When Parental Background Matters:

The Intergenerational Mobility and Assimilation of Italian Immigrants in Germany

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Freie Universität Berlin

Historical Background

Germany 1956-1973:
recruitment of guest workers from Italy, Turkey, Spain, Portugal, Greece and Yugoslavia

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Today, 20 % of population in Germany has a migration background (∼16 million people)

Motivation

- In Germany, integration of immigrants has become an indispensable subject of social policy measures.
- Official statistics (German Education Report 2012) evidence low educational performances of people with migration background, especially from former *guest worker* recruitment states.
- Italian immigrants show very low performances, although they were the first group immigrated as *guest worker* to Germany (Italy was the first country signing an agreement with Germany in 1956).

Literature Review I

* Low educational performances of *2nd generation immigrants* in Germany*:*

  - Algan et al. (2010)
  - Gang and Zimmermann (2000), Kirsten and Granato (2007)
  - Luthra (2010)
    $\longrightarrow$ all evidence that Italian immigrants are one of the least groups in educational achievements.

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BUT...what about the "starting point"?

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** Educational disadvantage conditional on parental background

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** Educational disadvantage conditional on parental background:

Italian immigrants: **still lower** *vs* **no difference to natives**

Literature Review II

Influence of parental background $\equiv$ ***intergenerational mobility***

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- higher mobility $\longleftrightarrow$ **equality of opportunity** (Schütz et al. 2008).
- Germany: **educational mobility is low** (Woessmann 2008; Heineck and Riphahn 2009).

Literature Review II

Influence of parental background $\equiv$ ***intergenerational mobility***

- higher mobility $\longleftrightarrow$ **equality of opportunity** (Schütz et al. 2008).
- Germany: **educational mobility is low** (Woessmann 2008; Heineck and Riphahn 2009).

- *2nd generation immigrants* should be more mobile (Borjas 1993).
- link between **intergenerational mobility** and **assimilation of immigrants** (Dustmann and Glitz 2011).

Motivation

Research questions of our study:

- can **lower educational achievements of immigrants** be interpreted directly as a **lack of integration**?
  - depends on intergenerational mobility of this group (*low mobility=intergenerational transmission of disadvantages*)
- is there **convergence of outcomes** in the medium/long run? (*assimilation*)
- which **other specific factors** influence the mechanism? (*ethnic capital*)
- case study: **Italian immigrants in Germany**

Outline

Measurements of intergenerational mobility

$$Educ = f\left(PB^{obs}, PB^{unobs} \right)$$

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$$Educ = f\left(PB^{obs}, PB^{unobs} \right)$$

$$Educ_{it} = \alpha + \beta Educ_{it-1} + \mu_i + \varepsilon_{it}$$

- β : *intergenerational elasticity*
- $\varphi = \beta(\sigma_{t-1}/\sigma_t)$: *intergenerational correlation*

$$\beta, \varphi \longrightarrow 0 \qquad \equiv \text{higher mobility}$$

$$\beta, \varphi \longrightarrow 1 \qquad \equiv \text{higher persistence}$$

Assimilation of immigrants (Dustmann and Glitz 2011)

$$Educ_{it}^{N} = \alpha^{N} + \beta Educ_{it-1}^{N} + u_i$$

$$Educ_{it}^{I} = \alpha^{I} + (\beta + \xi) Educ_{it-1}^{I} + u_i$$

$$\underset{(Inequality)_t}{\Longrightarrow E\left[Educ_{it}^{N}\right] - E\left[Educ_{it}^{I}\right]} = \alpha^{N} - \alpha^{I} + \underset{(Inequality)_{t-1}}{\beta(E\left[Educ_{it-1}^{N}\right] - E\left[Educ_{it-1}^{I}\right])} - \xi E\left[Educ_{it-1}^{I}\right]$$

Data

Socioeconomic Panel	*Registry of Italians resident abroad*
SOEP 1984-2010	AIRE 2013

