

# The effects of common culture on economic exchanges: evidence from tourist flows

A. Accetturo, M. Cascarano, P. Degasperi, F. Modena

Bank of Italy

StatCities 2017

# The relevance of the tourism sector

- 1 Tourism is the largest sector in the global services trade (1/4 of world's services exports, UNCTAD 2015);
- 2 In South Tyrol tourism:
  - accounts for about 12% of regional VA (4% in Italy);
  - attracts widespread policy attention;
  - is characterized by an high share of German-speaking tourists (60%).

# Cultural proximity and tourism

- ① Cultural proximity is particularly important in international trade;
- ② Tourism is a particular form of international trade;
- ③ Tourism involves the direct experimentation by the tourist of the quality of the service;
- ④ Asymmetric information and moral hazard could be particularly relevant;
- ⑤ Cultural proximity may reduce these asymmetries by improving both communication and trust.

# The paper in a nutshell

- We study the impact of cultural proximity on trade in services (international tourism);
- We exploit cultural heterogeneity in one border Italian region (South Tyrol), where two linguistic groups (Italian and German) coexist;
- Our units of analysis are municipalities;
- We provide several robustness checks and IV analysis.

**Main findings:** a 1 percentage point increase of the share of German-speaking population determines a rise of 0.5 percentage points in the share of tourist coming from German-speaking countries (Germany, Austria, and Switzerland).

## Related literature (1/2)

- ① Cultural proximity is defined as the sharing of a common identity, the feeling of belonging to the same group, and the degree of affinity between two parties;
- ② Cultural ties play an important role in determining economic exchanges;
- ③ Most of the existing studies have focused on common language and trade of goods (Melitz, 2008; Melitz and Toubal, 2014; Felbermayr and Toubal, 2010; Falck et al., 2012; Egger and Lassmann, 2012, 2015);

### ① Channels (Melitz, 2008):

- ease of communication,
- ethnic ties, trust;

### ② Identification:

- Proxies for cultural ties are often available only at a high level of aggregation, typically at the country level, making it difficult to isolate culture from other country specific aspects, such as institutions (Falck et al., 2012);
- There is an enormous variability of the estimated elasticity of trade with respect to a common language (Egger and Lassmann, 2012).

# Our contribution

- 1 We analyze the impact on trade in services, tourism in particular;
- 2 We exploit cultural heterogeneity of the bilingual region South Tyrol;
- 3 Our units of analysis are municipalities;
- 4 Our measure of cultural proximity is the share of German-speaking population across municipalities [▶ Map](#)
- 5 Cultural heterogeneity in ST was determined by historical reasons;  
[▶ Institutional background](#)
- 6 We are able to control for a very fine set of local covariates.

- 1 ASTAT: touristic presences by nationality at the municipality level;  
▶ Descriptive Stats
- 2 ISTAT, Census (1991): share of German-speaking population
  - residents in South Tyrol are asked to indicate which linguistic group they belong to (German, Italian, Ladin); the declaration is compulsory;
  - our measure of cultural proximity captures the notion of native language: not only ability to communicate, but also ethnic ties and trust;
- 3 ISTAT, other sources: population, elevation, area, slope. ▶ Descriptive Stats

We estimate by OLS the following equation (for municipality  $i$  at time  $t$ ):

$$Tger_{it} = \alpha_{it} + \beta Pger_i + \gamma X_{it} + D_t + DLLS_i + \epsilon_{it} \quad (1)$$

- 1  $t = 1999, \dots, 2014$
- 2  $i = 1, \dots, 116$  municipalities
- 3  $Pger_i$  is the share of local population belonging to the German linguistic group; this share was quite stable over time;
- 4 Standard errors are clustered at the municipality level;
- 5 Endogeneity issues: OVB and reverse causation.
  - We control for several local covariates;
  - IV identification (instrument: increase of local population in 1921-1936).

