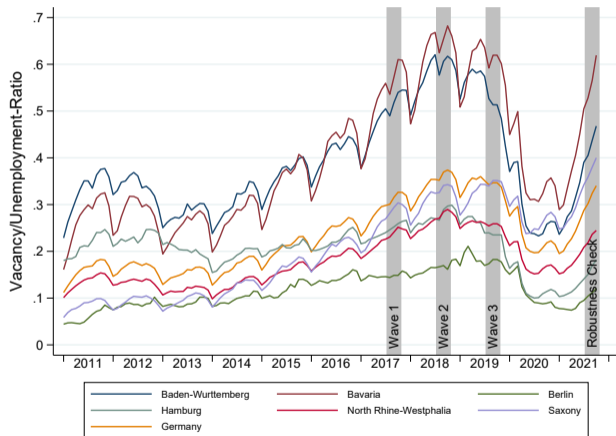
Source: Statistics of the Federal Employment Agency; Own calculations.

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Could hiring discrimination result from expected higher reservation wages of union members?

Differences in Callbacks related to Wage Requests

Appendix 6 - Heckman Critique ▸ Back to Presentation ▸ Back to Appendix

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Table: Neumark Correction Probit

	Callbacks 1	Callbacks 2
Probit estimates		
Union (marginal)	-0.0645^{***}	-0.0848^{***}
	(0.0272)	(0.0283)
Heteroscedastic probit estimates		
Union (marginal)	-0.0654^{***}	-0.0854^{***}
	(0.0274)	(0.0285)
Overidentification test: ratios of coefficients on skills for union relative to non-union are equal (p-value)	0.756	0.852
Standard deviation of unobservables, Union/Non-Union	0.961	0.977
Test: Homoscedastic vs. heteroscedastic probit (p-value, Wald test for equal variances)	0.487	0.686
Union-level (marginal)	-0.0602^{**}	-0.0848^{***}
	(0.0279)	(0.0285)
Union-variance (marginal)	-0.0052	-0.0006
	(0.0075)	(0.0015)
Observations	8714	8714

$^{*}\ p < 0.1,\ ^{**}\ p < 0.05,\ ^{***}\ p < 0.01.$

Appendix 7 - Weighting   ▸ Back to Presentation   ▸ Back to Appendix

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Table: Sensitivity to Weighting - Callbacks 2

	(1)	(2)	(3)
Union	-0.0753^{***}	-0.0756^{***}	-0.0831^{***}
	(0.0075)	(0.0077)	(0.0088)
Average Callback Rate	0.447	0.431	0.417
Observations	8714	8714	8714
Adjusted R^2	0.087	0.088	0.089
Controls and Weighting			
Linear Probability Model	✓	✓	✓
Baseline Controls	✓	✓	✓
Vacancy Characteristics	✓	✓	✓
Occupation Weights		✓	
Regional Employment Weights			✓

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix 8 - Social Media Experiment I   ▶ Back to Appendix

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Email applications only varied in the existence of a social media account.

Baseline:

- Standard application.

Treatments:

- Union membership in CV.
- Twitter account.
- Pro-union sentiment via Twitter account.

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Appendix 8 - Email Signature

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Bewerbung als ▪▪▪

Sehr geehrte ▪▪
anbei übersende ich Ihnen meine Bewerbungsunterlagen für die von Ihnen ausgeschriebene
Vollzeitstelle als ▪▪▪ mit der Referenznummer ▪▪▪. Durch mein noch
bestehendes Arbeitsverhältnis, wäre es mir möglich die neue Stelle zum 01.▪ anzutreten.
Meine Bewerbungsunterlagen erhalten Sie zusammengefasst in dem beigefügten PDF Dokument.
Über die Möglichkeit Sie in einem persönlichen Gespräch von meiner Person überzeugen zu dürfen,
würde ich mich sehr freuen.
Mit freundlichen Grüßen
Tobias ▪▪▪

——————————

Tobias ▪▪▪
Adresse: ▪▪▪
PLZ: ▪▪▪
Mobil: ▪▪▪
Email: ▪▪▪@gmx.de

Figure: Without Twitter Account

Bewerbung als ▪▪▪

Sehr geehrte ▪▪
anbei übersende ich Ihnen meine Bewerbungsunterlagen für die von Ihnen ausgeschriebene
Vollzeitstelle als ▪▪▪ mit der Referenznummer ▪▪▪. Durch mein noch
bestehendes Arbeitsverhältnis, wäre es mir möglich die neue Stelle zum 01.▪ anzutreten.
Meine Bewerbungsunterlagen erhalten Sie zusammengefasst in dem beigefügten PDF Dokument.
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würde ich mich sehr freuen.
Mit freundlichen Grüßen
Tobias ▪▪▪