Data

Socioeconomic Panel SOEP 1984-2010	*Registry of Italians resident abroad* AIRE 2013
Last observation of individual in data	All registered Italian families in Germany
N = 35,920 (636 Italians, 341 2nd gen.)	N = 6,564 (whole data: 794,463 people)
Immigrants: *migration background* (MB)	
1st gen. immigrants:	
- direct MB	
2nd gen. immigrants:	
- indirect MB or	children of household heads
- direct MB & immigrated <10 years old	
Outcome variable: Years of regular schooling (0 to 13)	
Parental education: "Best parent's" years of schooling	
Ethnic capital:	
- year of family arrival	- year of inscription
- language spoken at home	- Italian geographic region
	- parental country of birth

Data - Descriptive

Educational outcomes: distance to natives

	present study		Algan et al. (2010)	
	male	*female*	*male*	*female*
Italians 1st gen.	**-2.876**	**-2.831**	**-3.391**	**-2.403**
	(0.295)	(0.280)	(0.182)	(0.189)
Italians 2nd gen.	**-0.945**	**-0.716**	**-2.333**	**-1.483**
	(0.158)	(0.261)	(0.207)	(0.216)
Other 1st gen.	-1.246	-1.289	[-3.529 -0.320]	[-3.570 0.386]
	(0.119)	(0.140)		
Other 2nd gen.	-0.302	-0.449	[-2.333 0.225]	[-1.523 0.275]
	(0.0997)	(0.0840)		
Dep.Variable	Regular years of schooling		Age left full-time education	
Data	SOEP (1984-2010)		Microcensus (2005-2006)	

Regression coefficients of dummy-variables indicate distance to natives. Controlling for quadratic birth year, federal state and time dummies. Weighted regressions.

Estimation strategy

- Intergenerational mobility
  - OLS: $Educ \equiv log(Yschool)$
    $\Longrightarrow \hat{\beta}$
    $\Longrightarrow \hat{\varphi} = \hat{\beta}(\hat{\sigma}_{t-1}/\hat{\sigma}_t)$
- Probability of higher schooling
  - $Prob(YSchool_{it} > 9) = Prob(Educ_{it} > \pi) = \Phi(\beta YSchool_{it-1} + \gamma D_i + m)$

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Results I

Estimation results: SOEP sample

	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	elasticity β				*intergen. corr.* φ			
Natives	0.482*	0.445*	0.445*	0.445*	0.384*	0.356*	0.356*	0.356*
Italians 2nd gen.	0.113*	0.124°	0.0855	0.0725	0.218°	0.233'	0.142	0.133
Others 2nd gen.	0.160*	0.171*	0.134*	0.0936°	0.264*	0.283*	0.240*	0.171°
Controls								
Demog. factors		yes	yes	yes		yes	yes	yes
Migration cohorts			yes				yes	
Language				yes				yes
N	33543	33543	32762	31453	33543	33543	32762	31453

Demographics: Federal State, Gender, Birthcohort, Survey year.

Weighted regressions using SOEP data design variables and robust standard errors clustering by household of origin.

Statistical significance level ' 0.1 ° 0.05 * 0.01.

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Results II

Estimation results: AIRE sample

AIRE sample: Italian 2nd generation immigrants

	(1)	(2)	(3)	(4)
elasticity: β	**0.185***	**0.176***	**0.159***	**0.176***
	(0.0161)	(0.0160)	(0.0169)	(0.0219)
intergenerational corr.: φ	**0.261***	**0.249***	**0.225***	**0.229***
	(0.0161)	(0.0160)	(0.0169)	(0.0219)
Demog. factors		yes	yes	yes
Migration cohorts + Italian geographic region			yes	
Parental country of birth				yes
N	6564	6564	5936	4737

Robust standard errors clustering by household of origin. Statistical significance level ' 0.1 ° 0.05 * 0.01.

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- **Probability of higher schooling**
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Results III

Probability of higher schooling ($>$ 9 years of schooling) conditional on parental education

	(1)	(2)
Italian: 1st gen. (0/1) (d)	-1.112***	-0.584***
	(0.151)	(0.180)
Italian: 2nd gen. (0/1) (d)	**-0.609*** **	**0.0777**
	(0.105)	(0.144)
Other immig.: 1st gen. (0/1) (d)	-0.429***	-0.101*
	(0.0529)	(0.0602)
Other immig.: 2nd gen. (0/1) (d)	**-0.285*** **	**0.0616**
	(0.0506)	(0.0621)
Controls		
Parental Education	**No**	**Yes**
Demographic	Yes	Yes
N	34343	33543

Probit estimation with higher schooling (at least 10 years of schooling) as dependent variable. Weighted regressions using SOEP data design variables and robust standard errors clustering by household of origin. Statistical significance level * 0.1 ** 0.05 *** 0.01.

