Is the link between education and attitudes towards foreigners driven by differences in cultural values and beliefs? Evidence from Switzerland

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Foreword

- Damit Ihr Lohn nicht sinkt und Sie Ihre Stelle nicht verlieren!

Introduction

Research questions

- Main question:
  Examine the relevance of the labour market competition hypothesis in explaining individual attitudes towards equal opportunities for foreign and Swiss citizens

- Research question 1:
  Does *education* measure labour-market skills?

- Research question 2:
  Does *unemployment risk* shape attitudes towards foreign citizens?

Data

Data source

- Data from the Swiss Household Panel survey
- First wave, 1999 (*SHP_I* sample)
- Focus on the first wave, used as a cross-section
- Cross-sectional individual weights used to produce representative estimates
- Sample selection: Swiss voters, employed, without missing values on the variables of interest (i.e. attitudes towards foreigners and unemployment risk)

Why focusing only on the first wave?

- The sample size at the first wave is the highest
  $\Rightarrow$ the number of missing values is the smallest

- Two important proxies of individuals' values and beliefs are only available at the first wave: (i) opinion on Swiss tradition and (ii) trust in organisations for the defence of human rights

Empirical methods

Explaining attitudes towards foreigners in Switzerland (1)

(1) Incorporating years of education (and basic control variables):

$$y_i^* = \alpha_E E_i + \mathbf{X}_i \boldsymbol{\beta} + \epsilon_i$$

(2) Using levels of education instead of years of education:

$$y_i^* = \alpha_1 L_{1i} + \alpha_3 L_{3i} + \mathbf{X}_i \boldsymbol{\beta} + \epsilon_i$$

(3) Replacing levels of education by levels of occupation:

$$y_i^* = \widetilde{\alpha}_0 \widetilde{L}_{0i} + \widetilde{\alpha}_1 \widetilde{L}_{1i} + \widetilde{\alpha}_3 \widetilde{L}_{3i} + \mathbf{X}_i \boldsymbol{\beta} + \epsilon_i$$

y_i^* = unobserved latent variable for attitudes towards foreigners,

E_i = years of actual education,

L_{hi} = levels of actual education with $h \in \{1, 2, 3\}$,

$\widetilde{L}_{ji}$ = levels of occupation with $j \in \{0, 1, 2, 3\}$.

Explaining attitudes towards foreigners in Switzerland (2)

Adding individual risk of unemployment:

(2') $$y_i^* = \alpha_1 L_{1i} + \alpha_3 L_{3i} + \gamma U_i + \mathbf{X}_i\boldsymbol{\beta} + \epsilon_i$$

(3') $$y_i^* = \widetilde{\alpha}_0 \widetilde{L}_{0i} + \widetilde{\alpha}_1 \widetilde{L}_{1i} + \widetilde{\alpha}_3 \widetilde{L}_{3i} + \gamma U_i + \mathbf{X}_i\boldsymbol{\beta} + \epsilon_i$$

$U_i =$ a discrete variable based on a 0 to 10 scale indicating self-assessed risk of unemployement in the next 12 months,

$\mathbf{X}_i =$ a vector of observed personal characteristics, including a dummy for gender, age, age squared, dummies for father's national origin and dummies for mother's national origin,

Canton dummies are inlcuded in all models to account for regional variation in the labour market.