——————————

Tobias ▪▪▪
Adresse: ▪▪▪
PLZ: ▪▪▪
Mobil: ▪▪▪
Email: ▪▪▪@gmx.de
Twitter: Twitter.com/▪▪▪

Figure: With Twitter Account

Appendix 8 - Example Twitter Accounts ▸ Back to Appendix
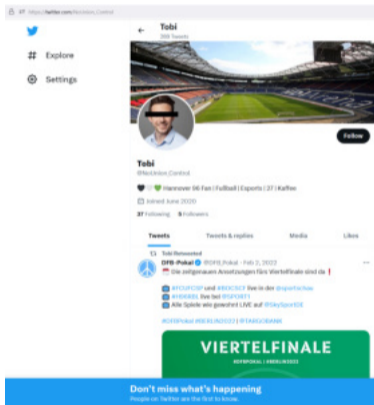
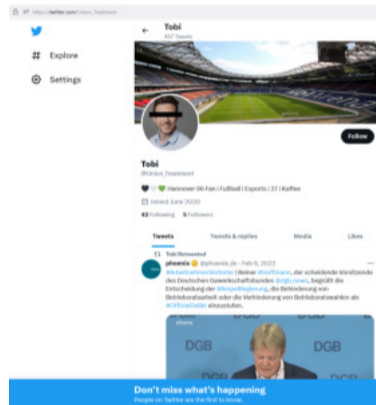Figure: Control Group

Figure: Treatment

Overview
○
Experiment 1
○○○
Works Councils
○○○
Robustness Checks
○○○
Further Experiment 2
○○○○●
Heterogeneity
○○○○○
Follow-Up: LMC
○○

Appendix 9 - Social Media Experiment ▸ Back ▸ Back to Appendix

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Table: Treatment Effect by Design

	No Controls		All Controls	
	(1)	(2)	(3)	(4)
Union in CV	−0.0639**	−0.0608**	−0.0665**	−0.0629**
	(0.0264)	(0.0286)	(0.0261)	(0.0284)
Union in Twitter	−0.0342**	−0.0370**	−0.0346**	−0.0377**
	(0.0157)	(0.0169)	(0.0156)	(0.0167)
Twitter	-0.0001	0.0100	-0.0024	0.0095
	(0.0223)	(0.0237)	(0.0221)	(0.0236)
Callback Rate Control Group	0.311	0.413	0.311	0.413
Observations	4531	4531	4531	4531
Adjusted R^2	0.002	0.002	0.014	0.018
Controls				
Basic Callbacks		✓		✓
Strict Callbacks	✓		✓	
Collective Agreement			✓	✓
Contract Type			✓	✓
Immediately Hiring			✓	✓
Firmsize			✓	✓
Federal State			✓	✓

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix 10 - Corporate Legal Forms ▶ Slides

Discrimination by Corporate Legal Forms
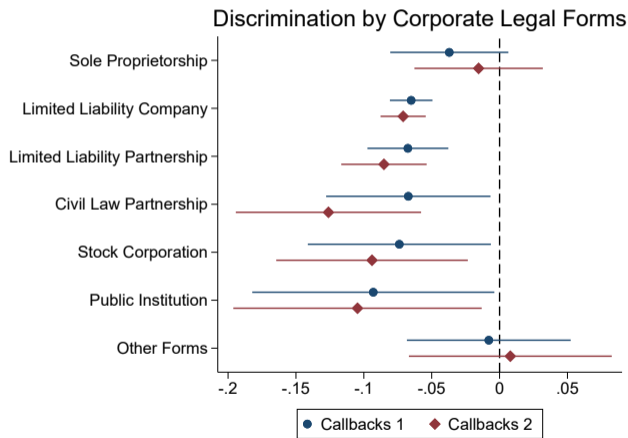
Appendix 11 - Union Type ▸ Slides

Discrimination by Union
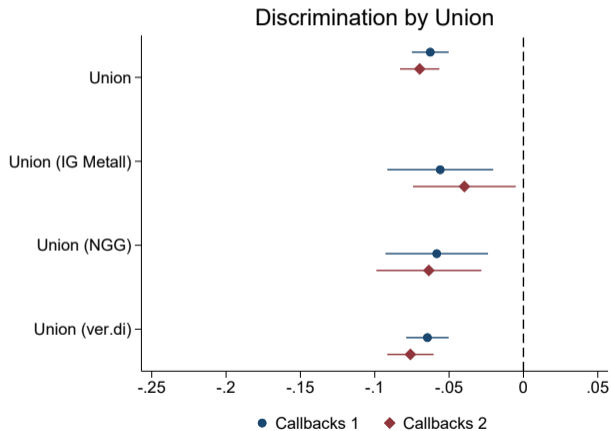
Appendix 12 - Corporate Collective Agreement Type   ▶ Slides