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Main empirical results

- Italian 2nd generation immigrants
  - have **lower educational achievements**, but
  - are **more mobile than natives** and
  - are **not less likely to achieve higher schooling,** controlling for parental education.

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$\Longrightarrow$ Assimilation of Italian immigrants in Germany

Assimilation

Educational convergence of Italian immigrants in Germany: *guest worker cohort*

$$\Longrightarrow \quad E\left[Educ_{it}^{N}\right] - E\left[Educ_{it}^{I}\right] = \alpha^{N} - \alpha^{I} + \beta(E\left[Educ_{it-1}^{N}\right] - E\left[Educ_{it-1}^{I}\right]) - \xi E\left[Educ_{it-1}^{I}\right]$$

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	Children		*Parents*	
generation	$E\left[Educ_{it}^{N}\right] - E\left[Educ_{it}^{I}\right]$	$\alpha^{N} - \alpha^{I}$	$E\left[Educ_{it-1}^{N}\right] - E\left[Educ_{it-1}^{I}\right]$	ξ
t-1	0.48	-0.31	0.84	-0.36
t	0.14	-0.34	0.48	-0.17

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Possible Scenarios:

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t-1	0.48	-0.31	0.84	-0.36
t	0.14	-0.34	0.48	-0.17
Possible Scenarios:				
t+1 (1)	0.05	0	0.14	0

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Educational convergence of Italian immigrants in Germany: *guest worker cohort*

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	Children		*Parents*	
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t-1	0.48	-0.31	0.84	-0.36
t	0.14	-0.34	0.48	-0.17
Possible Scenarios:				
t+1 (1)	0.05	0	0.14	0
t+1 (2)	0.42	0	0.14	-0.17

