Neo-Nazism and discrimination against foreigners: A direct test of taste discrimination

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What's this all about?

- I'm going to test some predictions of Gary Becker's (1957) theory of taste discrimination
- Basic idea: prejudice/distaste against foreigners, women, etc. directly built into individuals' preferences $\Rightarrow$ prejudiced individuals receive disutility from interacting with specific social groups (here: foreigners)
- Principally straightforward empirical predictions for wages and employment, but hard to test directly because you usually do not observe preferences
- Idea here: Approximate prejudices against foreigners on a regional level using election data $\Rightarrow$ Combined vote share of three German right-wing parties on the county level, combined with micro-data on firms and individuals from social security
- Only one study with a similar approach: Charles and Guryan (2008, JPE) who find evidence for wage discimination using regional attitude data

Theory – basic predictions (I)

prejudiced employers:

- distaste transfers into lower willingness-to-pay for foreign labor
- prejudiced employer will only hire foreign workers if they accept wages below their productivity
- $\Rightarrow$ empirical prediction: wage and employment differentials
- $\Rightarrow$ note: we may not observe wage differentials if foreigners are able to sort into non-prejudiced firms $\Rightarrow$ for employer discrimination the last employer that hires a foreigner matters

Theory – basic predictions (II)

prejudiced co-workers:

- distaste transfers into higher wage demand by natives if work involves contact with foreigners
- firms will hire either natives or foreigners, but never both
- $\Rightarrow$ empirical prediction: segregated firms
- $\Rightarrow$ Note: segregated firms can also arise through prejudiced employers who only hire natives (or foreigners if wages are low enough)

Theory – basic predictions (III)

prejudiced customers:

- distaste transfers into lower willingness-to-pay for products when contact with foreigners is required
- foreigners less productive in jobs/industries with customer contact
- ⇒ empirical prediction: wage and employment differentials in industries/occupations with customer contact

Data (I) – vote data

- combined number of voters for three right-wing parties in Germany – the NPD, DVU and Republikaner – in the Federal elections of 1998, 2002 and 2005 on the county level ($\tilde{3}00$ in total)

- all three parties are heavily anti-foreigner, NPD and DVU can be considered neo-fascist; all three are under surveillance by the German secret service of the interior for being a threat for Germany's constitutional order

- vote data us used to calculate two measures of regional prejudice
  - (a) vote share of right wing parties: number of right-wing voters/total number of valid votes cast
  - (b) population share: number of right-wing voters/adult population

Data (I) – vote data

- Some notes on the German election system:
    - Every citizen has two votes, the *Erststimme* and the *Zweitstimme*.
    - The *Erststimme* is used to vote for a local direct candidate and determines who surely goes into parliament.
    - The *Zweitstimme* determines the number of delegates a party has in parliament, places not occupied by direct candidates (around 50% of all seats) are filled up using lists determiend by the party on the level of the Federal States.

- I use the *Zweitstimme* as it is less influenced by characteristics of the local candidates.

- Candidate lists vary on the level of the Federal state and by election $\Rightarrow$ not exactly clear if that matters, but easy to control for by Federal state$\times$election year interactions anyway

Data (I) – vote data

- general advantages over survey data: anonymous, hence no socially desired responses; available on a lowly aggregated regional level

- evidence that anti-foreigner feelings are a major determinant of the decision to vote for these parties (e.g., Arzheimer, 2008, Comparative Governance and Politics)

- evidence that high vote shares lower the happiness of foreigners (Knabe et al., 2009)

- evidence that high votes shares of right wing parties go hand in hand with opinion swings in the population at large:
  - historically, they often went hand in hand with mainstream parties' campaigns picking up anti-foreigner sentiments (Thraenhardt, 1995)
  - evidence for correlations between anti-foreigner feelings and right wing vote shares in cross-country analyses (Lubberts et al., 2002)
  - evidence for correlations between prominence of right-wing topics in mainstream party manifestos and right wing vote shares in cross-country analyses (Arzheimer, 2009)

Data (II) – regional data

- voter turnout: proxy for good citizenship in a region & mayor determinant of right-wing party success
- economic conditions: GNP per head, share of working age population employed
- share of foreigner, share of young men (most likely group to engage in racist crime), share of young people, share of men, number of school-dropouts, number of county inhabitants
- estimates also use county fixed effects

Data (III) – individual data

- Data: BA employment panel drawn from German social security records
- Years 1998, 2002 and 2005
- Only individuals aged between 25 and 55 working as regular, full-time workers, no apprentices etc.
- Wages censored at the contribution limit to social security are imputed using Tobit-based imputation, relevant for high-skilled workers; top/bottom 1% of wage distribution is dropped
- Wages are monthly real wages in 2000 €
- Sample size: 528,329 person-year-observations from 249,404 men and 430,140 observations from 218,036 women

Data (IV) – firm data

- Establishment History Panel (BHP) of the IAB: 50% sample of German plants with workers subject to social security contributions.