Estimation technique

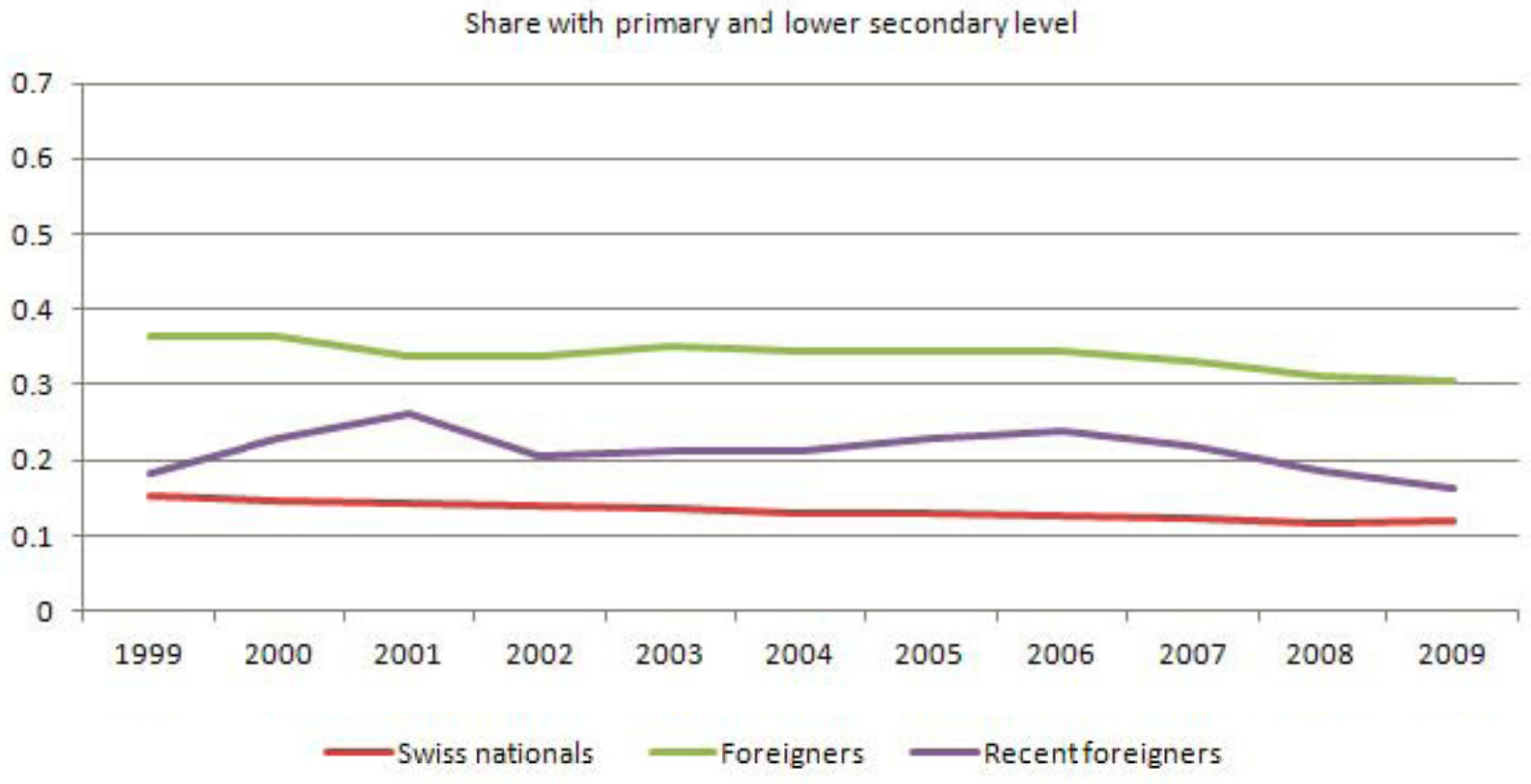
The empirical analysis is based on the ordered probit estimation technique where