Assimilation

Educational convergence of Italian immigrants in Germany: *guest worker cohort*

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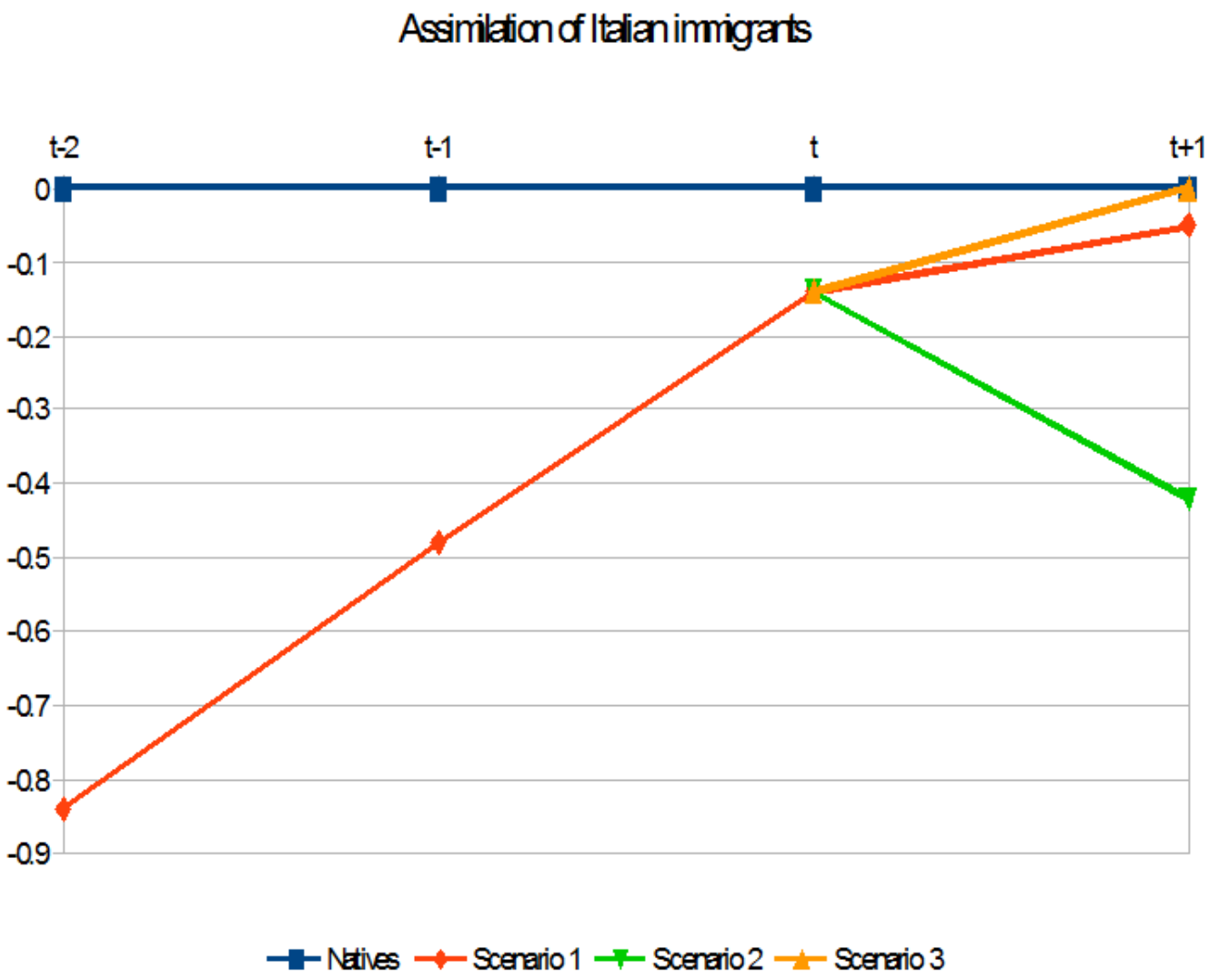
Possible Scenarios:				
t+1 (1)	0.05	0	0.14	0
t+1 (2)	0.42	0	0.14	-0.17
t+1 (3)	0	-0.2	0.14	-0.07

Assimilation

Educational convergence of Italian immigrants in Germany: *guest worker cohort*



Conclusions I

- Our study depicts a better situation of Italian immigrants than previous studies did.
- Parental background is main characteristic in determining educational achievements in Germany (low intergenerational mobility).
- So, as Italian and other immigrants (especially *guest worker*) had very low education, lower educational attainments of their children is a product of this situation.

Conclusions II

- If assimilation is not affected by other factors, higher mobility of immigrants should ease convergence.
- Lower educational achievements of Italian 2nd generation immigrants might be the cause of an unfinished - but ongoing - assimilation process.

Outlook

- role of
  - *ethnic capital*
  - other parental background characteristics (*abilities* or *motivation*)
- intergenerational mobility and assimilation of other groups of immigrants
- Registry of Italians Living Abroad (AIRE) data

Thank you for your attention!