Discrimination by Collective Agreement Type

Overview
○

Experiment 1
○○○

Works Councils
○○○

Robustness Checks
○○○

Further Experiment 2
○○○○

Heterogeneity
○○○●○

Follow-Up: LMC
○○
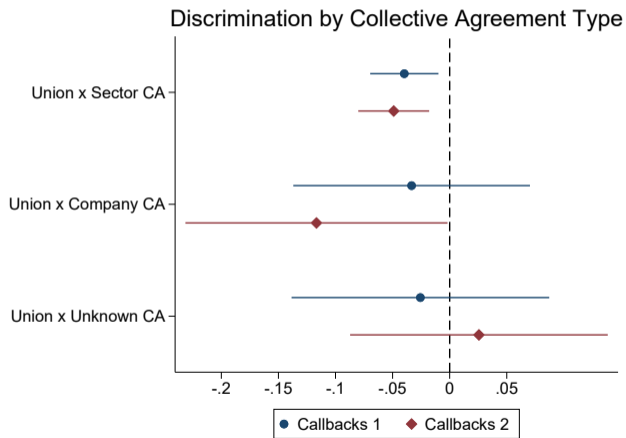
Appendix 13 - HR Manager Type ▸ Slides

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Discrimination by Human Resource Manager
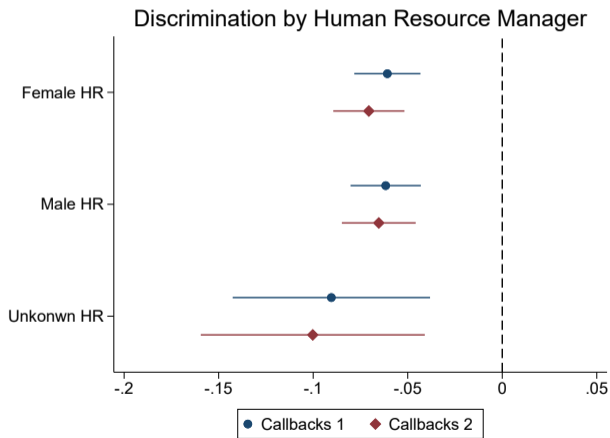
Appendix 14 - Impact of Labor Market Conditions ▶ Back to Appendix

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Conventional economic theory predicts a reduction in discrimination with increasing labor market tightness.

- Search and matching theory (Mortensen and Pissarides, 1999; Pissarides, 2000).
- Ranking model (Blanchard and Diamond).

This is supported by empirical evidence for ethnic discrimination:

- Correspondence experiments: Baert et al. (2015).
- Job platform data: Hangartner et al. (Mimeo).

Increasing labor market tightness also improve unions bargaining power.

- We could therefore also expect increasing hiring discrimination.

Appendix 14 - Experimental Design

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The basic idea is...

- Send pairs of fictitious job applications to real vacancies.
- Monitor the callback rates of firms.

The experiment was carried out between August and November 2020.

The main sample consists of 5004 applications (2502 firms).

Table: Overview of the Experimental Design

Regions	2020	Occupations	2020
Berlin	X	Office Clerk	X
North Rhine-Westphalia	X	Hotel Manager	X
Hamburg	X	Logistic Worker	X
Bavaria	X	Sales Manager	X
Saxony	X	Mechatronic Technician	X
Baden-Wurttemberg	X		

Appendix 14 - Experimental Design

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The basic idea is...

- Send pairs of fictitious job applications to real vacancies.
- Monitor the callback rates of firms.

The experiment was carried out between August and November 2020.

The main sample consists of 5004 applications (2502 firms).

Table: Overview of the Experimental Design

Regions	Nüß (2022)			New Paper	Occupations	Nüß (2022)			New Paper
	2017	2018	2019	2020	Occupations	2017	2018	2019	2020
Berlin	X	X	X	X	Office Clerk	X	X	X	X
North Rhine-Westphalia	X	X	X	X	Hotel Manager	X	X	X	X
Hamburg	X	X	X	X	Logistic Worker	X	X	X	X
Bavaria	X	X	X	X	Sales Manager	X	X	X	X
Saxony		X	X	X	Mechatronic Technician		X	X	X
Baden-Wurttemberg		X	X	X					

Appendix 14 - First Results ▸ Back to Appendix

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Callback Definitions

- Category 1 when it is a clear invitation to a job interview.
- Category 2 when firms asked for further information.