# OLS Results

Dep.Variable:	(1)	(2)	(3)	(4)	(5)
Pct. of GER speaking tourists	b/se	b/se	b/se	b/se	b/se
Pct. of GER speakers	0.368*** (0.047)	0.424*** (0.100)	0.519*** (0.125)	0.532*** (0.135)	0.543*** (0.132)
Population (log)			-0.028 (0.025)	-0.024 (0.032)	-0.009 (0.032)
Area (log)			0.026 (0.024)	0.026 (0.027)	0.018 (0.027)
Elevation (log)			-0.147*** (0.036)	-0.139*** (0.040)	-0.126*** (0.039)
Slope (log)			-0.001 (0.032)	0.002 (0.032)	0.002 (0.032)
Pct. of pop. with HS degree				0.443 (0.550)	0.683 (0.531)
Pct. of pop. with UGRD degree				-1.808 (1.975)	-1.191 (1.986)
Tax basis (log)					-0.314** (0.144)
constant	0.309*** (0.043)	0.279*** (0.032)	1.434*** (0.424)	1.298** (0.506)	2.000*** (0.658)
SLL FE	No	Yes	Yes	Yes	Yes
YEAR FE	Yes	Yes	Yes	Yes	Yes
R-sq	0.208	0.637	0.676	0.678	0.695
N	1856	1856	1856	1856	1276
VCE	cluster	cluster	cluster	cluster	cluster

## Results - Robustness checks (1/2)

Dep.Variable:	(1)	(2)	(3)	(4)
Pct. of GER speaking tourists	b/se	b/se	b/se	b/se
Pct. of GER speakers	0.517*** (0.135)	0.522*** (0.118)	0.519*** (0.137)	0.508*** (0.133)
Population (log)	-0.039 (0.026)	-0.014 (0.026)	-0.027 (0.028)	-0.022 (0.028)
Area (log)	0.033 (0.025)	0.018 (0.024)	0.026 (0.026)	0.024 (0.024)
Elevation (log)	-0.158*** (0.038)	-0.132*** (0.037)	-0.146*** (0.040)	-0.143*** (0.037)
Slope (log)	-0.002 (0.036)	0.001 (0.028)	-0.001 (0.035)	-0.001 (0.032)
constant	1.570*** (0.438)	1.214*** (0.433)	1.411*** (0.464)	1.381*** (0.442)
SLL FE	Yes	Yes	Yes	Yes
YEAR FE	Yes	Yes	No	Yes
$R^2$	0.656	0.716	0.726	0.672
N	1044	812	116	1808
VCE	cluster	cluster	robust	cluster

## Results - Robustness checks (2/2)

Dep.Variable:	(1)	(2)
Pct. of GER speaking tourists	b/se	b/se
Pct. of GER speakers	0.530*** (0.125)	0.452*** (0.128)
highway	0.020 (0.053)	
trunk road	-0.042 (0.064)	
Population (log)	-0.025 (0.025)	-0.070*** (0.031)
Area (log)	0.023 (0.023)	0.119*** (0.057)
Elevation (log)	-0.150*** (0.044)	-0.120 (0.131)
Slope (log)	-0.000 (0.030)	-0.039 (0.029)
constant	1.448*** (0.428)	1.526*** (0.771)
SLL FE	Yes	Yes
YEAR FE	Yes	Yes
R-sq	0.679	0.488
N	1856	640
VCE	cluster	cluster

# IV Results

Dep.Variable:	(1)	(2)	(3)	(4)	(5)
Pct. of GER speaking tourists	b/se	b/se	b/se	b/se	b/se
Pct. of GER speakers	0.371*** (0.101)	0.608*** (0.094)	0.697*** (0.180)	0.673*** (0.180)	0.752*** (0.199)
Population (log)			-0.017 (0.030)	-0.023 (0.035)	-0.008 (0.035)
Area (log)			0.024 (0.025)	0.031 (0.030)	0.023 (0.029)
Elevation (log)			-0.164*** (0.045)	-0.148*** (0.048)	-0.138*** (0.048)
Slope (log)			-0.009 (0.030)	-0.004 (0.031)	-0.006 (0.030)
Pct. of pop. with HS degree				0.731 (0.629)	1.130 (0.715)
Pct. of pop. with UGRD degree				-1.778 (2.120)	-0.996 (2.259)
Tax basis (log)					-0.356** (0.179)
constant	0.307*** (0.080)	0.274*** (0.032)	1.538*** (0.464)	1.346** (0.555)	2.277*** (0.870)
SLL FE	No	Yes	Yes	Yes	Yes
YEAR FE	Yes	Yes	Yes	Yes	Yes
R-sq	0.210	0.620	0.664	0.672	0.682
N	1840	1840	1840	1840	1265
AP-F-statistic	50.548	24.594	24.594	24.594	24.594
AP-pvalue	0.000	0.000	0.000	0.000	0.000