Public Economics & Inequality

Doctoral Program | Freie Universität Berlin

Hans **Böckler** **Stiftung**

Appendix

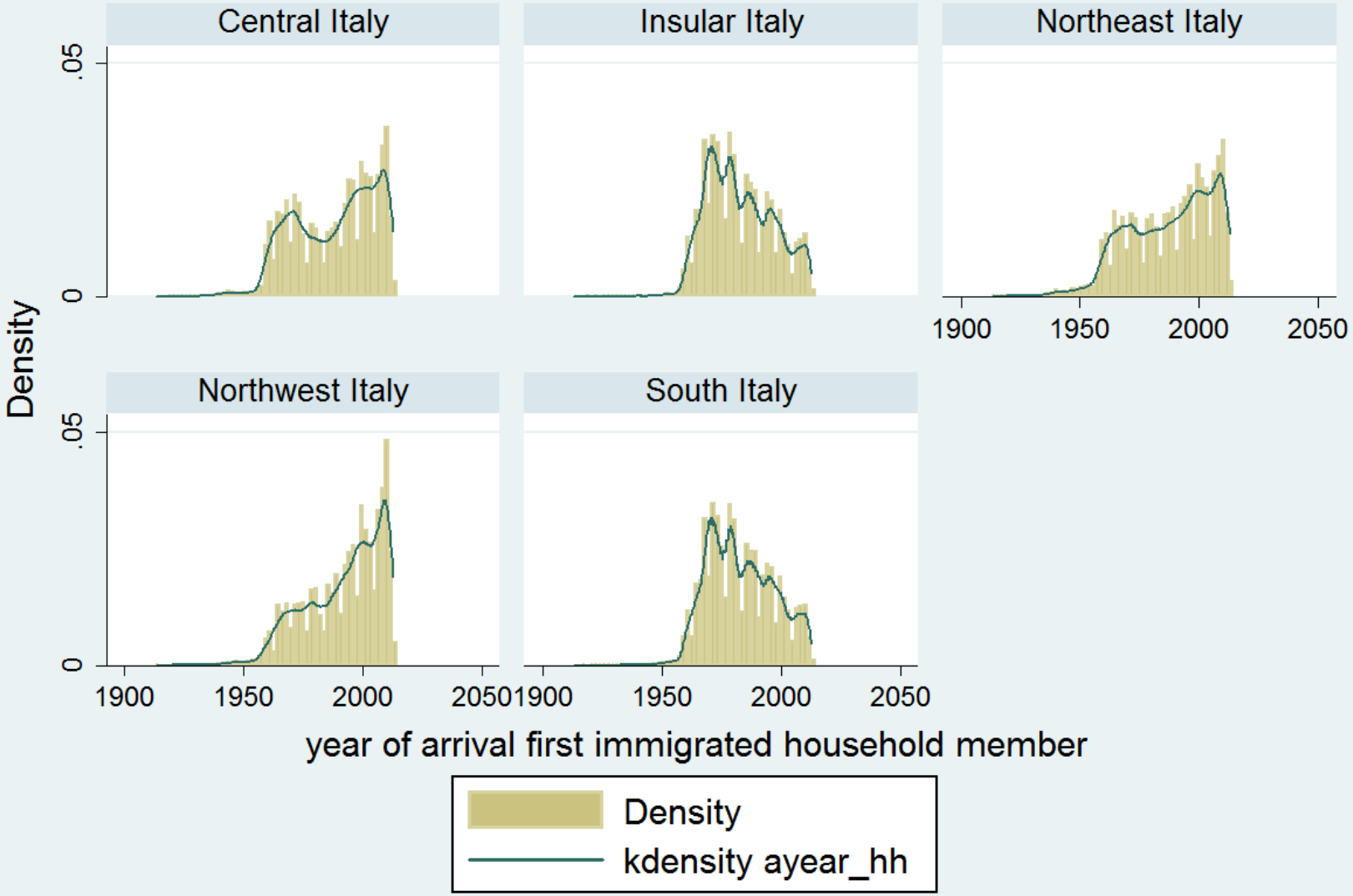
Measurement of intergenerational mobility: *Immigrants vs. Natives*

$$Educ_{it} = \alpha + \alpha \cdot m^{jk} + \beta Educ_{it-1} + \xi^{jk} Educ_{it-1} \cdot m^{jk} + ... + u_i$$

- *intergenerational elasticity*
  - **Natives**: β
  - **Immigrants** of group j in generation k: $\beta + \xi^{jk}$

    $j \, \epsilon$(*Italians, Other immigrants*)
    $k \, \epsilon$(*First generation, Second generation*)
- ... = Controls for
  - *Demographics* (Federal State, Gender, Birthcohort, Survey year)
  - *Ethnic capital* (Migration cohort, Language spoken at home)

Appendix



Data: A.I.R.E. (2013)

