Those Who Stayed: Selection and Cultural Change during the Age of Mass Migration

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Motivation

- Migrants are not a random selection of their sending populations
  - Traditional focus on wealth and education (Borjas 1987, Docquier and Rapoport 2012, Abramitzky et al. 2013)
  - Psychology: Migration can be associated with social and existential loss (Eisenbruch 1991, Bhugra and Becker 2005)
- Voluntary settlement hypothesis: People with individualistic social values are more likely to migrate (Kitayama et al. 2006)
  - Individualism: View oneself as independent from other human beings
  - Easier goodbyes: Lower costs of abandoning social relations

Cultural selection of migrants

- Potential implication: Lasting cultural change towards reduced individualism in migrant-sending societies
  - Cultural values are portable and persist across generations (Algan and Cahuc 2010, Dohmen et al. 2012)
- Why should we care?
  - Individualism linked to preferences for redistribution, labor market organization, cooperation, innovation and entrepreneurship (Morris et al. 1993, Chen et al. 1998, van Everdingen and Waarts 2003, Bozeman 2007).

This paper

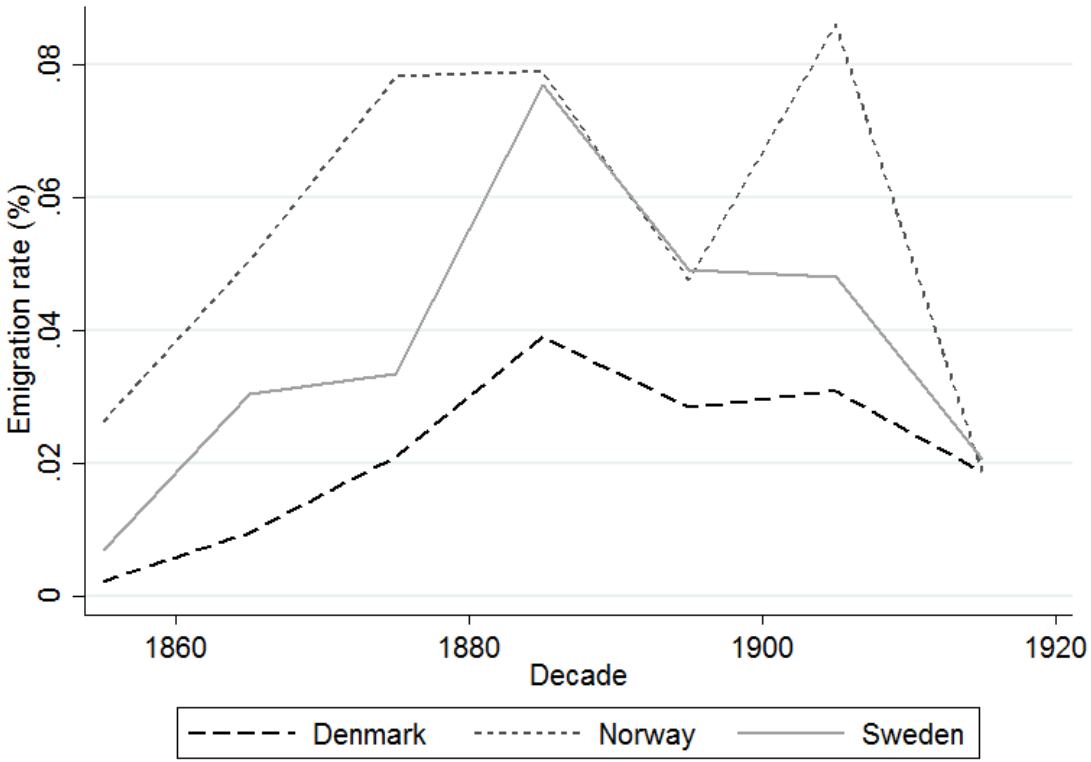
- Examine the link between tight social networks and migration in Scandinavia during the Age of Mass Migration (1850-1920)
  - Emigration of approx. 25% of the populations to New World countries
  - Historical perspective: Loose regulatory policies and long-run perspectives
- Individual data on nearly all emigrants and stayers from censuses and passenger lists
  - Indicators of collectivism and individualism based on common first names: Capture parents' preferences for fitting in or standing out at time of name-giving

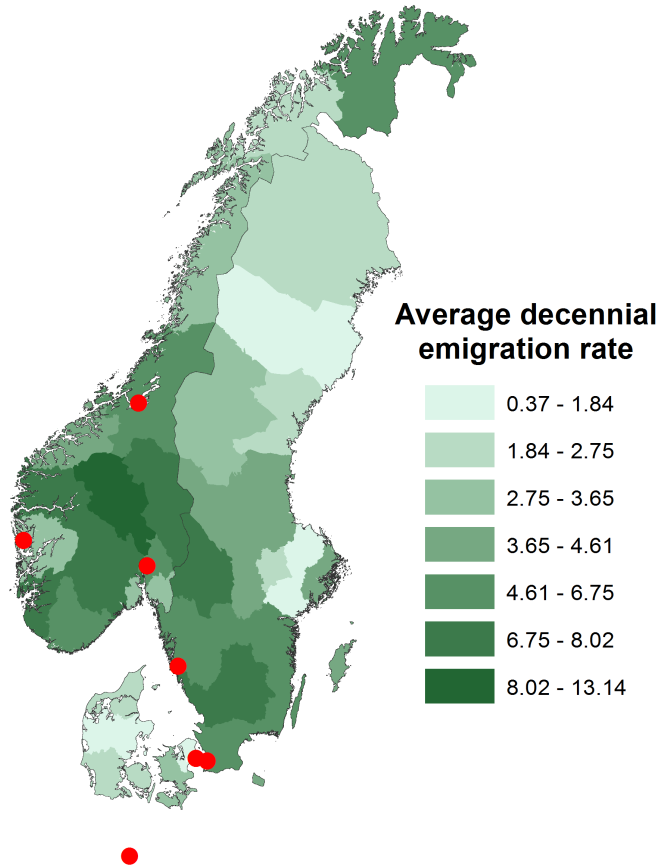
Related literature

- Social and cultural aspects of migration (Fouka 2019, Abramitzky et al. 2019, Bazzi et al. 2017)
- Cultural evolution
  - General (Boyd and Richerson 2005, Guiliano and Nunn 2017)
  - Of social norms and cooperation (Buggle 2019, Enke 2019, Richerson et al. 2003, Henrich and Henrich 2007)

