

“Deny Thy Father and Refuse Thy Name”

Nation Building and the Salary Differential of Family Name Changers in Hungary

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SMYE 2021

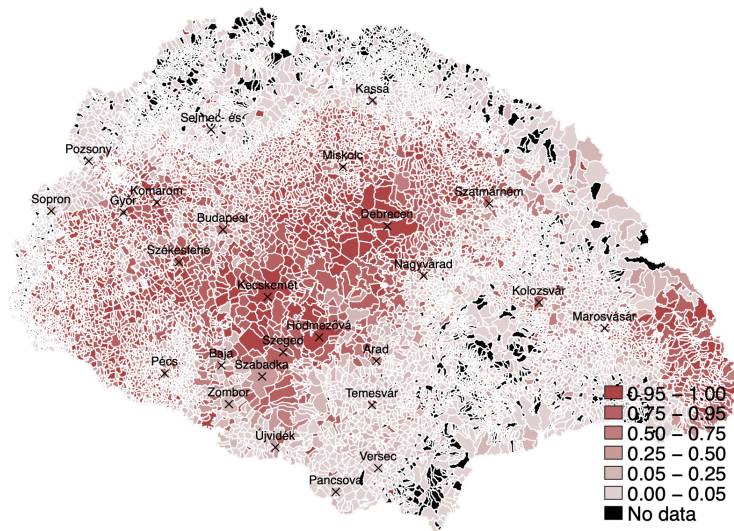
Motivation

- ▶ In most of the economics literature, culture is either taken as exogenously given or as changing sluggishly
- ▶ This paper: culture/identity can change on the short run
 - ▶ **Changing a minority surname increased the salary of a worker** - individual level empirical evidence from 19/20th century Hungary
 - ▶ **Name-based discrimination affected reported cultural composition within a generation** - model-based, settlement level empirical evidence from the censuses

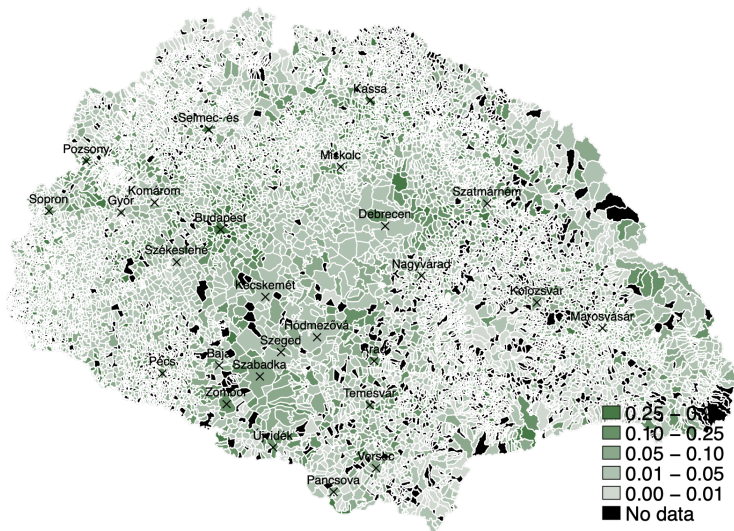
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Share of native Hungarian speakers in 1880



Change in share of native Hungarian speakers 1880-1910



Details and preview of the results

- ▶ Context: Hungary 1870-1914
 - ▶ Hungarian speakers become a majority from 1880 to 1910 (natives speakers: 45% to 54.5%, non-natives: 11.5% to 22.5%)
 - ▶ Formal step of assimilation: **the family name change**
- ▶ We combine unique data from the period...
 - ▶ **All individual cases** of family name changes
 - ▶ **Two** independent, hand collected samples of individuals' wages and occupations
 - ▶ **Administrative records** (marriages, census)
- ▶ ... to estimate the **causal salary impact of name change** using **pooled OLS and IV** (+5.8% to +14%)
- ▶ Build a **model** on assimilation to evaluate the societal impact of name change on cultural diversity