- Aggregated from social security records, contains detailed information on workforce structure, no information on sales, profits, capital etc.

- Time frame: 1998, 2002, 2005

- Sample size: 2,379,061 observations from 935,924 plants

Wage differentials

Individual level regression:

$$
\begin{aligned}
Ln(wage_{ict}) = {} & \alpha_i + \zeta_c + \beta' X_{it} + \delta' W_{ct} + \theta \times (Bundesland_{ict} \times year_t) \\
& + \lambda \times RW_{ct} + \tau \times (RW_{ct} \times foreigner_i) + \epsilon_{ict} \qquad (1)
\end{aligned}
$$

- estimated separately for men and women, low-skilled, skilled and high-skilled workers
- SEs adjusted for clustering on the county level (Moulton, 1990, REStat)

Wage differentials

Table: Right-wing voters and foreigner-native wage differentials by skill groups, individual level estimates, dependent variable: ln(monthly wages in 2000 prices)

	Men low-skilled (1)	Men skilled (2)	Men high-skilled (3)	Women low-skilled (4)	Women skilled (5)	Women high-skilled (6)
	Vote share					
RW share	-.0017	-.0016	-.0029	.0048	.0016	-.0074
	(.0032)	(.0014)	(.0061)	(.0043)	(.0026)	(0.0133)
RW share*foreigner	.00016	.0011	-0.0179***	.0015	-.0082**	-0.0252*
	(.0018)	(.0014)	(.0059)	(.0034)	(.0034)	(0.0134)
	Population share					
RW share	-.0036	-.0037	-.0041	.0058	.0000	-0.0141
	(.0048)	(.0023)	(.0092)	(.0068)	(.0043)	(0.0211)
RW share*foreigner	.0003	.0018	-0.0273***	.0024	-0.0124**	-0.0377*
	(.0027)	(.0022)	(.0090)	(.0052)	(.0052)	(0.0203)
Individual FEs	yes	yes	yes	yes	yes	yes
County FEs	yes	yes	yes	yes	yes	yes
Industry FEs (2 digit)	yes	yes	yes	yes	yes	yes
Bundesland*year effects	yes	yes	yes	yes	yes	yes
No. of individuals	43,732	182,208	35,925	42,098	164,958	20,134
No. of observations	76,114	381,670	70,545	70,607	324,560	34,973

Employment differentials

Firm level regression:

$$
\begin{aligned}
Share\_of\_natives_{ict} &= \alpha + \zeta_c + \beta' X_{it} + \delta' W_{ct} \qquad (2) \\
&+ \theta \times (Bundesland_{ict} \times year_t) \\
&+ \lambda \times RW_{ct} + \epsilon_{ict}
\end{aligned}
$$

- No firm-level fixed effects as these would capture most firm level prejudice
- SEs adjusted for clustering on the county level (Moulton, 1990, REStat)

Employment differentials

Table: Right-wing voters and labor demand for natives, plant level regressions estimates, dependent variable: share of Germans employed (0 to 100)

	(1)	(2)
Vote share of right parties	0.0897**	
	(0.0402)	
Share of RW voters in population		0.01745***
		(0.0622)
Firm fixed effects	no	no
County fixed effects	yes	yes
Industry fixed effects (2-digit)	yes	yes
Bundesland*year interactions	yes	yes
No. of plants	974,091	
No. of observations	2,473,757	

Plant segregation

Two outcomes:

- Simple foreigner-native-index $2 \times |share\_of\_Germans - 50|$:
    - Plant is maximally heterogeneous with 50% foreigners and 50% natives $\Rightarrow$ index value of "0"
    - Maximal segregation 100% foreigners OR 100% foreigners $\Rightarrow$ index value of "100"
    - One unit increase in the index equals redistribution of 0.5 percentage points from the smaller to the larger group in the firm

- Herfindahl-index of nationality groups in the firm, distinguishing between the major guest workers nationalities (Turks, Greeks, Italians, Spanish/Portuguese, Yugoslavians), Northern Americans/Australians, East Europeans, Polish, West Europeans and other foreigners

Plant segregation

Firm level regression:

$$
\begin{aligned}
Plant\_homogeneity_{ict} &= \alpha_i + \zeta_c + \beta' X_{it} + \delta' W_{ct} \qquad (3)\\
&+ \theta \times (Bundesland_{ict} \times year_t)\\
&+ \lambda \times RW_{ct} + \epsilon_{ict}
\end{aligned}
$$

- This time with and without firm-level fixed effects as plant segregation can arise through employer and co-worker discrimination.
- SEs adjusted for clustering on the county level (Moulton, 1990, REStat)
- Additional problem: Native prejudiced workers can select into industries where they can avoid contact with (potentially foreign) customers/bosses. ⇒ Distribution of prejudiced natives can be different in, e.g., construction than in services or gastronomy. ⇒ Additional estimates using interactions with different industries.

