

EU Scepticism and EU Cohesion Policy: Microeconometric evidence on structural funds effects and EU citizens' voting behaviour

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- Strongly divergent attitudes of European citizens towards the EU become apparent
- French presidential elections 2017 as a further indication
- Becker, Fetzner and Novy (2017) have investigated the determinants of the “Brexit” votum in June 2016
- **Are the drivers for the French votum similar?**
- **Does the citizens’ exposure towards the EU affect their opinion about it?**
 - **Does the effectiveness of EU cohesion policy play a role?**

- The first round of French presidential elections
- Literature review on determinants of Euroscepticism
- Modelling the citizens' exposure towards the EU
 - Firm-level effects of EU cohesion policy on employment growth
- Estimation results
- Conclusion and next steps

French presidential elections - First round, 23 April 2017

Valid votes: 31,381,603

The candidates:

Candidate	Share	Min.	Max.
Emmanuel MACRON	24.01%	17.73% (FR825)	34.83% (FR101)
Marine LE PEN	21.30%	4.99% (FR101)	35.67% (FR221)
François FILLON	20.01%	12.75% (FR621)	29.14% (FR105)
Jean-Luc MÉLENCHON	19.58%	13.78% (FR832)	34.02% (FR106)

Further candidates: Benoît HAMON (6.36%), Nicolas DUPONT-AIGNAN(4.70%), Jean LASSALLE (1.21%), Philippe POUTOU (1.09%), François ASSELINEAU (0.92%), Nathalie ARTHAUD (0.64%), Jacques CHEMINADE (0.18%)

- “Brexit”: Becker, Fetzner and Novy (2017) find that EU (cohesion) policies did not affect votum
 - Trade and immigration have little explanatory power
 - Demographic and economic characteristics matter
- “Hard” and “soft” Euroscepticism (Treib 2014)
- On regional level, EU subsidies and the distance to Brussels seem to influence political euroscepticism (Lubbers & Scheepers 2007)
- Regional citizens’ characteristics like education, occupation, age significantly affect political euroscepticism (Lubbers & Scheepers 2010)

Literature on euroscepticism (II)

- Robust findings for the influence of immigrant share, population density, the share of graduates and the employment rate on voting for the center-right (Barone et al. 2016)
- Demographic characteristics (age, education) as well as regional characteristics (institutions, rural or urban area) contribute to EU citizens' satisfaction with cohesion policy (Capello & Perucca 2017)
 - Satisfaction is higher when cohesion policy actions are taken according to perceived (and real) needs

EU citizens' exposure towards the EU

- EU policies: Cohesion policy as main redistributive policy, EU legislation
- Increased trade: Internal market, common standards
- More tourism: Common currency, Schengen
- More immigration and emigration: Free movement of persons, Erasmus

Becker et al. (2017): Structural funds payments, trade with EU member states (GVA share, NUTS-2), Immigration by origin groups

- EU policies
 - Structural funds and Cohesion Funds expenditure per capita in 2007-2013 (NUTS-3)
 - Effectiveness of cohesion policy: Contribution to firm-level employment growth
- More trade and tourism
 - Share of wholesale and retail trade, transport, accommodation and food service activities (NACE Rev.2 sectors G-I) in GVA (NUTS-3)
- More immigration and emigration
 - Net migration per inhabitant (NUTS-3)

A Micro-level approach

Data

- Novel dataset with projects and structural and Cohesion funds beneficiaries on the firm-level
- Location, information about industry, size, etc. from ORBIS business database

Methodology

- Standard propensity score matching analysis combined with difference-in-difference estimation

$$\tau(w) = E[Y(1) - Y(0) | T = 1, w] \quad (1)$$

Sample: France

- 1,390 treated firms in programming period 2007-2013, 123,389 firms as control group
- Outcome: %-change in employment from its pre-treatment value (2004, 2005 or 2006) to post-treatment (2014, 2015 or 2016)
- Matching on:
 - Initial number of employees (log)
 - Initial firm age (2007-year of incorporation, log)
 - Initial fixed assets per employee (log)
 - Initial current ratio (current assets divided by current liabilities, log)
 - Industry: NACE Rev.2, 4-digit code
 - NUTS-3 fixed effect

