Applied Statistical Analysis II
POP77003

- Replication Study -
Public Attitudes toward Young Immigrant Men

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Paper Overview

Paper
Public Attitudes toward Young Immigrant Men

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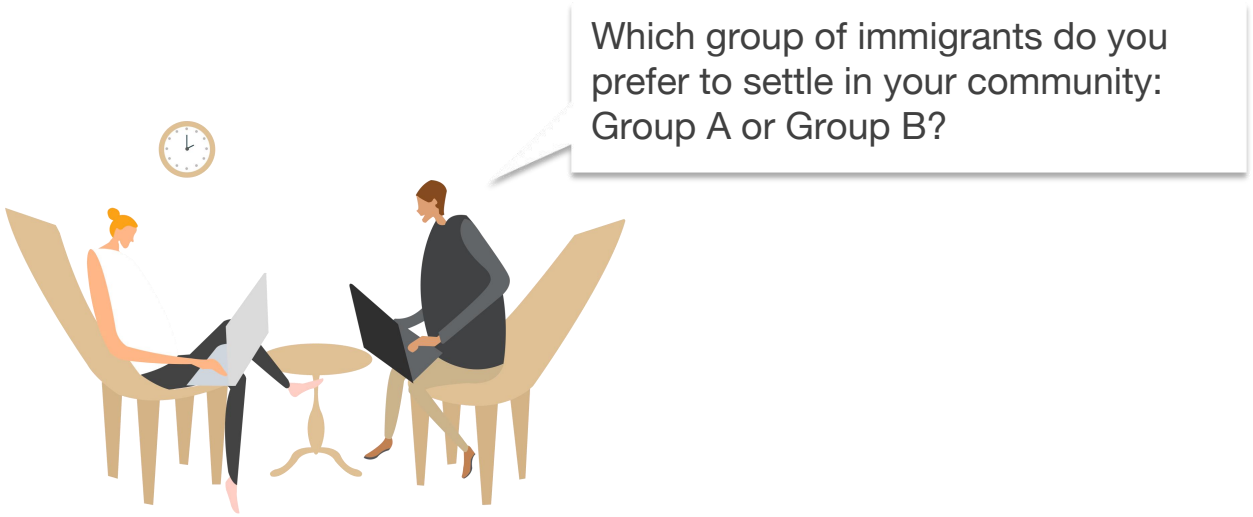
Paper Overview

Why While immigrant young men may contribute economically, they could also be perceived as security and cultural threats. How do the public perceive young male immigrants in reality?

How A conjoint experiment was conducted in 2,100 Germans were asked to complete a survey, evaluating groups of immigrants with randomly varying shares of young men.



Paper Overview

What

1. What is the attitude?

Whether German attitudes toward young immigrant men differ from attitudes toward other immigrants.

2. What explains the attitude?

Which of the three mechanisms described best explains attitudes toward young men? Economy, security or culture?

Analysis Method

Analysis Unit

Immigrant groups. The share of young men (under 25) per group was randomly selected as 0%, 25%, 50%, 75%, or 100%.

Quantity of Interest

Effect of Young Men on settlement preference, economic potential, security threat, and cultural threat.

Analysis Model

Weighted least squares regression. (To correct for differences between the sample and population on covariates)

Analysis Method

Variables of interest

- Settle_binary: Binary indicator for whether an immigrant group was preferred for settlement. (1 = did, 0 = did not)
- Jobs_binary: Binary indicator for responses to the question “Few members of Group X will find jobs in my neighborhood.” (1 = low rating, 0 = high rating.)
- Security_binary: Binary indicator for responses to the question “Group X would be a safety concern for my neighborhood.” (1 = high rating, 0 = low rating)
- Culture_binary: Binary indicator for responses to the question "Group X would adapt well to German culture." (1 = low rating, 0 = high rating)
- Group_edu: Share of immigrants in a group with a university education(0, 10, 20, or 30)
- men0/25/50/75/100 (dummy variable) : Binary indicator for 0%/25%/50%/75%100% young men in the group. men50 as the baseline. (1 = selected, 0 = did not)