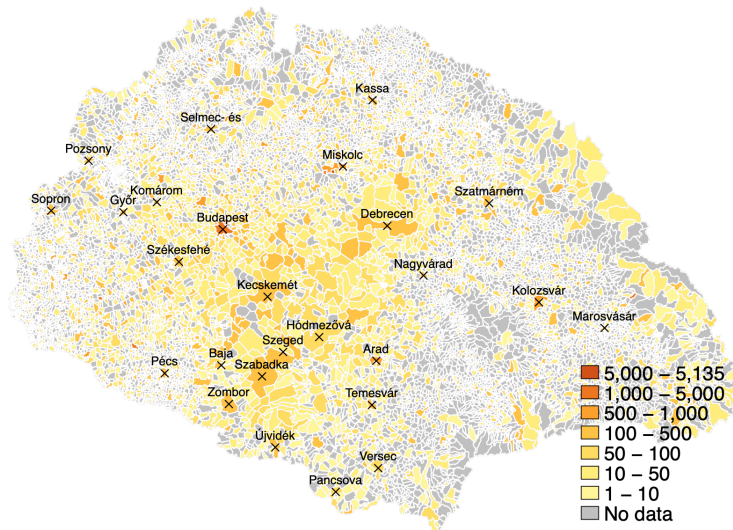
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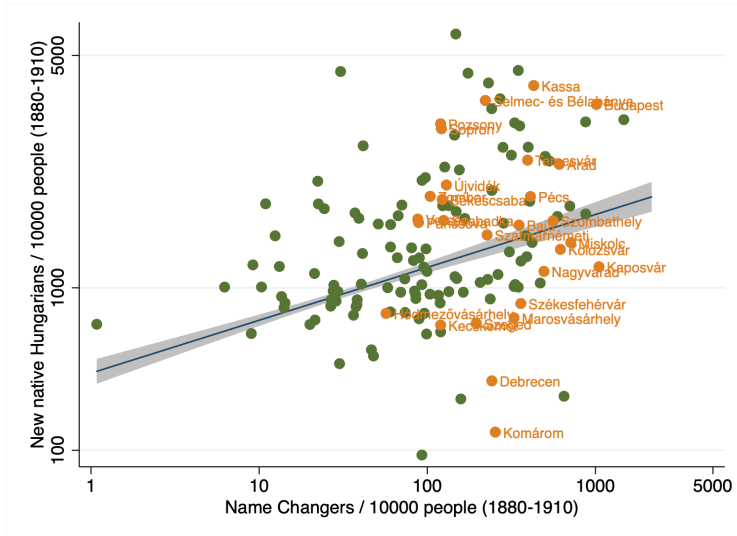
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Motivating evidence: geographic distribution of name changers



Motivating evidence: name changing and shrinkage of linguistic diversity



Outline

1. Contribution
2. Background an Data
3. Empirical Strategy and Results
4. Societal Impact and Counterfactuals

Contribution

- ▶ **Name based discrimination & name change, identity manipulation** - our paper looks at own outcomes of a non-immigrant worker upon changing own identity (Bertrand and Mullainathan, 2004 ; Arai and Thoursie 2009, Biavaschi et al 2013, Algan et al. 2013 ; Cassan 2015, Nix and Quian 2015, Jia and Persson 2017)
- ▶ **Nation building** - economic incentives worked on the short run in changing culture (Alesina Giuliano Reich 2019, Alesina Reich Riboni 2017, Aghion et al 2015; Aspachs-Bracons et al 2008, Fouka 2016, Clots-Figueras and Masella 2016; Depetris-Chavin et al. 2018; Alesina and Fuchs-Schündeln 2007, Cantoni et al. 2014; Bazzi et al. 2019)

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Background - a multiethnic, multireligious country