Methodology

- Estimation of average treatment effects on the treated (ATT) by 21 NUTS-2 regions (= 94 NUTS-3 regions) with and without NUTS-3 fixed effects
 - Standard propensity score matching analysis combined with difference-in-difference estimation
 - Probit estimation; Epanechnikov kernel matching; bootstrapped standard errors
- Second stage: OLS regression including estimated ATTs with bootstrapped standard errors (500,000 replications)

Results of first stage:

- Without NUTS-3 FE:
ATT significant at 95%-level in 4 NUTS-2 regions (21 NUTS-3),
at the 90%-level in 7 NUTS-2 regions
 - Average ATT: 0.208
- With NUTS-3 FE:
ATT significant at 95%-level in 5 NUTS-2 regions (27 NUTS-3),
at the 90%-level in 7 NUTS-2 regions
 - Average ATT: 0.216

- EU policies:
 - **Structural funds and Cohesion Funds expenditure per capita in 2007-2013 (NUTS-3)**
 - Effectiveness of cohesion policy: Contribution to firm-level employment growth
 - **Average treatment effect on the treated (ATT) on employment growth** (calculated with and without NUTS-3 FE)
 - **Dummy**: 1 if average ATT per region or region&theme is statistically significant, 0 otherwise
 - **Interaction**
- More trade and tourism
 - Share of wholesale and retail trade, transport, accommodation and food service activities (NACE Rev.2 sectors G-I) in GVA (NUTS-3)
- More immigration and emigration
 - Net migration per inhabitant (NUTS-3)

NUTS-3:

- Population density: Inhabitants per km² (-)
- GDP per capita (-)
- GDP per capita growth 2007-2015 (-)
- Age structure: Share of population ≥ 65 years (+/-)

NUTS-2:

- Population with upper secondary and higher education (-)
- Share of employees working in industry and construction (+)
- Quality of health system (inhabitants per hospital bed) (-)
- Unemployment rate (-)

[Averages 2007-2015]

Results: Marginal effects on vote shares

n=96. Marginal Effects	Macron's Share		Le Pen's Share	
	(1)	(2)	(1)	(2)
Regional funds expenditure per capita (log)	0.592*	0.892**	-1.423***	-2.270***
GVA share trade&tourism	-0.239**	-0.127	0.150	0.047
Net Migration per inhabitant (log)	0.476	0.290	-0.226	0.467
Inhabitants per km2	0.000	0.000	0.000	0.000
GDP per capita (log)	4.500***	7.618***	-8.015***	-11.218***
GDP per capita growth	30.583	-29.657	-75.109	9.875
Pop. share over 65	-0.067	0.047	-0.167	-0.212
Pop. share with higher education	0.226***	-	-0.448***	-
Empl. share in industry & construction	-0.192**	-	0.445***	-
Inhabitants per hosp.bed	2.960	-	-11.037**	-
Unemployment rate	-1.008***	-	1.729***	-
NUTS-2 FE	-	Yes	-	Yes
Adjusted R ²	0.686	0.826	0.741	0.835

Notes: Marginal effects after OLS estimation. Standard errors (in parentheses) are clustered at the NUTS-3 level. *** denotes significance at the 1% level, ** at the 5% level, * at the 10% level.

Considering the effectiveness of EU cohesion policy

n=94. Marginal effects	Macron's Share		Le Pen's Share	
Regional funds expenditure per capita (log)	0.455 (0.344)	0.467 (0.349)	-1.167** (0.509)	-1.451*** (0.517)
ATT NUTS-2 wo. NUTS-3 FE	0.937 (2.420)		-11.182*** (3.687)	
ATT NUTS-2 with NUTS-3 FE		0.078 (1.708)		-4.806* (2.759)
GVA share trade&tourism	-0.216** (0.108)	-0.218** (0.108)	0.094 (0.158)	0.095 (0.170)
Net Migration per inhabitant (log)	0.485 (0.495)	0.509 (0.481)	0.037 (0.823)	-0.163 (0.862)
GDP per capita (log)	4.461** (1.894)	4.479*** (1.891)	-7.835*** (2.952)	-8.109** (3.196)
GDP per capita growth (log)	41.844 (41.941)	41.507 (42.524)	-94.329 (70.181)	-97.665 (71.496)
Pop. share with higher educ.	0.268*** (0.070)	0.259*** (0.065)	-0.593*** (0.101)	-0.512** (0.094)
Empl. share in industry & construction	-0.128 (0.094)	-0.137 (0.091)	0.265** (0.131)	0.341** (0.143)
Inhabitants per hosp.bed	1.336 (3.359)	1.352 (3.248)	-9.421** (4.450)	-11.840** (4.799)
Unemployment rate	-0.925*** (0.222)	-0.931*** (0.216)	1.577*** (0.351)	1.661*** (0.367)
Inhabitants per km2	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
Pop. share > 65	-0.092 (0.095)	-0.086 (0.093)	-0.072 (0.150)	-0.147 (0.151)
Adjusted R ²	0.700	0.699	0.769	0.751