# Conclusions

- 1 Aim: explore the effects of cultural proximity on tourists flows;
- 2 Where: in a bilingual Italian region;
- 3 Results: the share of tourists coming from German-speaking countries is positively associated with the share of German-speakers in local population;
- 4 Robustness: the result is robust to the inclusion of several controls and to different estimation techniques;
- 5 Channels: sharing a common culture is more than sharing a common language
  - communality of tastes, affinity, trust
- 6 Policy implications:
  - teaching German to Italian-speaking pupils is not enough;
  - formal and informal institutions are generally substitute (Ahlerup et al., 2009);
  - Italy should invest more on the quality of its formal institutions (law, contract enforcement).

# Descriptive statistics

	mean	sd	min	max	count
Pct. of GER speakers	0.842	0.265	0.009	0.998	116
Population - mean	4164.875	9797.540	192	98491	116
Elevation	849.707	380.948	212	1568	116
Area	63.793	57.634	1.660	302.490	116
Slope (log)	7.425	0.690	1.609	7.963	116

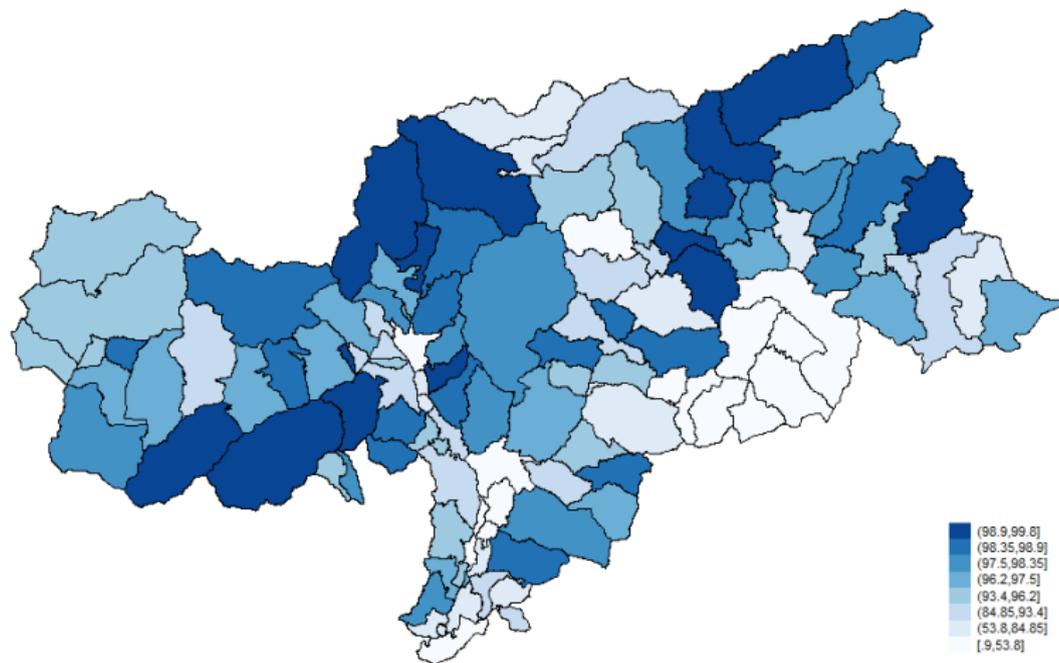
◀ Data

# Descriptive statistics

Percentage of German speaking tourists					
	mean	sd	min	max	count
1999	0.619	0.232	0.002	0.959	116
2000	0.613	0.226	0.122	0.952	116
2001	0.614	0.216	0.124	0.951	116
2002	0.621	0.216	0.109	0.948	116
2003	0.604	0.218	0.100	0.942	116
2004	0.596	0.220	0.000	0.946	116
2005	0.591	0.218	0.000	0.939	116
2006	0.580	0.221	0.000	0.930	116
2007	0.579	0.216	0.000	0.929	116
2008	0.573	0.214	0.000	0.917	116
2009	0.571	0.214	0.000	0.937	116
2010	0.571	0.217	0.000	0.936	116
2011	0.581	0.216	0.000	0.940	116
2012	0.592	0.215	0.000	0.944	116
2013	0.616	0.207	0.139	0.949	116
2014	0.617	0.209	0.000	0.947	116