- ▶ During the Austria-Hungary period (1867-1918) the **Hungarian elite wants to forge a nation state** through assimilation
 - ▶ Linguistic minorities: Germans, Slovaks, Romanians (13%-13%-17%) religious minorities: Jews (5%), Orthodox Christians (15%) (1880 census data)
 - ▶ Nudging and positive propaganda, e.g. promoting “Hungarianization” of the family name as nationalist “pledge of allegiance” of the individual
 - ▶ Example: Schmidt → Kovács, Rosenthal → Rózsavölgyi etc.
- ▶ Family name changing is a **costly** step (not cheap talk, credible and conditionable signal):
 - ▶ administrative costs: time and paperwork
 - ▶ psychological costs: identification with family and ethnicity
 - ▶ social costs: worker might be scorned by family and others from minority

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Data: name changing & hand-collected worker data sets

- ▶ Universe of family name changing documents in the time period
 - ▶ Old and new family names, given names, year and residence upon name change, year and place of birth, religion, profession
- ▶ Two data sets on workers and wages
 - ▶ **Municipal workers** of Budapest (**public sector**) - pooled cross section from 1904, 1907, 1909, 1912; $N = 3700$
 - ▶ **Reserve officers** of the Royal Hungarian Army ("**private sector**"); Military training BUT retain civilian jobs → army records civilian wages; Pooled cross section from 1869-1915; $N = 2400$
 - ▶ **Variables:** salary, occupation, year and place of birth, religion, schooling, family background
- ▶ Rich settlement level, geo-referenced historical data from the Social Geography Scientific Council of the Hungarian Academy of Sciences (available at <http://www.gistory.hu>)

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Estimating the surname salary premium

- ▶ we run the following pooled OLS regression

$$\log(\text{salary})_{it} = \alpha + \beta * \text{changer}_{it} + \gamma * \text{controls}_{it} + \lambda_t + \varepsilon_{it}$$

- ▶ changer_i is a dummy indicating if person i has changed his family name until the year t ;
- ▶ Controls: age and its square, experience and its square, occupation dummies, Jewish dummy, schooling controls
- ▶ Main identification threat: selection - name changing is correlated with unobserved skills \rightarrow biased estimate of β , impact is not causal

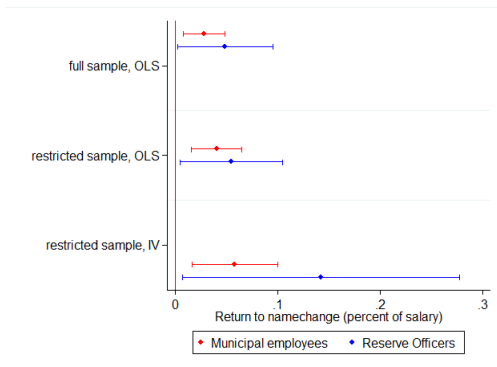
IV: definition & intuition

- ▶ **IV: name distinctiveness measure** (similar to Fryer & Levitt, 2004); natural logarithm of the overrepresentation of a family name among changers relative to the population:

$$IV_n = \log \left[\frac{P(\text{old name} | \text{name changer})}{P(\text{old name})} \right]$$

- ▶ Idea: the **wage is depending on the name changing** decision, but **not on name distinctiveness** (the boss knows you, your background, sees your papers)
- ▶ A distinctively minority surname affects discrimination outside of the workplace → **name change is more likely**
- ▶ no systematic relationship between observed skills and $IV(\rightarrow)$; no relationship between IV and salary conditional on name changing(\rightarrow)

Results



- ▶ salary premium: (i) Municipal Empl.: 3 extra year of experience (ii) Reserve O.: 4 extra years of schooling (→link to table)

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Impacts on society

- ▶ **Result to this point:** Name changing had a causal impact on salaries.
- ▶ **From now:** How does name changing alter the composition of the population over time?
 1. **This talk:** population-wide correlates of name changing that lays the groundwork for the theory
 2. **Use it to** build a simple **model of economic selection** into assimilation; test its independent **predictions**; **use it to decompose observed cultural change**
- ▶ Estimate the following equation:

$$NC_{i,1880-1910} = \beta_1 Econ_i + \beta_2 StateCap_i + \beta_3 Dem_i + \gamma_c$$