$$\epsilon_i|\text{covariates} \sim \text{Normal}(0,1).$$

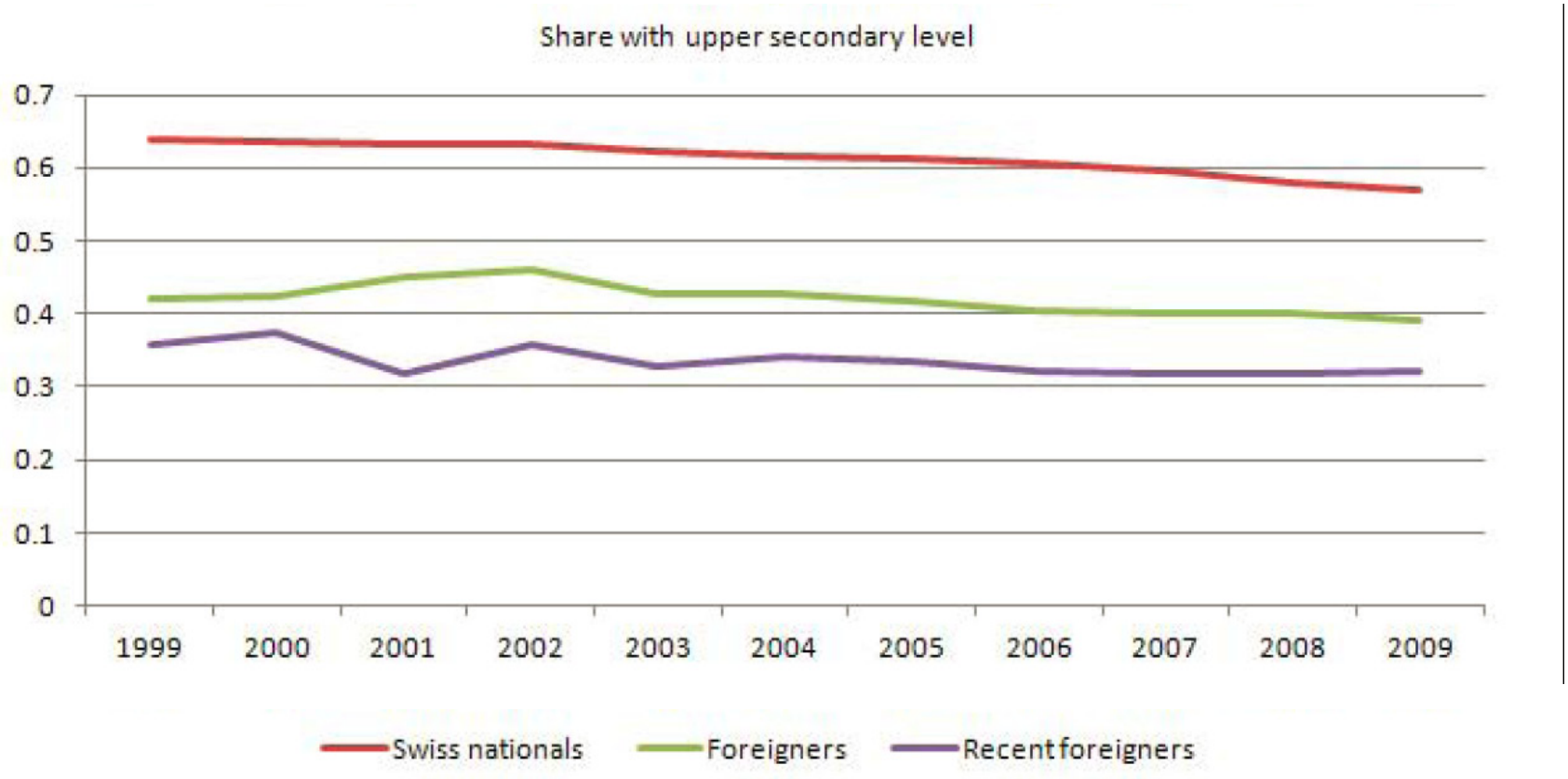
The continuous latent variable y_i^* can be thought of as the *propensity* to exhibit positive attitudes towards foreigners. The observed response categories are tied to the latent variable as follows:

$$y_i = \begin{cases} 1 & \text{(Strongly in favour of better opportunities for Swiss citizens)} & \text{if } y_i^* \leq \mu_1 \\ 2 & \text{(Rather in favour of better opportunities for Swiss citizens)} & \text{if } \mu_1 < y_i^* \leq \mu_2 \\ 3 & \text{(Neither of them)} & \text{if } \mu_2 < y_i^* \leq \mu_3 \\ 4 & \text{(Rather in favour of equal opportunities for foreigners)} & \text{if } \mu_3 < y_i^* \leq \mu_4 \\ 5 & \text{(Strongly in favour of equal opportunities for foreigners)} & \text{if } \mu_4 < y_i^* \end{cases}$$