Notes: Marginal effects after OLS estimation. Standard errors are clustered at the NUTS-3 level (bootstrapped with 50,000 estimations). *** denotes significance at the 1% level, ** at the 5% level, * at the 10% level.

EU Scepticism and EU Cohesion Policy effectiveness

n=94. Marginal effects	(1) Macron's Share (2)		(1) Le Pen's Share (2)	
Regional funds expenditure per capita (log)	1.043*** (0.318)	1.032*** (0.334)	-1.929*** (0.560)	-2.305*** (0.577)
ATT NUTS-2*	-5.199* (2.910)	-2.261 (2.346)	-1.508 (3.859)	-6.644** (3.090)
Significant x ATT NUTS-2*	23.439*** (5.848)	22.411*** (6.361)	-33.872*** (9.538)	-32.877*** (10.188)
Significant ATT NUTS-2* *(1) wo. and (2) with NUTS-3 FE	-6.755*** (1.618)	-8.620*** (2.217)	9.194*** (2.666)	13.021*** (3.513)
GVA share trade and tourism	-0.182* (0.109)	-0.201* (0.106)	0.042 (0.147)	0.051 (0.151)
Net Migration per inhabitant (log)	0.252 (0.504)	0.404 (0.468)	0.408 (0.770)	0.102 (0.788)
GDP per capita (log)	4.466** (1.781)	4.447** (1.738)	-7.988*** (2.597)	-8.128*** (2.812)
GDP per capita growth (log)	42.172 (39.969)	28.106 (38.805)	-95.912 (68.292)	-80.289 (63.485)
Pop. share with tertiary educ.	0.292*** (0.079)	0.353*** (0.072)	-0.698*** (0.109)	-0.518* (0.104)
Empl. share in industry & construction	-0.147 (0.092)	-0.202** (0.088)	0.276** (0.132)	0.398*** (0.130)
Inhabitants per hosp.bed	4.091 (3.333)	4.467 (2.994)	-13.330*** (4.507)	-17.410*** (4.713)
Unemployment	-1.350*** (0.266)	-1.019*** (0.201)	2.238*** (0.390)	1.742*** (0.350)
Inhabitants per km2	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
Pop. share > 65	-0.035 (0.092)	-0.013 (0.094)	-0.148 (0.142)	-0.246 (0.151)
Adjusted R ²	0.746	0.751	0.800	0.797

EU Scepticism and EU Cohesion Policy effectiveness (II)