Replication

Orginial Study

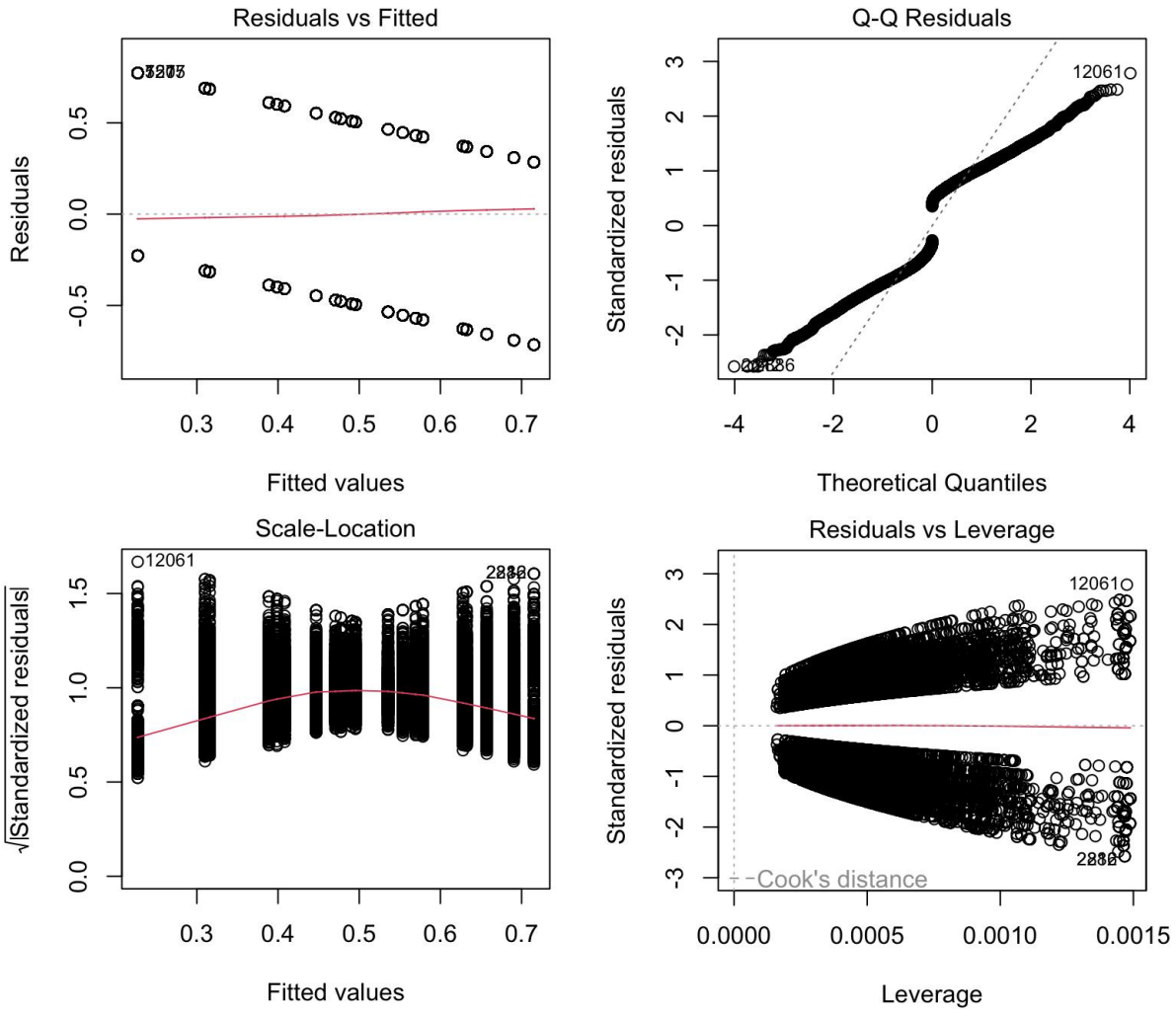
Interested in the presence of effect of young men —> applied OLS to outcome variable