Appendix

Transition Matrices and Mobility indexes

	Natives	*Italians*		*Other im.*	*Eq.Op.*
		SOEP[2]	(AIRE[3])		
corr$(Educ_t/Educ_{t-1})$	**0.421**	**0.332***	**(0.300)**	**0.520°**	0
OLS$(Educ_t/Educ_{t-1})$	**0.460°**	**0.163***	**(0.252)**	**0.396**	0
relative immobility	**0.517°**	**0.347***	**(0.516)**	**0.398**	0
$ML(P) = 1 - \lvert\lambda_2\rvert$	**0.522**	**0.577***	**(0.625)**	**0.464°**	1
$MT(P) = \frac{k-trace(P)}{k-1}$	**0.802°**	**0.896***	**(0.822)**	**0.837**	1
$MD(P) = 1 - \lvert det(P)\rvert^{(1/(k-1))}$	**0.869°**	**1***	**(0.881)**	**1***	1

Relative immobility: ratio(observations on main diagonal of transition matrix / N)

λ_2 : second largest eigenvalue of the transition matrix P; $trace(P)$ and $det(P)$: trace and determinant of P;

k is the number of classes

* most and ° less mobile, [2] SOEP weighted by sample design variables, [3] AIRE only 2nd gen. immigrants

Appendix

Table : Number of observations in sample

		absolute		*percentage*	
Natives		30510		84.94	
Italians	*1st gen.*	636	295	1.77	0.82
	2nd gen.		341		0.95
Other immigrants	*1st gen.*	4774	2257	13.29	6.28
	2nd gen.		2517		7.01
N		35920		100	

Appendix

	Natives	Italian 1st	Italian 2nd	Other 1st	Other 2nd
	mean	mean	mean	mean	mean
Year of birth	1954.95	1947.90	1973.51	1953.73	1970.53
Male*	.49479	.53017	.46203	.4748	.49892
Old federal state*	.79174	.99683	.98187	.93181	.92270
Years of schooling (0-13)	10.165	7.1033	9.737	8.8606	10.148
Years of parental schooling	9.6836	5.9169	7.0881	7.9102	8.8707
Higher schooling (> 9 years)*	.5491	.13177	.46460	.36728	.56559
Year of family migration**		1967.43	1967.33	1976.77	1972.03
Spoken language at home:					
- German*		.11343	.27655	.21818	.27661
- Both*		.53541	.51696	.38013	.28342
- Native*		.07382	.01472	.05429	.0026
- n.a.*		.27733	.1917	.34738	.43729
N	30510	295	341	2257	2517

* Dummy-variable (0/1), ** Year of first immigrated household member.
Weighted statistics using SOEP data design variables.

Appendix

Years of regular schooling

SOEP 1984-2010		AIRE 2013		
no school	0 years	*no degree*	0 years	ISCED 0
no degree	5 years	*primary school degree*	5 years	ISCED I
Hauptschule	9 years	*lower sec. school degree*	8 years	ISCED II
Realschule	10 years			ISCED II
Fachhochschulreife	12 years			ISCED III
Abitur	13 years	*upper sec. school / diploma*	13 years	ISCED III

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Italians 1st gen.	0.115*	0.056	0.0216	-0.0300	0.196*	0.093	0.026	-0.065
Italians 2nd gen.	0.113*	0.124°	0.0855	0.0725	0.218°	0.233'	0.142	0.133
Others 1st gen.	0.270*	0.264*	0.221*	0.169*	0.494*	0.482*	0.405*	0.318*
Others 2nd gen.	0.160*	0.171*	0.134*	0.0936°	0.264*	0.283*	0.240*	0.171°
Demog. factors		x	x	x		x	x	x
Migration cohorts			x				x	
Language				x				x
N	33543	33543	32762	31453	33543	33543	32762	31453