Plant segregation

Table: Plant segregation, plant level regressions, dependent variable: native-foreigner-homogeneity-index

	Linear Regressions		Plant fixed effects regressions			
	Vote (1)	Population (2)	Vote (3)	Population (4)	Vote (5)	Population (6)
Right wing share	0.0016**	0.0032***	0.0296	0.0973	0.9088***	1.4883***
(base: manufacturing)	(0.0772)	(0.1228)	(0.0434)	(0.0697)	(0.2285)	(0.3769)
Right wing share					-0.3504	-0.6185
* Retail/restaurants/bars					(0.3207)	(0.5136)
Right wing share					-1.0863***	-1.7935***
* Business services					(0.3022)	(0.4972)
Right wing share					-0.5442*	-0.9303*
* Personal/social services					(0.3185)	(0.5248)
Right wing share					0.4889	0.8445*
* Construction					(0.3075)	(0.5055)
Right wing share					-0.8954***	-1.4152***
* Other					(0.2262)	(0.3741)
Individual FEs	no	no	yes	yes	yes	yes
County FEs	no	no	yes	yes	yes	yes
Industry FEs (2 digit)	yes	yes	yes	yes	yes	yes
Bundesland*year int.	yes	yes	yes	yes	yes	yes
No. of firms			974,091			
No. of observations			2,473,757			

The role of customer contact

- Another look at wage and employment differentials, again at the individual and the firm level (with all FEs).
- This time with interactions for different industries with much customer contact (e.g., services, gastronomy/retail) and less customer contact (e.g., manufacturing).

The role of customer contact

Table: Right-wing voters and foreigner-native wage differentials by public contact, individual level estimates, dependent variable: ln(monthly wages in 2000 prices)

	Men		Women	
	Vote	Population	Vote	Population
	(1)	(2)	(3)	(4)
Right wing share	.0011	.0011	.00015	-.0014
(base: manufacturing)	(.0016)	(.0024)	(.0042)	(.0067)
Right wing share	.0012	.0018	-.0054	-.0083
* foreigner	(.0011)	(.0017)	(.0042)	(.0065)
Right wing share	-0.0137***	-0.0213***	.0085***	0.0130***
* Retail/restaurants/bars	(.0022)	(.0033)	(.0024)	(.0038)
Right wing share	-0.0182***	-0.0279	.0013	.0018
* services	(.0021)	(.0032)	(.0035)	(.0055)
Retail/restaurants/bars	-.0003	-.0003	-.0001	-.0001
* foreigner	(.0004)	(.0004)	(.0004)	(.0004)
Services	.0002	.0002	-.0004	-.0004
* foreigner	(.0004)	(.0004)	(.0007)	(.0007)
Right wing share * Retail/	.0072	.0116	-.0060	-.0088
restaurants/bars * foreigner	(0.0108)	(0.0164)	(.0093)	(0.0140)
Right wing share	-0.0281**	-0.0327**	-0.0262	-0.0382
* services * foreigner	(.0098)	(0.0151)	(0.0204)	(0.0317)
No. of individuals	90,739		49,956	
No. of observations	185,779		91,631	

The role of customer contact

Table: Employment shares of natives by industry, plant level estimates, dependent variable: share of Germans

| | Plant fixed effects regressions | |
| | Vote share | Population share |
	(1)	(2)
Right wing share (base: manufacturing)	0.4371***	0.7281***
	(0.1519)	(0.2475)
Right wing share* retail/restaurants/bars	-0.0127	-0.0643
	(0.2071)	(0.3350)
Right wing share * business services	-0.6845***	-1.1191***
	(0.2318)	(0.3752)
Right wing share * personal services	-0.2750	-0.4658
	(0.1754)	(0.2852)
Right wing share * construction	0.2639	0.4674
	(0.2096)	(0.3475)
Right wing share * other	-0.4495***	-0.7386***
	(0.1506)	(0.2459)
Plant fixed effects	yes	yes
County fixed effects	yes	yes
Industry fixed effects (2 digit)	yes	yes
Bundesland*year interactions	yes	yes
No. of firms	974,091	
No. of observations	2,473,757	

Conclusion

Findings:

- foreigner-native wage differentials rise with the share of right-wing voters

- the exact magnitude of the effects varies between skill groups and by gender, the largest effects being found for high-skilled men and women

- average employment shares of natives vary very little with the share of right-wing voters

- segregated firms become more common in manufacturing and construction when support for right-wing parties rises, while no effects are found for services and gastronomy

- the negative wage effects are strongest for foreigners working in services, while no effects are found in manufacturing and gastronomy

⇒ This is basically what you would expect from taste discrimination.

Fin

Working paper:
http://www.leuphana.de/institute/ivwl/publikationen/working-papers.html
$\Rightarrow$ No. 165, March 2010 (old version)

Comments, etc.:
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