Historical background

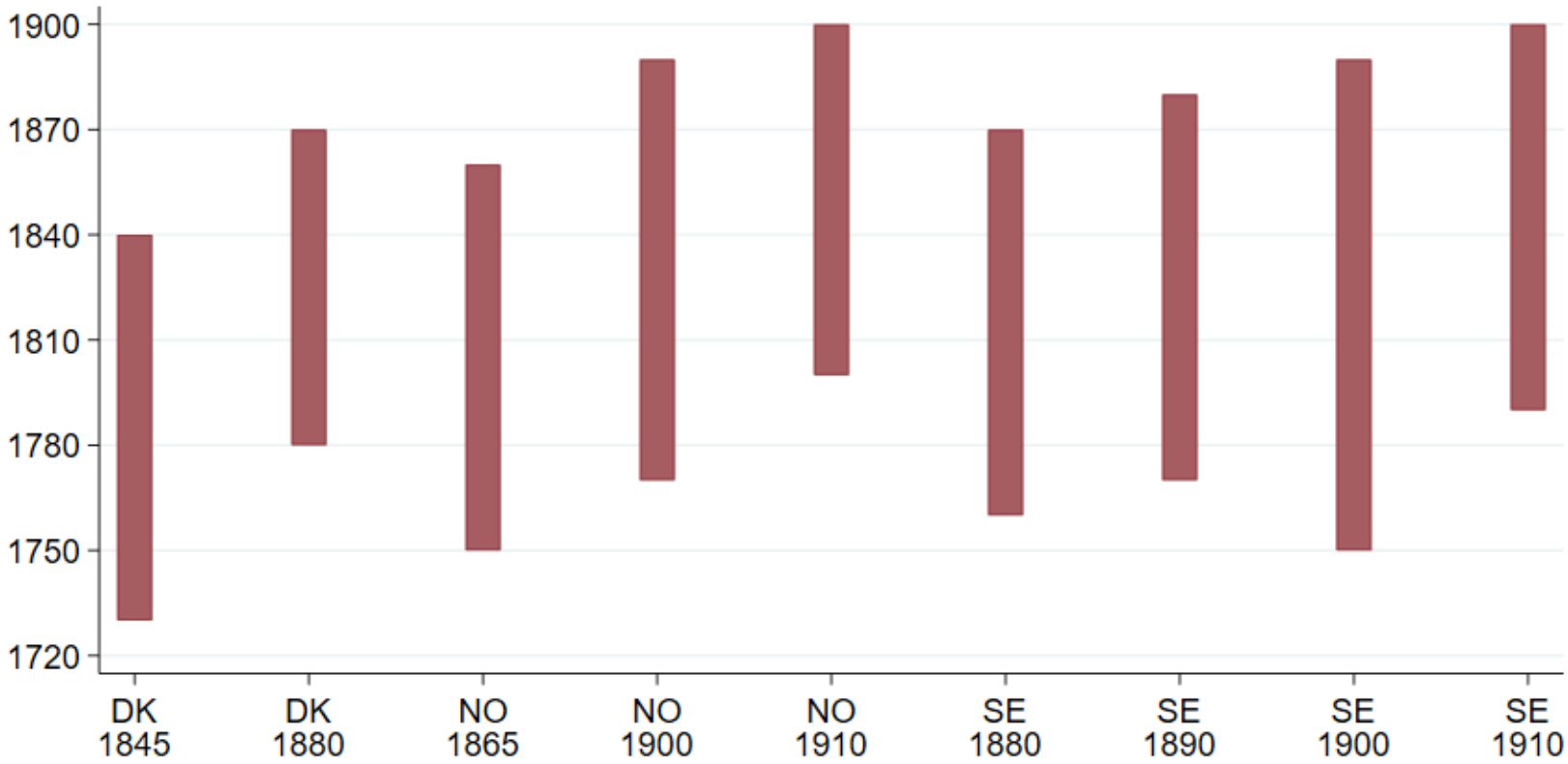
Figure: Scandinavian emigration 1850-1920





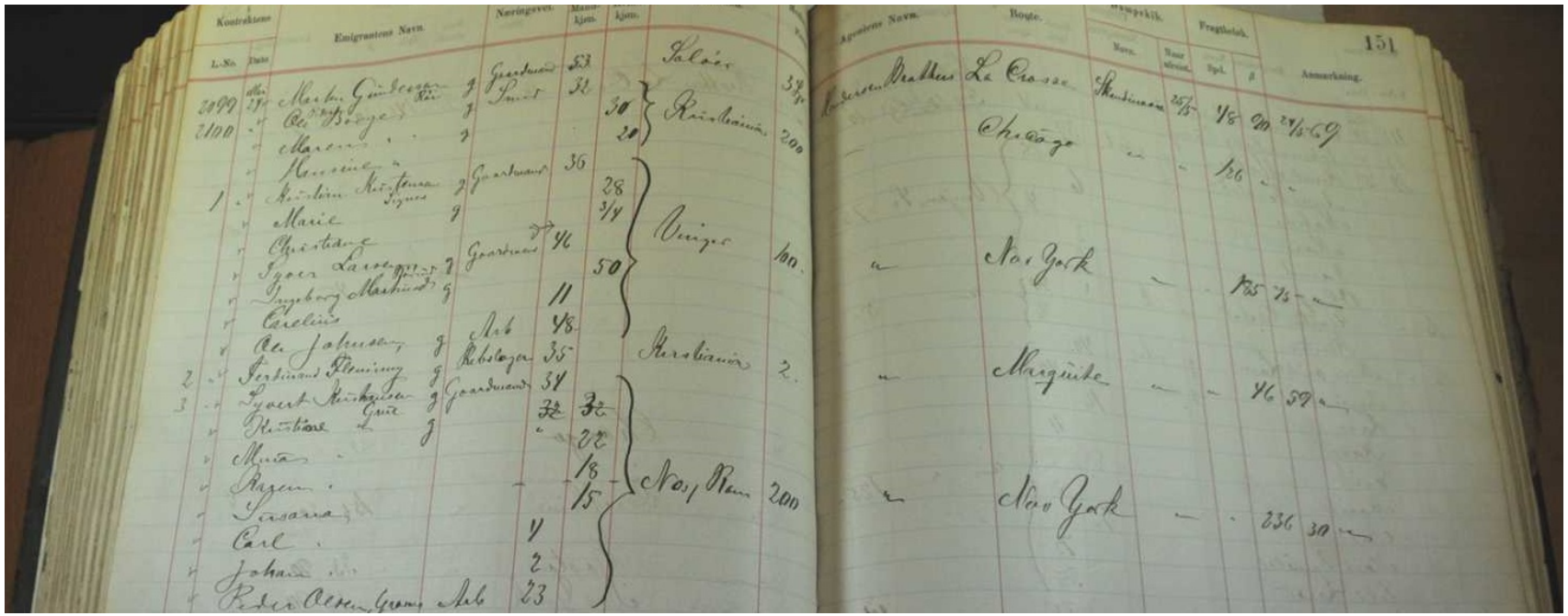
Data: Population censuses (1845-1910)

- Full-count with birthplace information, covering the following birthyears:



Data: Passenger lists (1868-1920)

- Cover 1.2 mil. first-time emigrants
- With name, birth year, date of emigration, gender, last place of residence, (and for a subsample) birth district
- Validation: Emigrant numbers correlate with cross-census changes