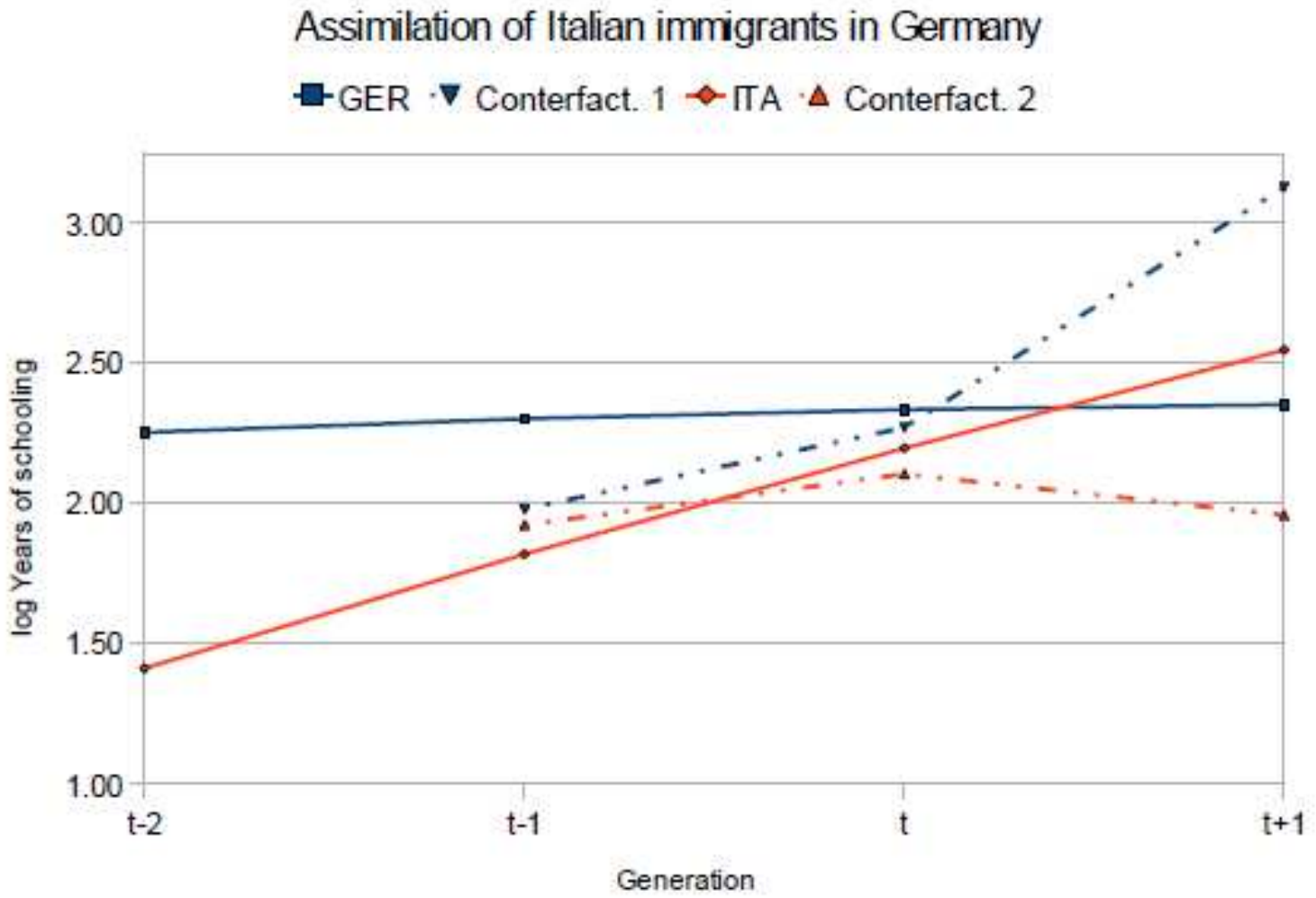
Natives: $\hat{\beta}$, Immigrants: $\hat{\beta} + \hat{\xi}$.

Weighted regressions using SOEP data design variables and robust standard errors clustering by household of origin.

Statistical significance level ' 0.1 ° 0.05 * 0.01.

Appendix

Educational convergence of Italian immigrants in Germany: *guest worker cohort*



Conterfactual 1: GER behaving like ITA; Conterfactual 2: ITA behaving like GER

Appendix

ROBUSTNESS CHECKS:

- only West-Germany
- without parents with 0 and 13 years of schooling
- parents with "no degree" coded with 1,2 and 5 y.of.schooling
- "other schooling degree" instead of missing to 0, 5, 9, 10 and 12 y.of.schooling
- ordered probit
- AIRE:
  - codification of G2 like in SOEP
  - different codifications of "lower secondary school" (9, 10 y.of.schooling)