n=94. Marginal effects	(1) Macron's Share (2)		(1) Le Pen's Share (2)	
ATT NUTS-2*	-4.009 (3.100)	1.747 (2.089)	3.391 (4.980)	-3.707 (4.012)
Significant x ATT NUTS-2*	17.560*** (6.027)	11.897* (6.393)	-34.285*** (9.538)	-23.006** (10.041)
Significant ATT NUTS-2*	-4.531*** (1.658)	-5.530** (2.183)	7.146*** (2.527)	5.084* (2.619)
* (1) wo. and (2) with NUTS-3 FE				
GVA share trade and tourism	-0.205* (0.108)	-0.220** (0.106)	0.103 (0.147)	0.085 (0.150)
Net Migration per inhabitant (log)	0.433 (0.471)	0.597 (0.428)	0.971 (0.754)	0.073 (0.754)
GDP per capita (log)	4.576** (1.861)	4.695** (1.860)	-9.854*** (2.694)	-8.191*** (2.979)
GDP per capita growth (log)	42.756 (43.955)	29.712 (42.588)	-40.021 (71.519)	-96.990 (80.608)
Pop. share with tertiary educ.	0.247*** (0.086)	0.335*** (0.073)	-0.624*** (0.122)	-0.515*** (0.122)
Empl. share in industry & construction	-0.077 (0.093)	-0.129 (0.088)	0.258* (0.133)	0.145 (0.138)
Inhabitants per hosp.bed	1.620 (3.301)	1.779 (3.095)	-16.489*** (4.727)	-8.762** (4.340)
Unemployment	-1.204*** (0.277)	-0.795*** (0.198)	2.075*** (0.367)	1.970*** (0.430)
Inhabitants per km2	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
Pop. share > 65	-0.039 (0.095)	0.001 (0.098)	-0.135 (0.135)	-0.140 (0.148)
Adjusted R ²	0.723	0.731	0.802	0.773

Notes: Marginal effects after OLS estimation. Standard errors are clustered at the NUTS-3 level (bootstrapped with 50,000 estimations). *** denotes significance at the 1% level, ** at the 5% level, * at the 10% level.

Conclusion

- More structural and Cohesion funds expenditure is associated with less votes for Le Pen
- The size of the ATT is negatively correlated - together with regional funds expenditure - with the vote share of Marine Le Pen
- A significantly higher effect on firm-level employment growth in a NUTS-3 region is linked to a higher vote share of Macron and a lower share of Le Pen
- In line with Becker et al. (2017) and other literature, (more) euroscepticism has a robust positive relationship with
 - Lower regional income
 - Lower parts of the population with upper secondary and higher education
 - Higher unemployment rates
 - A greater industry and construction sector

Next steps

- Focus on “hard” and “soft” euroscepticism (Treib 2014)
- Include further election results?
- Further robustness checks: e.g. Poisson regression model with Murphy-Topel variance estimates

Thank you very much for your attention!

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EU Scepticism and Local Cohesion Policy Effectiveness

Marginal effects	(1) Macron's Share (2)		(1) Le Pen's Share (2)	
Regional funds expenditure per capita (log)	0.398 (0.347)	0.824** (0.353)	-1.068** (0.531)	-2.116*** (0.605)
ATT NUTS-2*	-8.800** (3.734)	1.392 (2.395)	3.391 (4.980)	-4.895 (3.306)
Significant x ATT NUTS-2*	23.253*** (6.568)	10.474*** (6.198)	-34.285*** (9.538)	-22.536** (9.505)
Significant ATT NUTS-2*	-4.919*** (1.660)	-4.538** (2.052)	7.146*** (2.527)	8.558*** (3.264)
* 90%; (1) wo. and (2) with NUTS-3 FE				
GVA share trade and tourism	-0.220** (0.106)	-0.207* (0.106)	0.103 (0.147)	0.075 (0.155)
Net Migration per inhabitant (log)	-0.147 (0.532)	0.380 (0.482)	0.971 (0.754)	0.082 (0.819)
GDP per capita (log)	5.781*** (1.876)	4.243** (1.839)	-9.854*** (2.694)	-7.476** (2.916)
GDP per capita growth (log)	6.105 (43.007)	43.814 (41.326)	-40.021 (71.519)	-102.233 (66.664)
Pop. share with tertiary educ.	0.291*** (0.087)	0.348*** (0.072)	-0.624*** (0.122)	-0.654* (0.110)
Empl. share in industry & construction	-0.127 (0.089)	-0.156* (0.087)	0.258* (0.133)	0.369*** (0.133)
Inhabitants per hosp.bed	6.073* (3.417)	1.651 (3.358)	-16.489*** (4.727)	-12.968** (5.187)
Unemployment	-1.264*** (0.252)	-0.849*** (0.256)	2.075*** (0.367)	1.625*** (0.414)
Inhabitants per km2	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
Pop. share > 65	0.291 (0.087)	-0.059 (0.096)	-0.135 (0.135)	-0.171 (0.153)
n= 94; Adjusted R ²	0.745	0.721	0.802	0.774