Linking emigrants with their birth cohorts

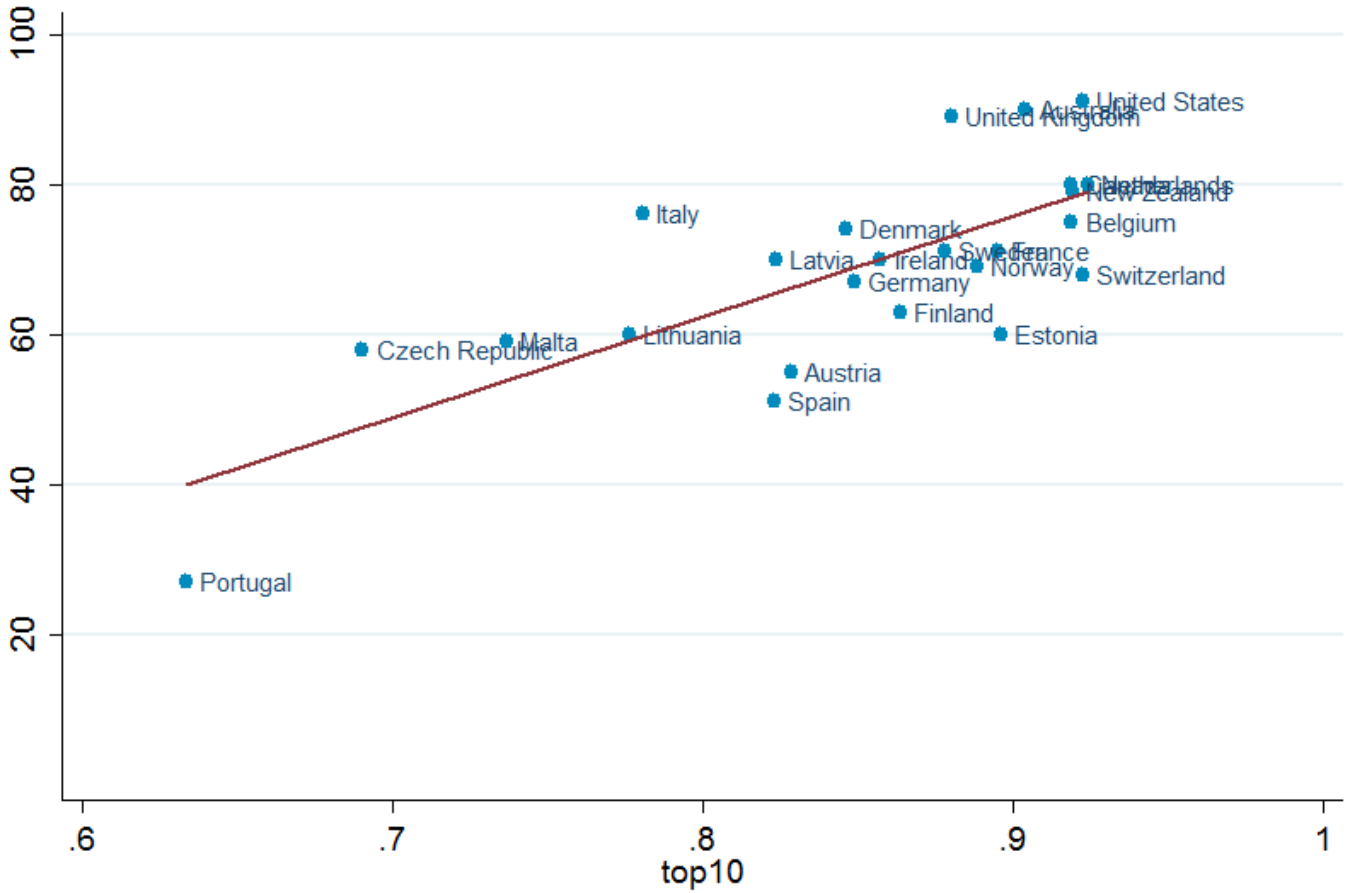
- Direct
  - Link boys <15yrs in earliest census to passenger lists **and** a later census
    - ★ (DK-1845 NO-1865 SE-1880) $\longrightarrow$ (DK-1880 NO-1900 SE-1910)
  - Based on full name, birthyr, gender, birthplace and residence district (42% success, potential bias from false links)
- Indirect
  - Assign a probable birth place based on the birthplace/residence and names composition in census closest to emigration year
  - Add them to the population if emigration before census year, ignore them if no link

Measurement: Common first names

- First names reflect the cultural and social environment in which they are chosen (Lieberson 2000, Tan 2004, Mateos 2013)
- Balance independent and social identity (Twenge et al. 2010, Varnum and Kitayama 2010)
  - Commonness a key driver of first name choice
  - Reflect preferences for fitting in or standing out (Schonberg and Murphy 1974, Zweigenhaft 1981, Emery 2013, Bloothooft and Groot 2008, Christenfeld & Larsen 2008)
  - Historical correlation between first name commonness and the use of singular vs. plural pronouns in Swedish local newspapers

Cross-country validation with present-day indicators

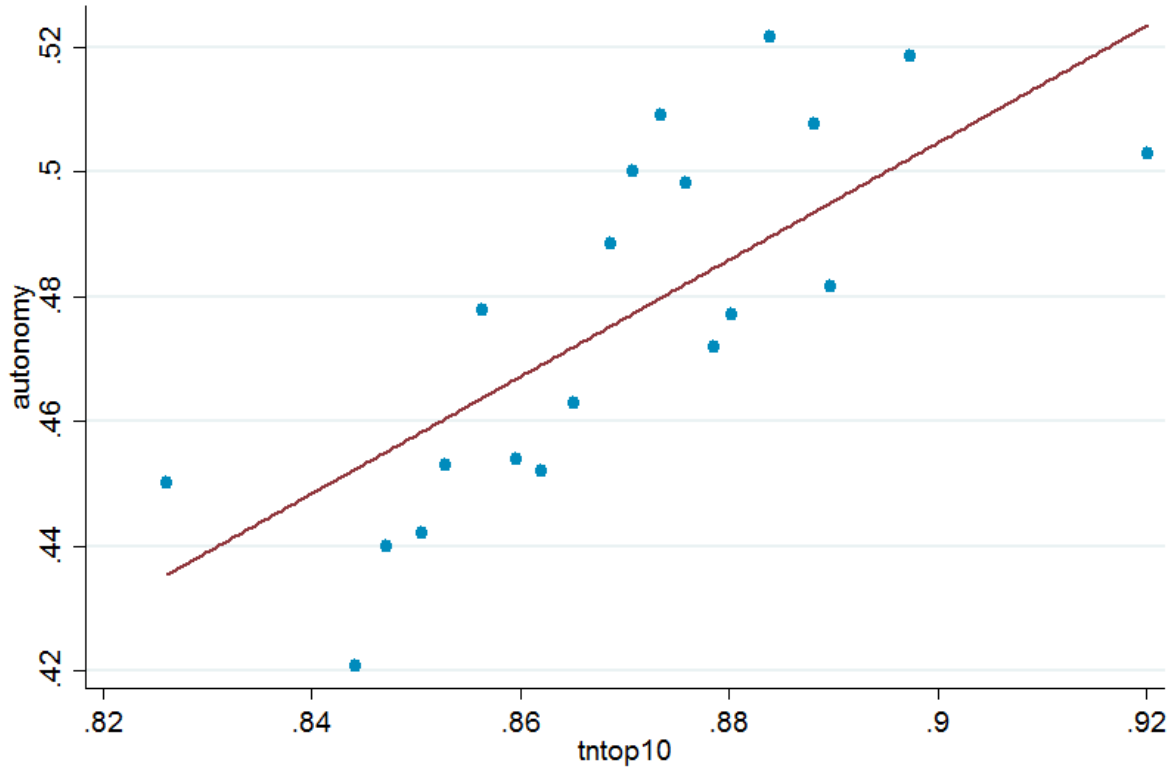
Figure: Baby first name uncommonness and Hofstede's (2001) individualism index



Note: Newborn first name uncommonness = the share of newborns with a first name not among the 10 most popular male or female names in the country.

Within-country validation with present-day indicators

Figure: Baby first name uncommonness and the value of personal autonomy



Note: Comparing individual responses on the value of personal autonomy from the pooled European Values Study and World Values Survey (1981-2012) with the share of babies born in the respondents residence district that were given an uncommon first name (2015). Controls . Countries included are: AU, AT, BE, CA, CZ, DK, FR, IR, IT, NE, NO, ES, SE, CH, GB.