Replication Sxtension

Interested in the magnitude of the effect of young men —> applied LR to outcome variable

Re-analysis

- **Let's check linear regression asummptions at first!**



Re-analysis

- **Predicting attitude with logistic regression**

```
# Model for Figure 1 and Table 1, Model 1
log_main <- glm(settle_binary ~ factor(group_edu) + men0 + men25 + men75 + men100,
                family = binomial(link = "logit"),
                data = datw)
log_main_vcov <- cluster.vcov(log_main, datw[, "id"])
log_main_coefs <- coeftest(log_main)

# Model for Figure 1 and Table 1, Model 2
log_main_NW <- glm(settle_binary ~ factor(group_edu) + men0 + men25 + men75 + men100,
                   family = binomial(link = "logit"),
                data = data)
log_main_NW_vcov <- cluster.vcov(log_main_NW, data[, "id"])
log_main_NW_coefs <- coeftest(log_main_NW)
```

Re-analysis

- **Predicting reasons behind attitude**
  (take economical potential as an example)

```
# Figure 2 and Table 2, Model
job_log_mod <- glm(jobs_binary ~ factor(group_edu) + men0 + men25 + men75+men100,
                   family = binomial(link = "logit"), data = datw)
job_log_vcov <- cluster.vcov(job_log_mod, datw[, id])
job_log_coef <- coeftest(job_log_mod, job_log_vcov)

# Figure 2 and Table 2, Model 2
job_log_modNW <- glm(jobs_binary ~ factor(group_edu) + men0 + men25 + men75 + men100,
                   family = binomial(link = "logit"),data = data)
job_log_vcovNW <- cluster.vcov(job_log_modNW, data[, id])
job_log_coefNW <- coeftest(job_log_modNW, job_log_vcovNW)
```

Output

- **Table 1**

Same as original study:

(1) Significance: reveals statistically reliable relationships between all predictor variables and the outcome variable.

(2) Trends: an increase in the proportion of young males leads to a decrease in the odds of being preferred for settlement.

	Model 1: Weighted	Model 2: Unweighted
Intercept	-0.392^{***}	-0.395^{***}
	(0.045)	(0.045)
Share of Young Men:		
0%	0.400^{***}	0.391^{***}
	(0.051)	(0.050)
25%	0.265^{***}	0.265^{***}
	(0.050)	(0.050)
75%	-0.341^{***}	-0.333^{***}
	(0.050)	(0.050)
100%	-0.763^{***}	-0.760^{***}
	(0.051)	(0.051)
Share with University Education:		
10%	0.336^{***}	0.342^{***}
	(0.046)	(0.045)
20%	0.656^{***}	0.657^{***}
	(0.046)	(0.045)
30%	0.926^{***}	0.927^{***}
	(0.046)	(0.046)
AIC	21798.801	22155.320
BIC	21860.503	22217.149
Log Likelihood	-10891.400	-11069.660
Deviance	21782.801	22139.320
Num. obs.	16528	16790