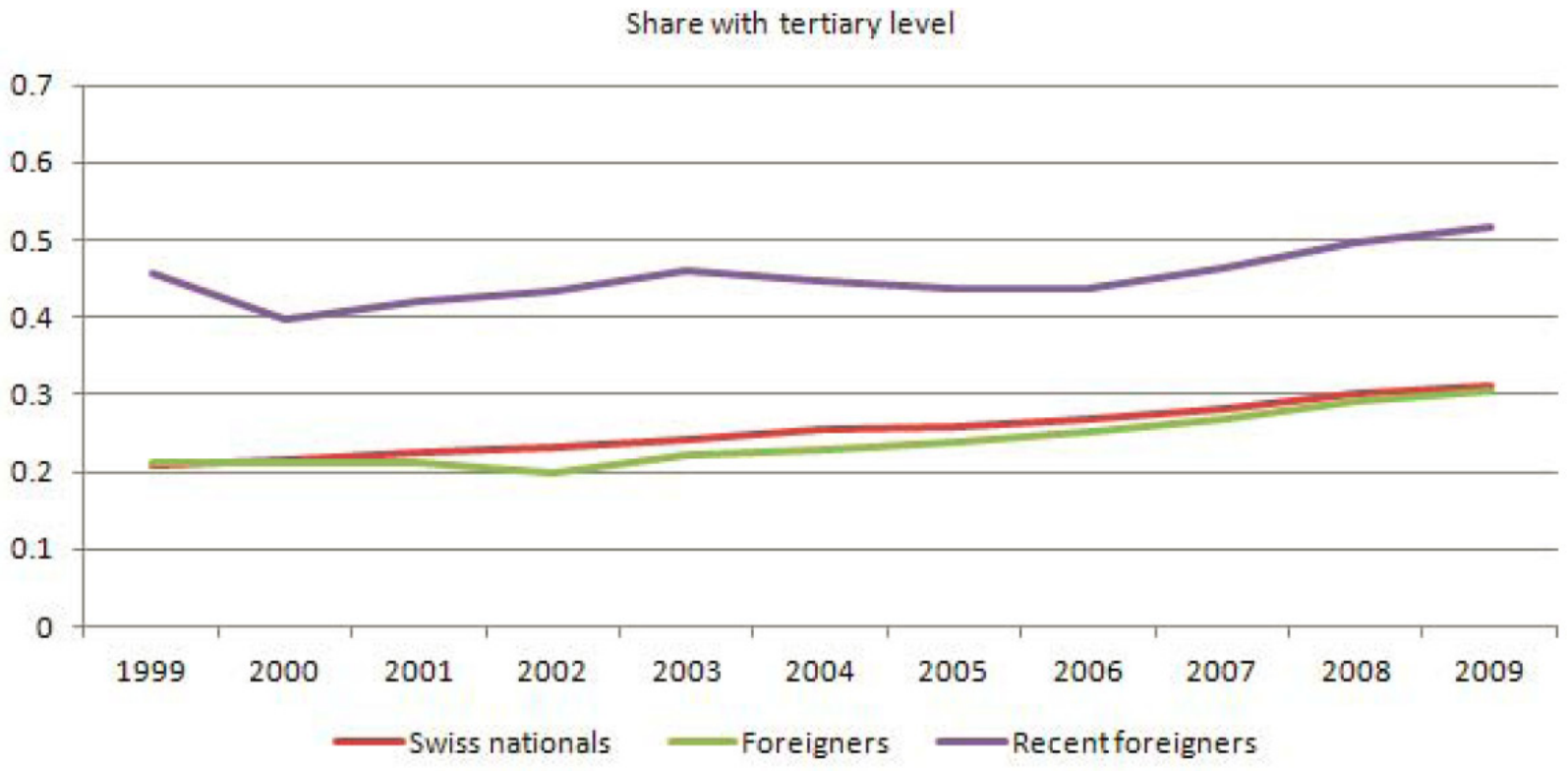
Some stylized facts (1)



Some stylized facts (2)



Some stylized facts (3)



Theorical framework consistent with the labour market competition hypothesis (1)

- The Heckscher–Ohlin approach "predicts that immigrants pressure the wages of similarly skilled natives nationwide" (Scheve and Slaughter, 2001)

- Given that foreigners recently settled in Switzerland are overrepresented at both the bottom and the top of the education distribution, we expect low- and high-educated Swiss workers to be opposed by the equivalent educational category:

$$\alpha_1 < 0 \quad \text{and} \quad \alpha_3 < 0.$$

Theorical framework consistent with the labour market competition hypothesis (2)

- As stated by Scheve and Slaughter (2001) and Hainmueller and Hiscox (2007), if education is highly correlated to individuals' values and beliefs, the relationship between the educational attributes of workers and their attitudes towards foreigners should have very little, if anything, to do with fears about labour-market competition:

$$\alpha_1 = 0 \quad \text{and} \quad \alpha_3 = 0.$$

Theorical framework consistent with the labour market competition hypothesis (3)

- Does *unemployment risk* induce more exposure to labour-market competition from foreigners?
- In order to investigate possible interactions between unemployment and education, we also estimate the model on three subsamples: (i) individuals with in/complete primary or lower secondary level, (ii) those with upper secondary level and (iii) those with tertiary level.
- As a robustness check, we estimate the model by level of occupation: (i) individuals with low skills or missing values on the level of occupation, (ii) those with intermediate skills and (iii) those with high skills.