Selective emigration

Distribution of first name commonness

Baseline measure: ln share of birth cohort (by birth decade, birth district, census) that share the same first name

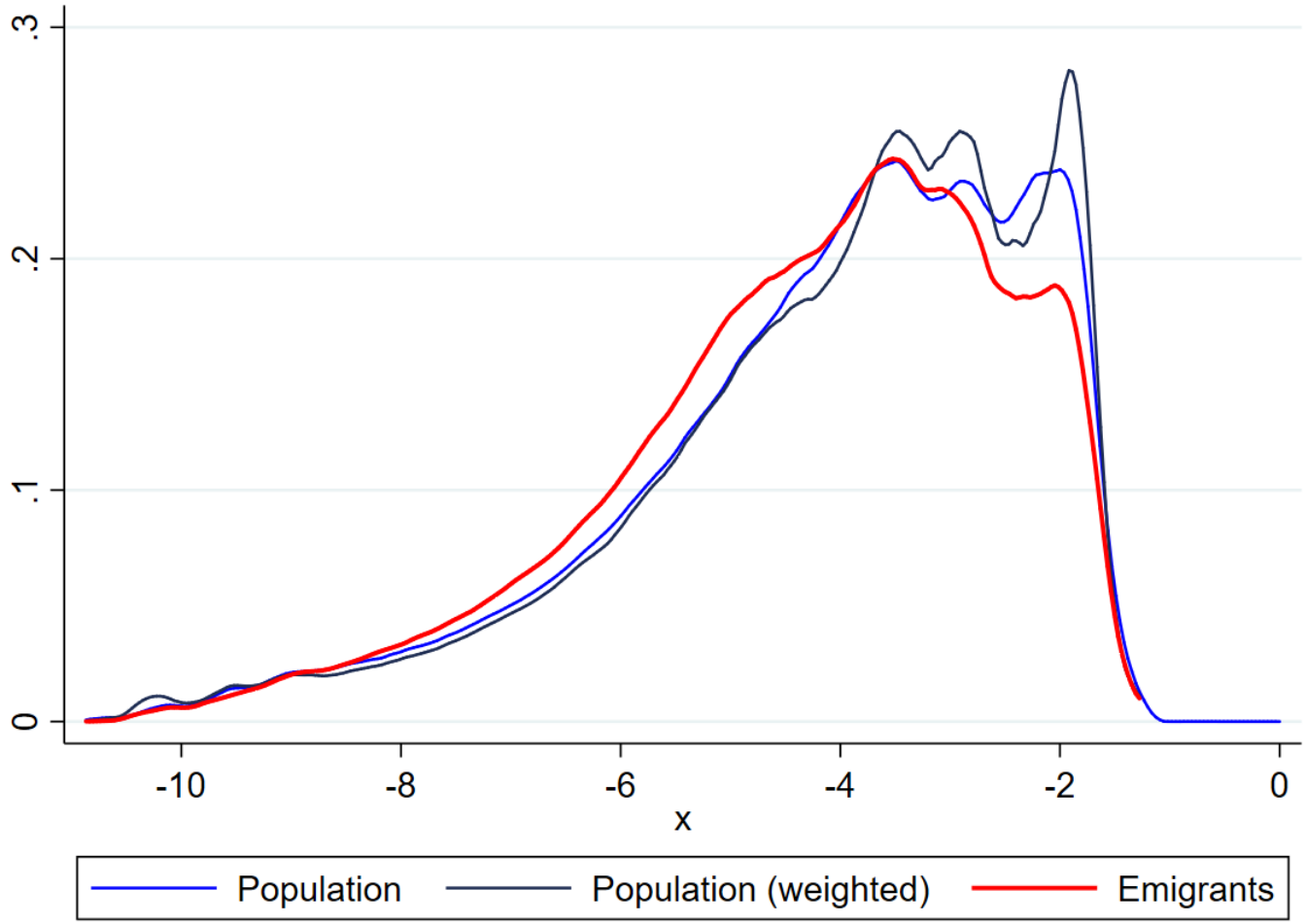
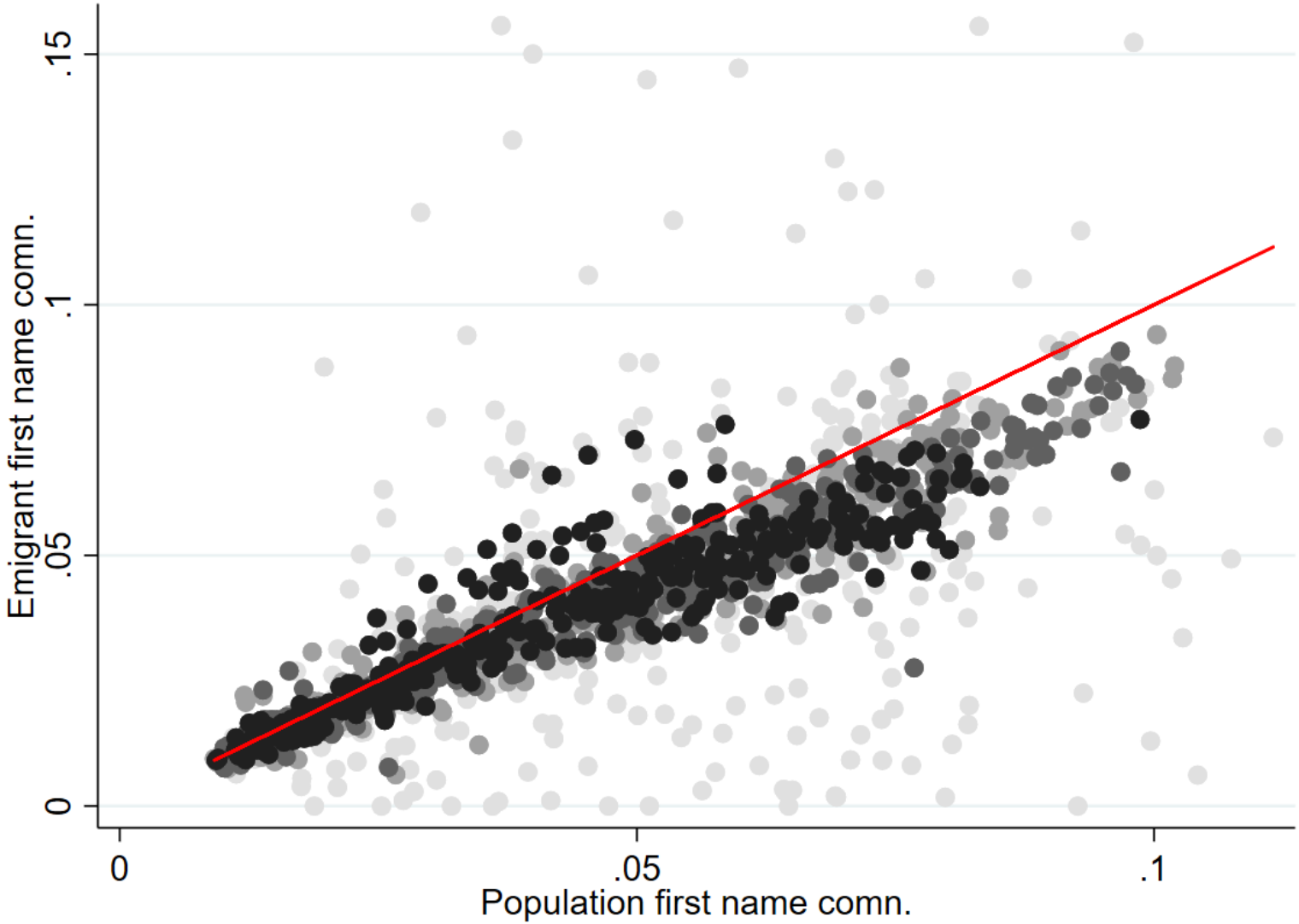


Figure: First name commonness across all emigrating cohorts



Population includes emigrants. Red 45-degree line.