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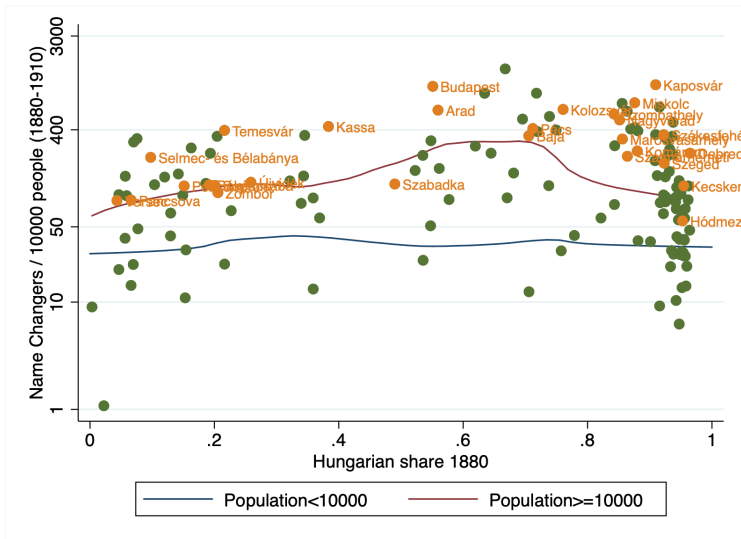
Regressing name changes between 1880 and 1910 on correlates in 1880/90

	(1)
Manufacturing share	726.54 (107.7634)***
Number of railways	2.10 (0.5468)***
Has post office	4.34 (2.2189)*
Has telegraph station	34.10 (6.9845)***
Has ship station	43.13 (12.0487)***
Native Hungarian share	92.45 (23.9910)***
Hungarian ²	-89.53 (27.5337)***
Log(population)	4.92 (0.8763)***
r ²	0.11
N	12120.00

County fixed effects included; clustered at 63 counties.

What matters: 1) Industrialization 2) State capacity 3) Initial H-share

Inverse U-shaped relationship between cultural heterogeneity and name changing



Our model

- ▶ State capacity
- ▶ **Based on Roy-Borjas**
 - ▶ Workers of minority background decide on name change (and assimilation) based on their **potential utilities** in both states
 - ▶ Fixed **wage premium** + different **random returns** to name change
 - ▶ Utility depends positively on **minority community size** and **government incentives/discrimination**
 - ▶ Early results confirm model predictions - more name change when skill/earnings distribution of the majority is more dispersed
(→link to result)

Ongoing work

- ▶ Counterfactual analysis using census records - **how did name changing effect cultural diversity between 1880 and 1910?**
 - ▶ Data for each settlement in 1900 and 1910
 - ▶ Wage structure on town level and the share of non-Hungarians in jobs
 - ▶ Community level controls
- ▶ Other nation building outcomes: intermarriage
- ▶ Private sector samples: archival records of individual firms
- ▶ Compare different regimes: name changing under right-wing authoritarianism

Summary

- ▶ We showed that the family name was endogenous in Hungary; name changers enjoyed higher salaries than people with non-Hungarian names
- ▶ This was a result of an active policy to homogenize the population
- ▶ It impacted the composition of Hungarian society on the long run
- ▶ Bottom line: culture & identity responds to economic incentives

Thank you for your attention!

Results

	OLS Full log(salary)	OLS Restr. log(salary)	IV Restr. log(salary)	First stage Changer	
Panel A - Budapest Employees					
Changer	0.0276** (0.0124)	0.0400*** (0.0149)	0.0578** (0.0253)	log(overrep)	0.108*** (0.00371)
Obs.	3,711	2,070	2,070		2,070
Panel B - Reserve Officers					
	0.0485* (0.0283)	0.0544* (0.0306)	0.142* (0.0823)	log(overrep)	0.0666*** (0.00450)
	2,477	1,372	1,372		1,372

(→link to main text)