Source: ASTAT

Figure: Share of German-speaking population in 1991



◀ Back

Figure: Change in population 1921-1936

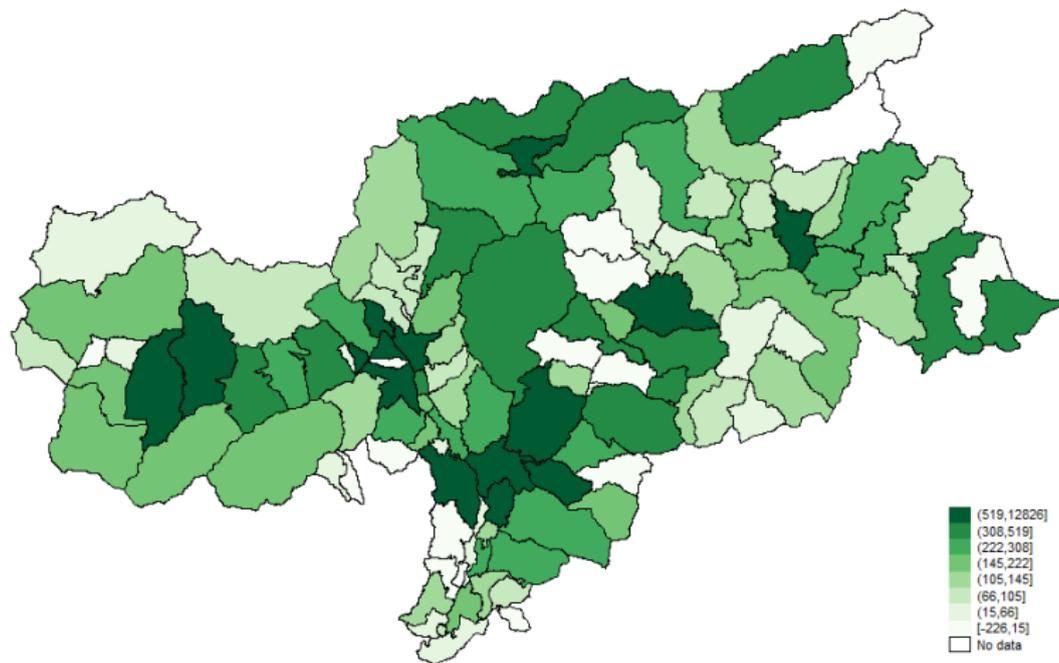
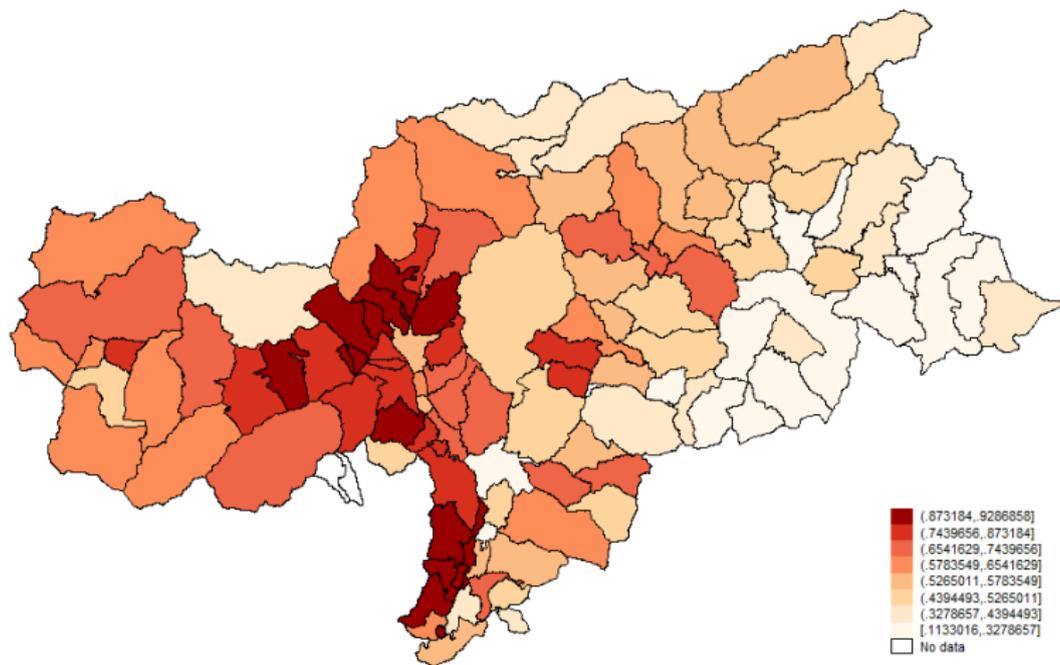