Group level analysis: Model

Within-cohort, across first names:

$$m_{ncdy} = \alpha_p p_{ncdy} + \phi_c + \phi_d + \phi_y + \alpha_X X_{ncdy} + \varepsilon_{ncdy}, \quad (1)$$

where

- $m_{ncdy} = \frac{M_{ncdy}}{N_{ncdy}}$: Total emigration rate (1870-1920) among people with first name n, birth decade c, birth distric d, observed in census y (*based on indirect emigrant-cohort links*)
- $p_{ncdy} = ln(\frac{N_{ncdy}}{N_{cdy}})$: First name commonness in earliest census
- ϕ_c, ϕ_d and ϕ_y: Fixed effects
- X_{ncdy}: Control variables

Group level analysis: Control variables

- Last name commonness
- Other first name characteristics: String length, no. of first names, regional distinction, rare name dummy, used today dummy
- Childhood household characteristics (for cohorts <15yrs in a census):
  - No. siblings and birth order
  - Parent's previous migration, occupation, wealth
  - Household being located in urban area
  - Same first name as another family member

Table: Group level results

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var.	Rate of emigration					
First name cmn. (ln)	-0.002***	-0.004***	-0.002***	-0.004***	-0.004***	-0.003***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Sample	Full		Children in the census			
Controls						
Last name cmn.	Y	Y	Y	Y	Y	Y
Add. first name char.	N	Y	N	Y	Y	Y
Sibling structure	N	N	N	N	Y	Y
Household char.	N	N	N	N	N	Y
Observations	13,410,843	13,410,843	6,860,116	6,860,116	6,860,116	6,860,116
R-squared	0.22	0.24	0.29	0.33	0.33	0.33

Notes: The unit of observation represents people that are born in the same district, decade, with the same gender and first name. Observations are weigthed by the number of name carriers. All regressions include cohort fixed effects. Beta coef.'s between -0.05 and -0.09. Robust standard errors clustered at the cohort level are shown in the parentheses where *** p<0.01, ** p<0.05, * p<0.1. AV plots here.

Additional results

- Robustness
  - Alternative first name measures here
  - Alternative migration rate estimates here
- Corroboration here
  - Considering the first name commonness of past decade does not alter the results
  - Carrying a name that has increased in popularity makes you less likely to emigrate
  - Carrying a name that sees a future inrease in popularity makes you more likely to emigrate
  - First name commonness matter less over time

Individual level analysis: Model

$$M_{incdy} = \alpha_p p_{ncdy} + \phi_c + \phi_d + \phi_y + \alpha_X X_{incdy} + \varepsilon_{incdy}, \quad (2)$$

where

- M_{incdy}: Emigration dummy of individual i (<15 yrs in earliest census) based on direct links to passenger lists and later censuses
- $p_{ncdy} = ln(\frac{N_{ncdy}}{N_{cdy}})$: Cohort-specific first name commonness
- ϕ_c, ϕ_d and ϕ_y: Fixed effects
- X_{incdy} is a set of individual control variables (same as previous analysis)

Table: Individual level results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var.			Emigration			Emigration	Out-migration
First name cmn. (ln)	-0.020***	-0.025***	-0.024***			-0.029***	-0.004***
	(0.002)	(0.002)	(0.002)			(0.002)	(0.001)
.. of oldest brother				-0.009***			
				(0.001)			
.. of brothers					-0.017***		
					(0.002)		
Excl. from sample						Out-migrants	Emigrants
Controls							
Last name cmn.	Y	Y	Y	Y	Y	Y	Y
First name char.	N	Y	Y	Y	Y	Y	Y
Household char.	N	N	Y	Y	Y	Y	Y
Observations	113,012	113,012	113,012	113,012	113,012	91,467	95,599
R-squared	0.07	0.08	0.08	0.08	0.08	0.11	0.05

Notes: OLS regression on boys<15yrs with mothers<43yrs in earliest census for each country (DK-1845, NO-1865, SE-1880). All regressions include cohort, birth order, and sibling number fixed effects. Beta coef.'s around -0.1. Robust standard errors clustered at the cohort and family level are shown in the parentheses where *** p<0.01, ** p<0.05, * p<0.1.

Additional results

- Robustness
  - Alternative first name measures here
  - Interacting all controls with various fixed effects (siblings, last name, municipality of birth, father's occupation) here
- Corroboration
  - Emigrants with common first names were more like to emigrate later, emigrate with companions, and state as reason that they were going to join someone else here
  - In the US, emigrants with common first names (rel. to Scandinavia) congregated and maintained own culture here

Effects of selection in migrant-sending districts

The places left behind

- Selective emigration causes an immediate drop in the prevalence of individualistic values
- Longer-lasting cultural change depends on strength of cultural persistence (Cavalli-Sforza and Feldman, 1981; Bisin and Verdier, 1998, 2000, 2001; Dohmen et al., 2012; Chowdhury et al. 2018)
  - Transmission among individuals within and outside the family
  - Behavior of minority groups
  - Altered payoffs to carrying different values, natural selection