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

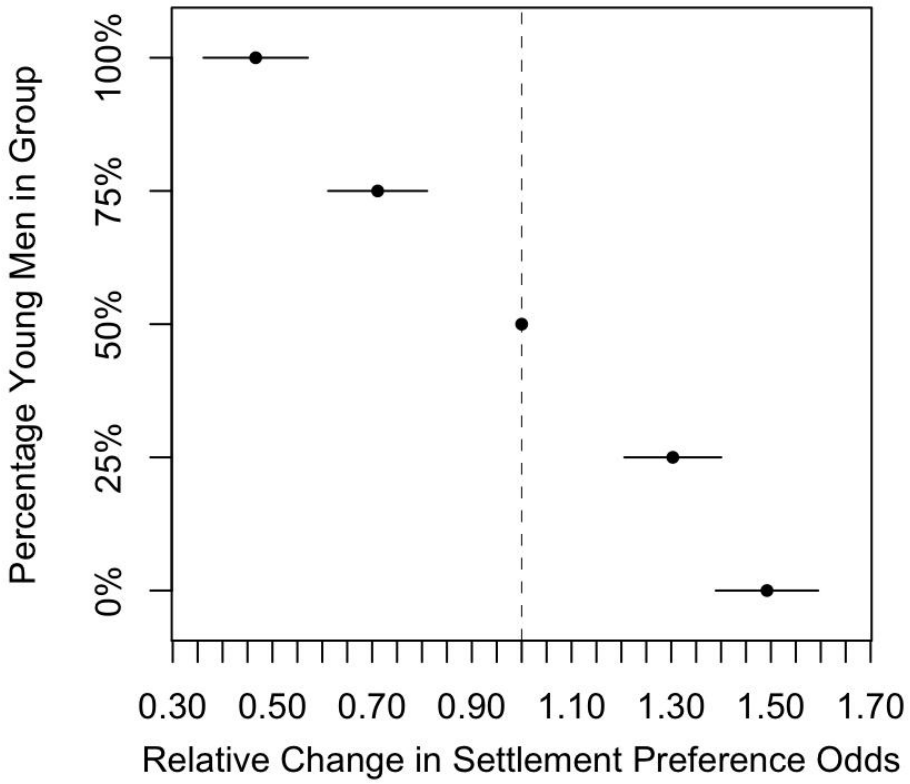
Table 1: Regression Results for Figure 1 and Unweighted Results

Output

- **Figure 1**

More concrete interpretation:

Prediction: compared with the baseline group (50% young men), the predicted odds of being preferred for settlement in a group without young males increase by a multiplicative factor of exp(0.4) ≈ 1.5, which is equivalent to increasing the odds by 50%.