IV and observable skills - Budapest Employees

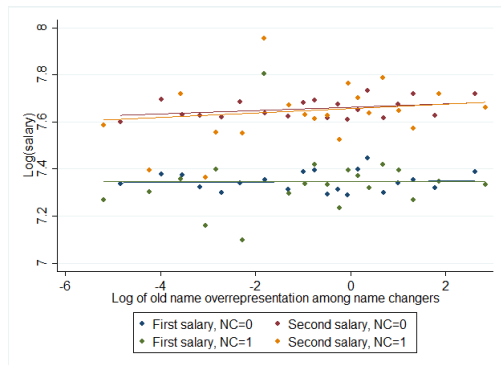
	log(overep)		log(overep)		log(overep)	
High school	-0.0898	(0.223)	-0.143	(0.223)	-0.450**	(0.221)
No mental score	0.117	(0.248)	0.0958	(0.245)	0.260	(0.241)
GPA=2	-0.0330	(0.265)	-0.0881	(0.265)	-0.0682	(0.255)
GPA=3	-0.180	(0.262)	-0.230	(0.261)	-0.115	(0.253)
GPA=4	-0.588*	(0.346)	-0.477	(0.346)	-0.391	(0.340)
GPA=5	-2.675***	(0.551)	-3.105***	(0.740)	-2.650***	(0.710)
High sch*Jewish					1.710***	(0.179)
Year	yes		yes		yes	
Occupation					yes	
Obs.	2070		2070		2070	

IV and observable skills - Reserve Officers

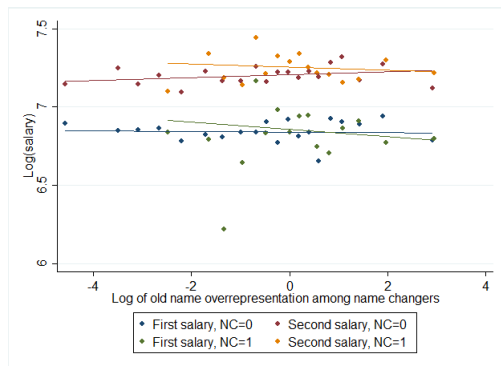
	log(overep)		log(overep)		log(overep)
Yrs. school	-0.249		-0.260		-0.088
	(0.227)		(0.227)		(0.203)
Sq. yrs. sch.	0.009		0.009		0.003
	(0.008)		(0.008)		(0.007)
Training		0.049		0.044	0.0068
		(0.204)		(0.216)	(0.195)
Clerical Occ.			0.102	0.107	0.134
			(0.118)	(0.125)	(0.118)
Jewish					1.669***
					(0.110)
Year	yes	yes	yes	yes	yes
Obs.	1331	1331	1331	1331	1331

(→link to main text)

Salary and IV - Municipal Employees



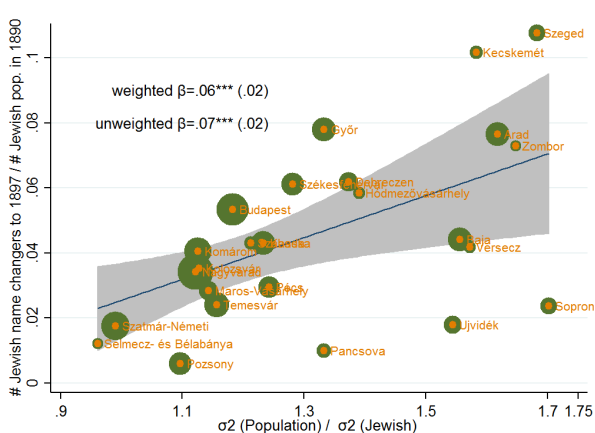
Salary and IV - Reserve Officers



(→link to main text)

Salary and IV - Reserve Officers

- **Example:** Jewish minority → more skilled with less variance in skills than Christians (majority); The bigger the variance ratio σ_H/σ_J , the more name changers between 1890 and 1898.



(→link to main text)