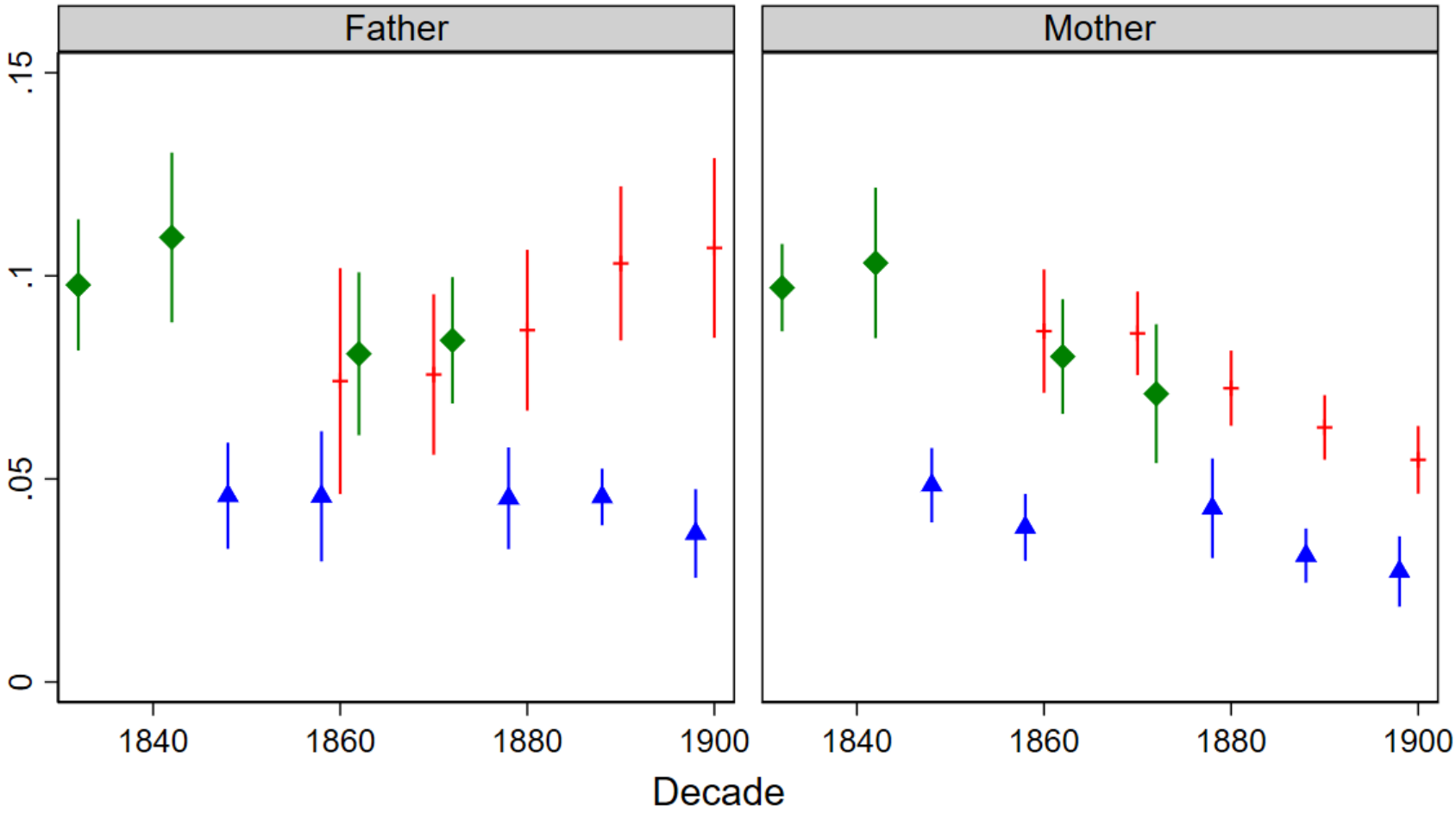
Long-run results

Cross-district correlation btw. present and past cultural norms, acc. for immediate changes caused by selective migration *("cumulative shock")*:

- $pcont_d = \rho_1 phist_{dy} + \rho_2 cs_{dy} + \phi_y + \rho_{HX} HX_{dy} + \rho_{CM} CM_{dy} + \varepsilon_d$
  - Data: Earliest population census, World/European Values Survey and contemporary naming patterns
  - Controls: Historical district and emigration characteristics

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var.	WVS: Personal Autonomy		WVS: Lifestyle Liberty		First name commonness 2015	
Historical first name comn.	-0.215***	-0.217**	-0.272***	-0.387***	0.044**	0.025
	(0.046)	(0.097)	(0.098)	(0.080)	(0.021)	(0.023)
Cumulative shock	-0.099***	-0.828**	-0.135**	-0.130	0.018*	0.444**
	(0.025)	(0.396)	(0.055)	(0.536)	(0.010)	(0.173)
Controls	Baseline	All	Baseline	All	Baseline	All
Observations	7,503	7,503	6,347	6,347	50	50
Districts	50	50	50	50	50	50
WVS/EVS census years	5	5	5	5	5	5
R-squared	0.13	0.13	0.28	0.29	0.98	0.99

Figure: Parent-to-child transmission of commonness (among stayers)



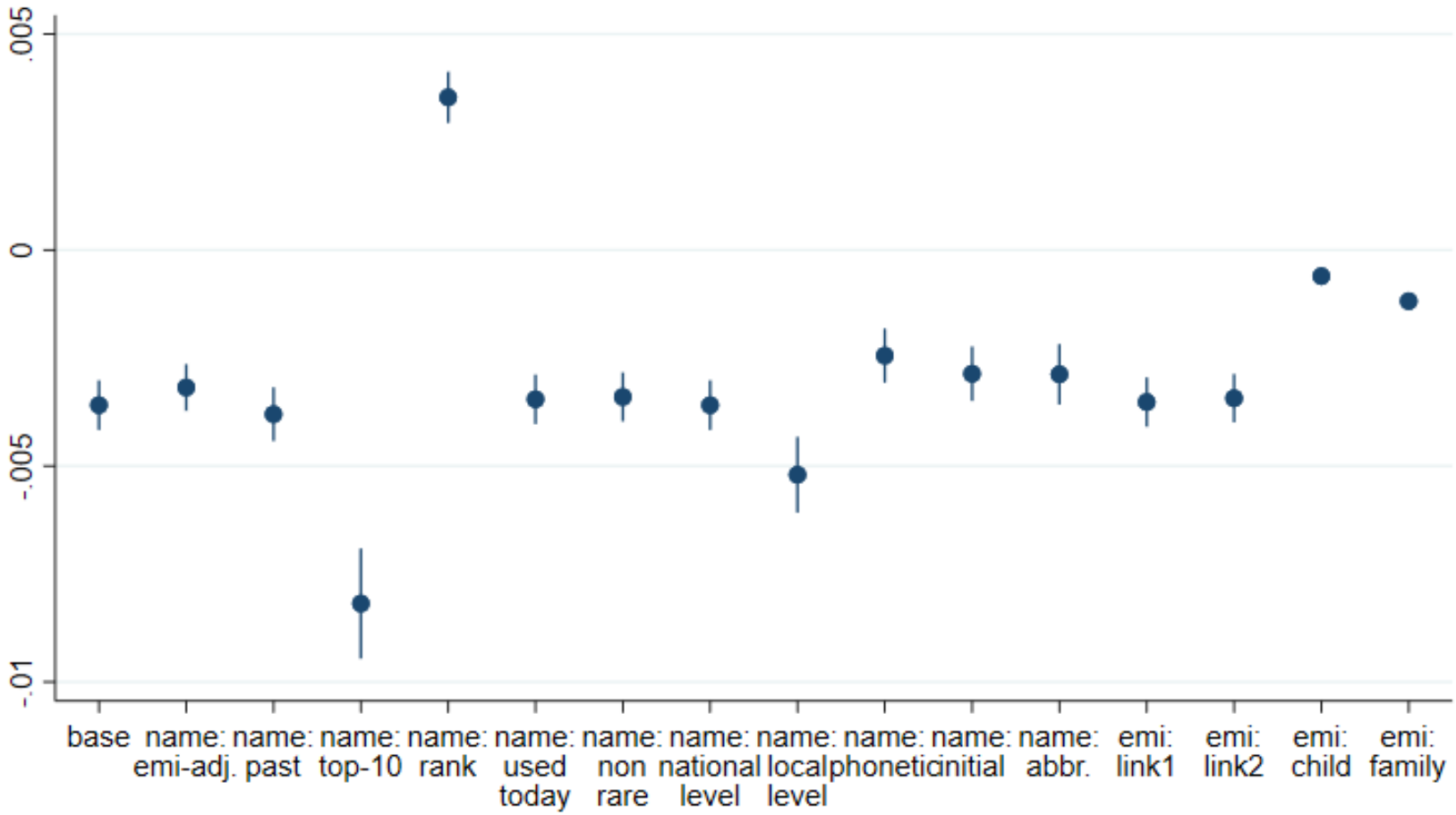
Coefficients from regressions on firstborn child and parents first name uncommonness grouped by country and birth cohort. Include fixed effects for child and parent cohorts, and individual controls.

Conclusions

- Scandinavia would have been more individualistic and culturally diverse had the Age of Mass Migration not taken place
  - Emigrants selected on individualistic cultural traits
  - Individualistic orientations mattered less in the decision to emigrate over time
  - Emigration was associated with lasting reductions in home population individualism
  - The asymmetric speed of cultural change over time and space generated cultural convergence
- External validity: EU migrants here

Additional results

Figure: Name-cohort level results: Robustness



Back to main.