Results

Ordered probit model: Baseline model

Equation	(1)	(2)
E	0.085**	
	(0.006)	
L_1		-0.199**
		(0.054)
L_3		0.349**
		(0.040)
Control variables	yes	yes
Canton dummies	yes	yes
Observations	4,222	4,222

Linearized standard errors in parentheses, ** p<0.05, * p<0.10
Notes: Coefficient estimates, data are weighted.

Ordered probit model: Employed (baseline model) vs. Out of the labour force

	Employed		Out of the labour force	
Equation	(1)	(2)	(1)	(2)
E	0.085**		0.051**	
	(0.006)		(0.009)	
L_1		-0.199**		-0.198**
		(0.054)		(0.061)
L_3		0.349**		0.281**
		(0.040)		(0.075)
Control variables	yes	yes	yes	yes
Canton dummies	yes	yes	yes	yes
Observations	4,222	4,222	1,877	1,877

Linearized standard errors in parentheses, ** p<0.05, * p<0.10
Notes: Coefficient estimates, data are weighted.

Ordered probit model: Adding individuals' values and beliefs and replacing education levels by occupation levels

	No proxies for values and beliefs			Proxies for values and beliefs		
Equation	(1)	(2)	(3)	(1)	(2)	(3)
E	0.085**			0.052**		
	(0.007)			(0.007)		
L_1		-0.199**			-0.057	
		(0.054)			(0.055)	
L_3		0.348**			0.222**	
		(0.040)			(0.041)	
$\widetilde{L}_0$			0.002			-0.073
			(0.101)			(0.103)
$\widetilde{L}_1$			-0.005			-0.007
			(0.079)			(0.080)
$\widetilde{L}_3$			0.470**			0.306**
			(0.036)			(0.038)
Control variables	yes	yes	yes	yes	yes	yes
Canton dummies	yes	yes	yes	yes	yes	yes
Observations	4,222	4,222	4,222	4,222	4,222	4,222

Linearized standard errors in parentheses, ** p<0.05, * p<0.10
Notes: Coefficient estimates, data are weighted.

Ordered probit model: Adding unemployment risk (1)

Equation	All	Education level		
		L_1	L_2	L_3
L_1	-0.055			
	(0.056)			
L_3	0.212**			
	(0.041)			
Unemployment risk	-0.008	0.009	-0.002	-0.037**
	(0.007)	(0.019)	(0.009)	(0.016)
Control variables	yes	yes	yes	yes
Canton dummies	yes	yes	yes	yes
Proxies for values and beliefs	yes	yes	yes	yes
Observations	4,090	537	2412	1141

Linearized standard errors in parentheses, ** p<0.05, * p<0.10

Notes: Coefficient estimates, data are weighted.

Ordered probit model: Adding unemployment risk (2)

Equation	All	Occupation level		
		$\widetilde{L}_0$ & $\widetilde{L}_1$	$\widetilde{L}_2$	$\widetilde{L}_3$
$\widetilde{L}_0$	-0.058			
	(0.112)			
$\widetilde{L}_1$	-0.004			
	(0.081)			
$\widetilde{L}_3$	0.288**			
	(0.038)			
Unemployment risk	-0.008	-0.006	0.011	-0.037**
	(0.007)	(0.029)	(0.010)	(0.011)
Control variables	yes	yes	yes	yes
Canton dummies	yes	yes	yes	yes
Proxies for values and beliefs	yes	yes	yes	yes
Observations	4,090	305	1651	2134

Linearized standard errors in parentheses, ** p<0.05, * p<0.10

Notes: Coefficient estimates, data are weighted.

Concluding comments

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- Results from the baseline model is in line with prior research: low-educated workers exhibit anti-foreigner attitudes ($\alpha_1 < 0$) while those high-educated hold positive attitudes ($\alpha_3 > 0$)
- Controlling for individuals' values and beliefs indicates that the significant relationship between a low level of education and attitudes vanishes ($\alpha_1 = 0$)
- A higher risk of unemployment is negatively associated with attitudes only among high-educated workers

THANK YOU
FOR YOUR ATTENTION

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