Output

- **Table 2**

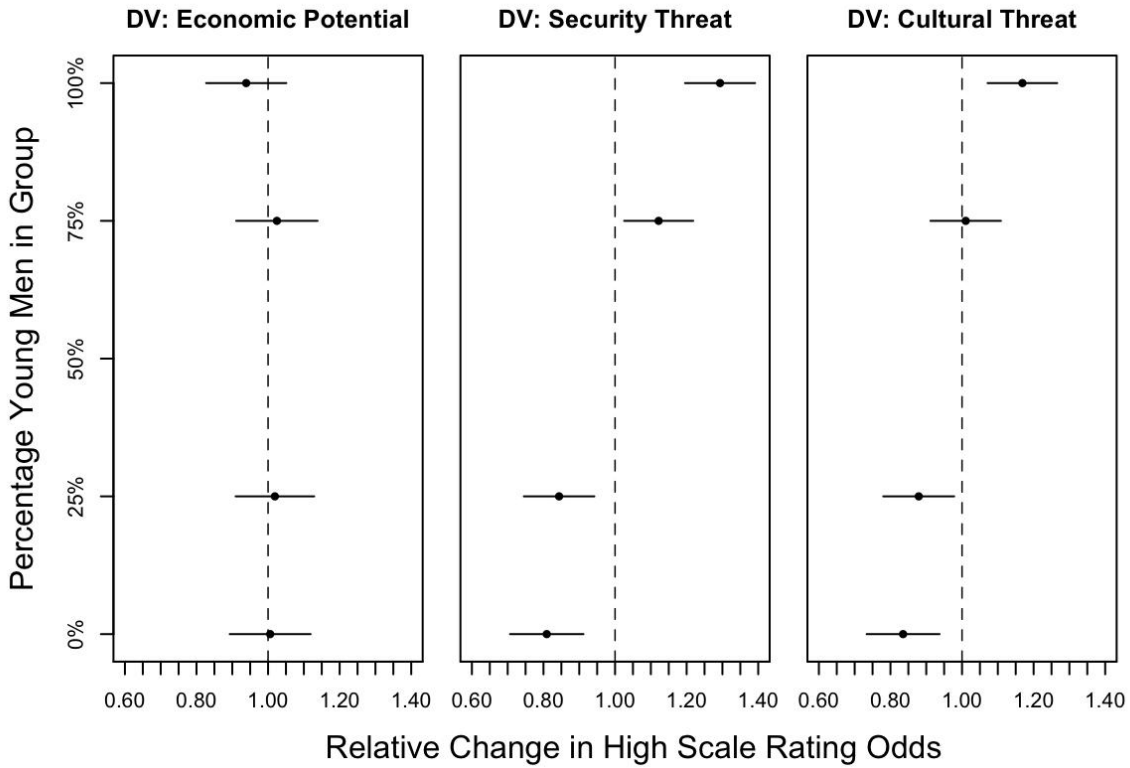
	Model 1: Economic Potential Weighted	Model 2: Economic Potential Unweighted	Model 3: Security Threat Weighted	Model 4: Security Threat Unweighted	Model 5: Cultural Threat Weighted	Model 6: Cultural Threat Unweighted
Intercept	-1.273^{***}	-1.276^{***}	-0.280^{***}	-0.288^{***}	-0.292^{***}	-0.294^{***}
	(0.060)	(0.059)	(0.054)	(0.053)	(0.053)	(0.052)
Share of Young Men:						
0%	0.006	0.009	-0.212^{***}	-0.214^{***}	-0.180^{***}	-0.176^{***}
	(0.058)	(0.057)	(0.052)	(0.052)	(0.052)	(0.051)
25%	0.019	0.019	-0.170^{***}	-0.167^{***}	-0.129^{*}	-0.134^{**}
	(0.056)	(0.056)	(0.050)	(0.050)	(0.051)	(0.050)
75%	0.024	0.033	0.115^{*}	0.112^{*}	0.010	0.010
	(0.058)	(0.057)	(0.049)	(0.049)	(0.050)	(0.050)
100%	-0.063	-0.060	0.257^{***}	0.265^{***}	0.156^{**}	0.157^{**}
	(0.057)	(0.057)	(0.050)	(0.050)	(0.050)	(0.049)
Share with University Education:						
10%	0.128^{*}	0.130^{*}	0.042	0.042	0.024	0.025
	(0.052)	(0.051)	(0.045)	(0.044)	(0.044)	(0.044)
20%	0.054	0.058	-0.081	-0.079	-0.133^{**}	-0.126^{**}
	(0.053)	(0.053)	(0.045)	(0.044)	(0.044)	(0.044)
30%	0.262^{***}	0.256^{***}	-0.218^{***}	-0.209^{***}	-0.258^{***}	-0.250^{***}
	(0.054)	(0.054)	(0.046)	(0.046)	(0.046)	(0.045)
AIC	18291.731	18594.302	22469.771	22822.899	22340.097	22713.711
BIC	18353.505	18656.205	22531.537	22884.794	22401.869	22775.612
Log Likelihood	-9137.865	-9289.151	-11226.886	-11403.449	-11162.049	-11348.856
Deviance	18275.731	18578.302	22453.771	22806.899	22324.097	22697.711
Num. obs.	16677	16949	16659	16930	16672	16943

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

With more university educated members are perceived as (1) more likely to contribute economically (2) less likely to be a security threat and (3) less likely to be a cultural threat.

Output

- **Figure 2**



(1) None of the estimated effects of young men on economic potential are significantly different from one another (Table 2), and the estimates are close to exp(0).

(2) The estimates of non-economical factors show a positive effect: as the number of young men in a group rises, perceptions of security and cultural threat increase.

Findings

- This extension work confirms the results of orgininal study, which is public attitudes toward young immigrant men differ significantly from attitudes toward other immigrants.

- Further tests reveal that non-economic factors were important for respondent evaluations of immigrant groups. Young immigrant men are more likely to be seen as cultural and security threats.

- More accurate interpretation can be made using logistic regression models. In general, when the share of young men in the immigrant group is 50% , holding the education variable constant, the estimated odds of being willing to settle in it are about 0.68. When the share shifts to 0%, 25%, 75%, and 100%, the odds would change by a multiplicative factor of 1.49, 1.3, 0.7, and 0.47, respectively.