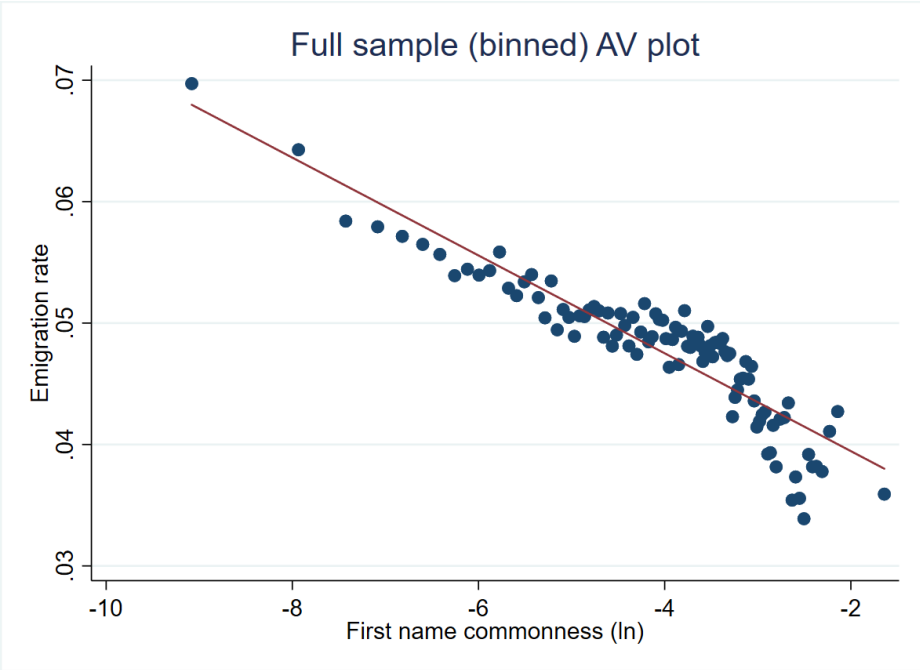
Table: Additional results

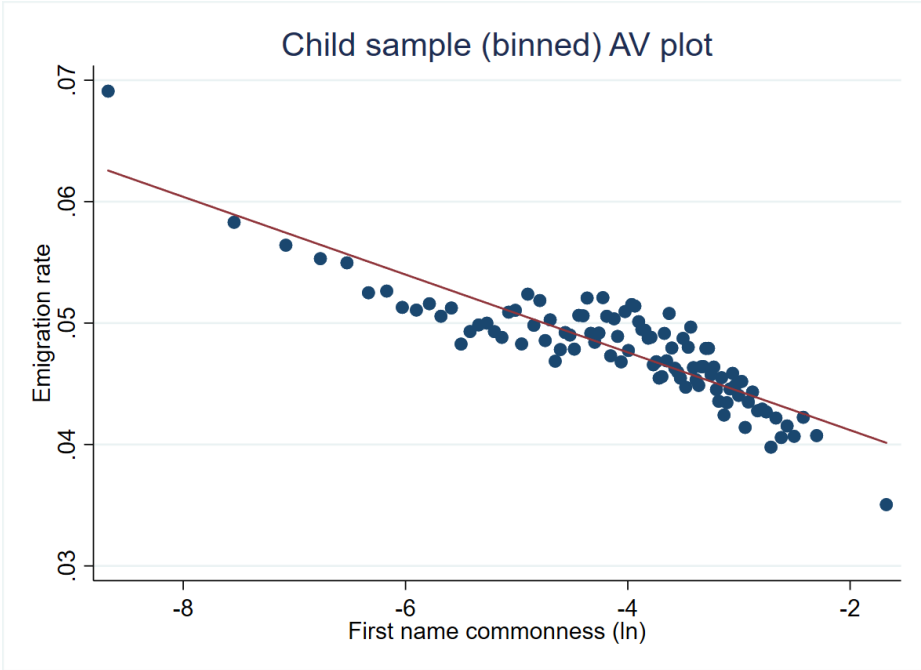
	(1)	(2)	(3)	(4)	(5)
Reference period	Past decade			Present decade	
Data type	Cross-section	Cross-section	Cross-section	Cross-section	Panel
First name cmn. (ln)	-0.005***	-0.005***	-0.004***	-0.010***	
	(0.000)	(0.000)	(0.000)	(0.001)	
Change in name cmn.		-0.002***	0.002***		
		(0.000)	(0.001)		
First name cmn.				-0.002***	
X district mean				(0.000)	
First name cmn.					0.0003***
X time trend					(0.000)
Observations	13,410,843	13,410,843	7,156,181	13,410,843	13,410,843
R-squared	0.24	0.24	0.19	0.24	0.42

Notes: Full sample. Dep. var is emigration rate. Robustness checks on full sample regression with all controls and cohort fixed effects. Fixed effects panel results in column (5).

Back to main.

Figure: Name-cohort level results

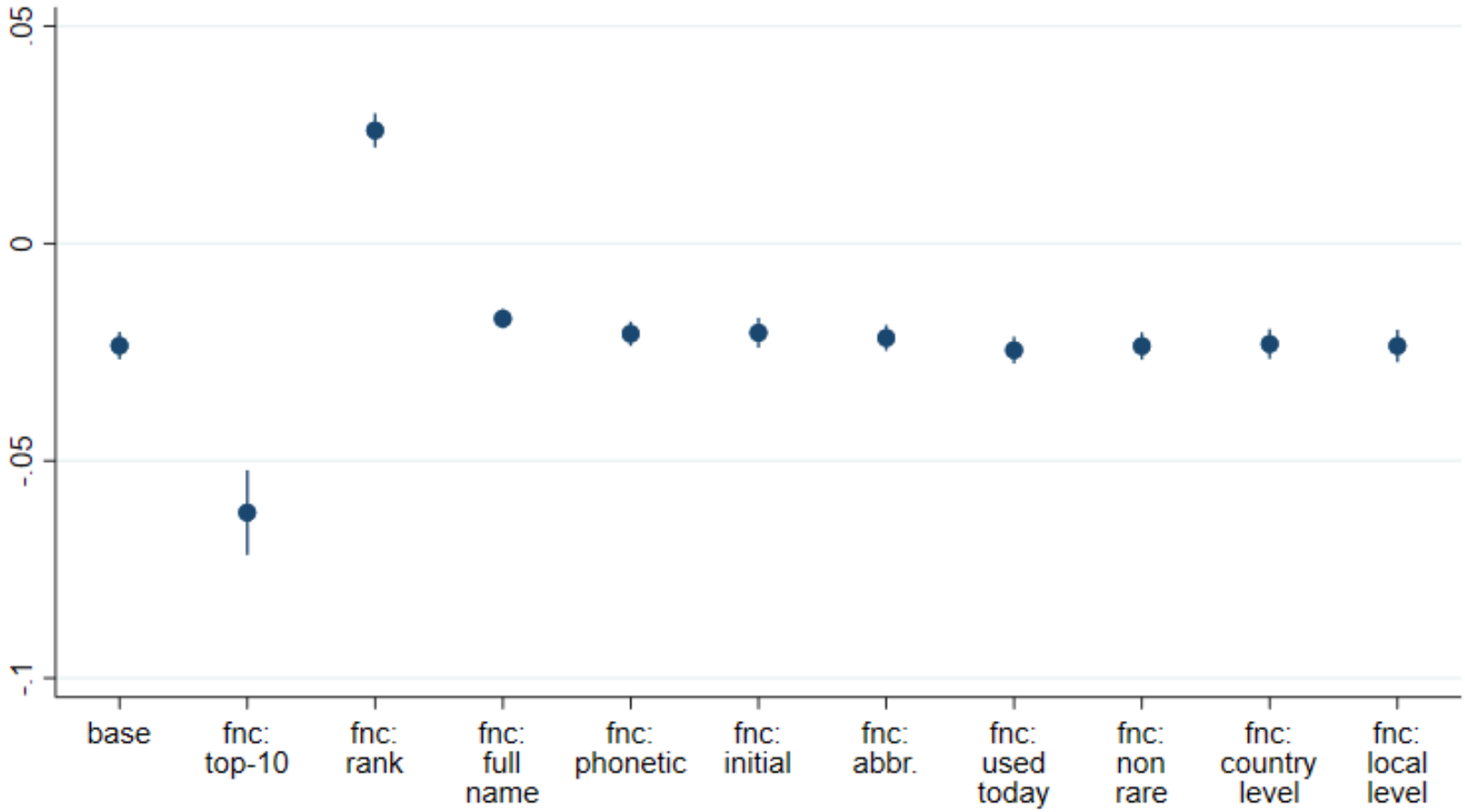




Back to main.