Figure: Share of tourists coming from German-speaking countries (1999-2014)



◀ Back

- 1 WWI: Italian annexation of South Tyrol (homogeneously German-speaking); ▶ Map
- 2 Fascist regime: forced Italianization, also with a change in the ethnic mix of local population; ▶ Map
- 3 1939 Option of Citizenship: German-speakers were allowed to move to Germany.

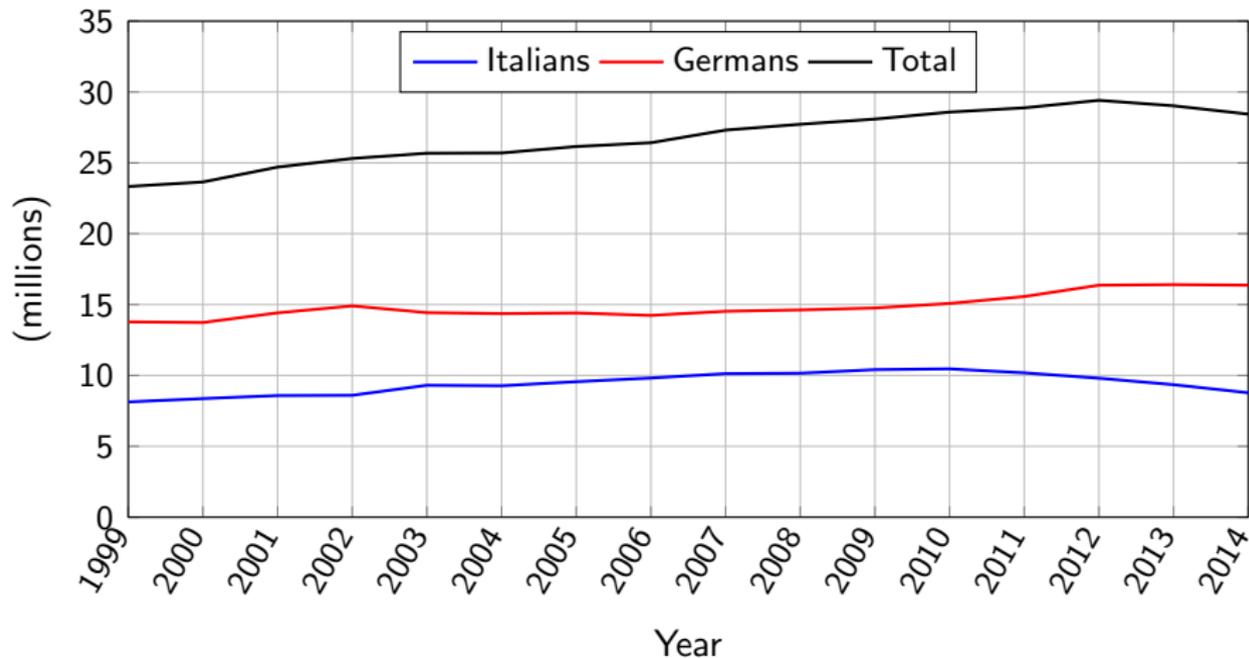
# Historical Tyrol

◀ Back



# Touristic presences in South Tyrol

← Back



Dep.Variable:	(1)	(2)
No. Of German speaking tourists (log)	b/se	b/se
Number of GER speakers (log)	0.591 (0.405)	2.451*** (0.673)
Population (log)	0.225 (0.386)	-1.455*** (0.546)
Area (log)	0.174 (0.132)	0.061 (0.171)
Elevation (log)	0.172 (0.257)	-0.137 (0.306)
Slope (log)	-0.112 (0.136)	-0.174 (0.111)
constant	6.201*** -2.879	15.301*** -3.673
SLL FE	Yes	Yes
YEAR FE	Yes	Yes
R-sq	0.617	0.443
N	1846	1830
VCE		
AP-F-statistic		23.922
AP-pvalue		0.000