Additional results

Figure: Individual level analysis: Robustness with alternative indicators



Back to main.

Additional results

Table: Individual level analysis: Robustness

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var.	Emigration							
First name cmn. (ln)	-0.0128***	-0.0168***	-0.0220***	-0.0756***	-0.0236***	-0.0275***	-0.0255***	-0.0235***
	(0.001)	(0.001)	(0.004)	(0.008)	(0.002)	(0.002)	(0.001)	(0.002)
X district mean				-0.0178***				
				(0.003)				
Past cmn. increase		-0.0106***						
		(0.002)						
Future cmn. increase			-0.0001					
			(0.003)					
Period of first name cmn.	Past	Past	Present	Present				
Additional FE					Sibling	Municipality	Last name	Father hisclass
Observations	113,012	43,935	10,498	113,012	113,012	94,618	108,929	113,012
R-squared	0.08	0.09	0.10	0.08	0.08	0.10	0.18	0.08

Back to main.

Additional results

Table: Individual level analysis: Emigrant behavior

	(1)	(2)	(3)	(4)	(5)
Dep. var.	W. family	Americas	US over CA	Following	Emigration year
First name cmn.	0.001***	-0.000	-0.000	0.003*	0.013***
	(0.000)	(0.000)	(0.000)	(0.002)	(0.002)
Observations	356,982	599,334	587,381	17,097	599,334
R-squared	0.29	0.04	0.02	0.56	0.95

Back to main.

Additional results

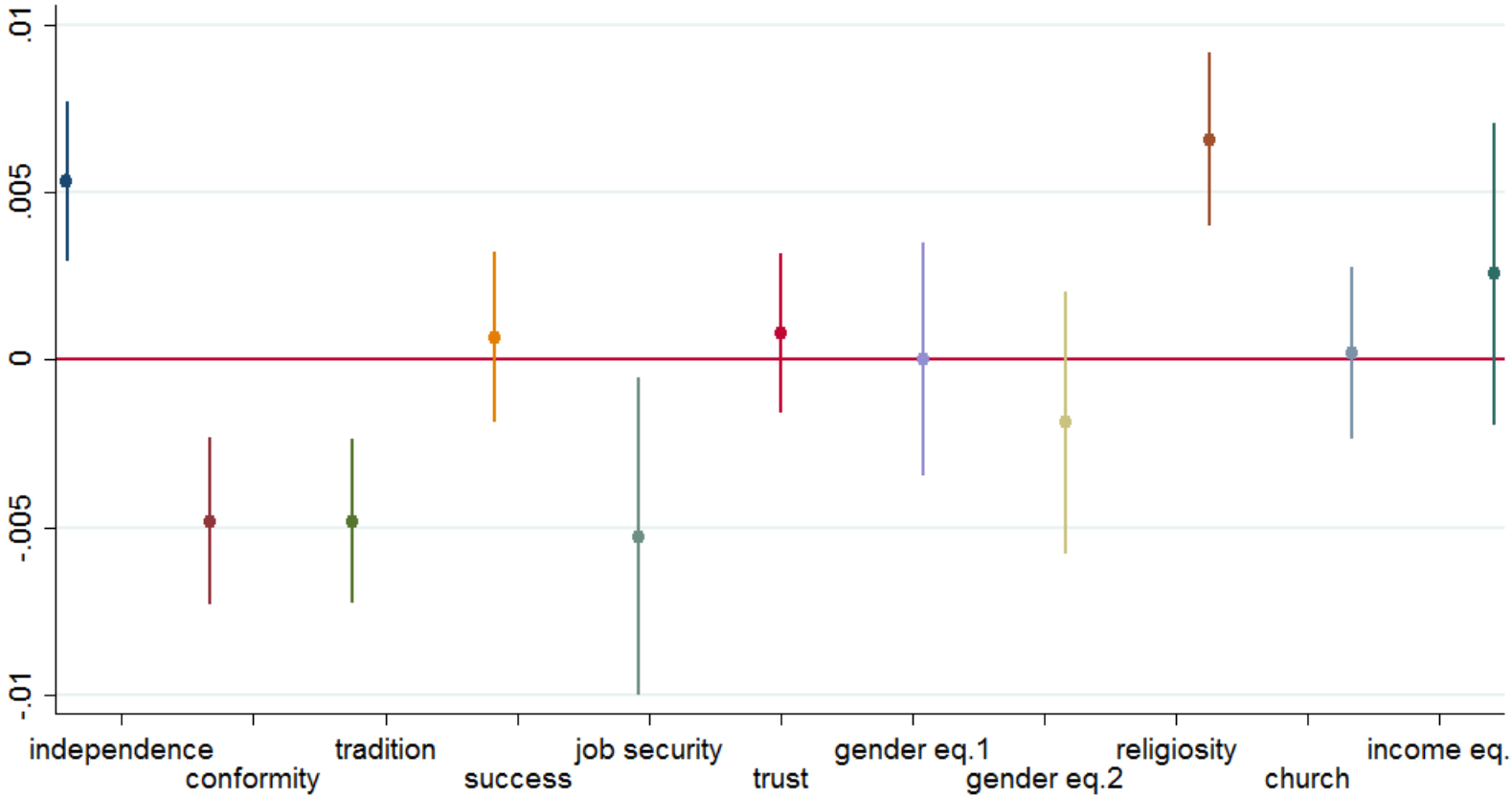
Table: Individual level analysis: Emigrant behavior in the US

	(1)	(2)	(3)	(4)	(5)
Dep. var.	No english	Spouse same nationality	State conc. own nationality	Scandi. distinctive first name of children	
First name uncmn.	-0.084**	-0.156***	-0.012***	-0.147***	-0.015
	(0.041)	(0.047)	(0.003)	(0.033)	(0.019)
Years spend in the US	-0.008***	-0.004***	0.000	-0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Sample	All	All	All	Fathers	Mothers
Additional controls	Y	Y	Y	Y	Y
Observations	47,758	47,758	47,758	37,335	32,371
R-squared	0.19	0.54	0.21	0.05	0.06
Mean of dep. var.	0.0773	0.458	0.0268	0.0561	0.0682
St.dev. of dep. var.	0.267	0.498	0.0245	0.128	0.145

Back to main

Discussion: External validity

Figure: Cultural attitudes and the propensity to migrate within Europe, 2002-2016



Beta-coefficients on the link between international migration and individual values and beliefs in the European Social Survey (2002-2016), controlling for age, age^2, marriage, education, survey year FE, country of origin FE, and country of residence FE. Back to main