Unifying Europe: A Progress Report

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Motivation

“United States of Europe”: How far?

“A day will come when the only fields of battle will be markets opening up to trade and minds opening up to ideas.” Victor Hugo, 1849 international peace congress

- In 1946, Winston Churchill called upon Europeans to “build a kind of United States of Europe.” (also in Hugo speech)
- Our question: 171 years after Hugo’s speech and 74 years after Churchill’s, have the European states achieved the objective of creating a “United States” in Europe?

Measuring unification: 4 freedoms + alignment

- Taking the literal interpretation of supranational entity the answer is a clear no. (Alesina and Perroti, 2004)
- As Hugo envisioned, European nations could become united by their reciprocal openness to each other:
  1. A major pillar of EU since 1958 is the commitment to the **four freedoms of movement** (person, goods, capital, and services).
  2. Another pillar of European unification is the recurring attempts to have EU members **align their defense and security policies**.
- Is Europe approaching the levels of integration and cohesion found between the United States of America?

Overview of main results

- We report here—with some degree of surprise—a body of quantitative evidence on the **successes** of the European Union in terms of both the 4 freedoms and stronger alignment of foreign policies.
- By several important metrics, European states have matched or surpassed the levels of openness prevailing between the 50 states of the USA.
- Increased integration within Europe has come from lower intra-European barriers, rather than the rise of a "Fortress Europe".

We also quantify in another paper what those trade gains mean in terms of welfare with and without Brexit.

Methods

- Regarding economic integration:
  1. use gravity to examine the inter-temporal changes in intra-EU frictions.
  2. use gravity to compare EU frictions cross-sectionally to those prevailing in the United States, a natural benchmark of full integration.
  3. price-based assessments of intra-EU frictions.
- Regarding foreign policy cohesion: draw on the political science / international relations literature and use alignment in United Nations voting patterns.

Modified gravity

Gravity for the EU

- Current standard of gravity equations writes bilateral flows going from country i to country n in year t, X_{nit} as

$$\mathbb{E}[X_{nit}] = \exp(\alpha_{it} + \gamma_{nt} + \mathbf{D}'_{nit}\boldsymbol{\delta} + \beta_t \mathsf{EU}_{nit}), \qquad \forall\, i \neq n. \tag{1}$$

- Fixed effects α_{it} and γ_{nt} replace traditional size variables (GDPs)
- In panel specifications the time-invariant components of $\mathbf{D}'_{nit}\boldsymbol{\delta}$ are replaced with dyad fixed effects, delivering a three-way fixed effect structure
- Primary focus: β_t, the coefficient on the "both EU" dummy, which depends on underlying barriers according to

$$\beta_t = \epsilon \ln[(1 + \mathsf{cet}_t)(1 + \nu_t)] - \epsilon \ln[(1 + \mathsf{pref}_t)(1 + \rho_t)]. \tag{2}$$

Modified Gravity with self-trade (X_{nnt}) included

- β_t could be rising over time due to falling pref_t or rising cet_t ("fortress Europe").
- Let B_{ni} be a dummy for border-crossing:

$$\mathbb{E}[X_{nit}] = \exp[\alpha_{it} + \gamma_{nt} + \mathbf{D}'_{nit}\boldsymbol{\delta} + \beta_t^{\text{EUB}} \underbrace{B_{ni}\text{EU}_{nit}}_{\text{EU to EU}} + \beta_t^{\text{CET}} \underbrace{B_{ni}(1-\text{EU}_{it})\text{EU}_{nt}}_{\text{ROW to EU}} + \beta_t^{\text{ROW}} \underbrace{B_{ni}(1-\text{EU}_{nt})}_{\text{ROW imports}}]. \quad (3)$$

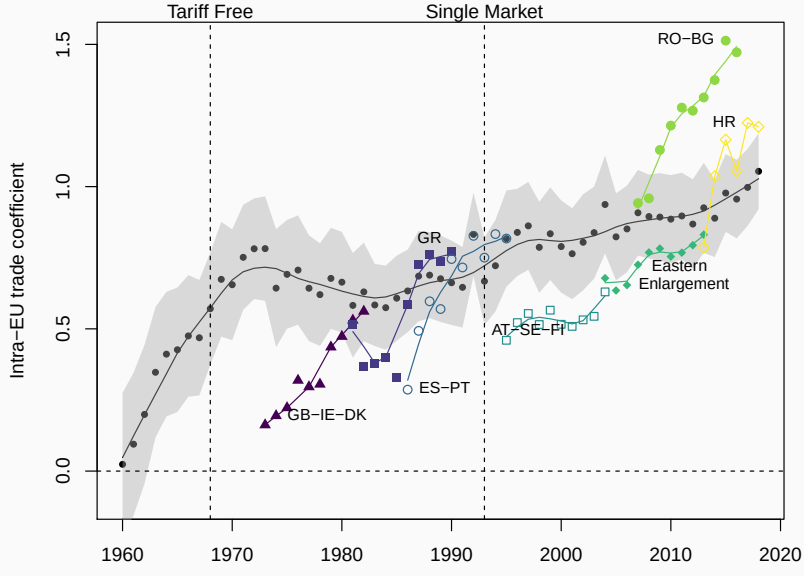
- Estimated coefficients have interpretations

$$\begin{aligned} \beta_t^{\text{EUB}} &= -\epsilon \ln[(1+\text{pref}_t)(1+\rho_t)], \\ \beta_t^{\text{CET}} &= -\epsilon \ln[(1+\text{cet}_t)(1+\nu_t)], \quad \text{and} \\ \beta_t^{\text{ROW}} &= -\epsilon \ln[(1+\text{row}_t)(1+\kappa_t)]. \end{aligned} \quad (4)$$

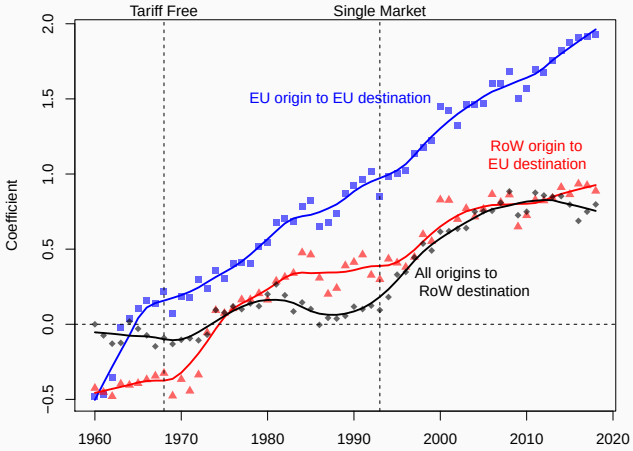
- The standard EU effect can be recovered as $\beta_t = \beta_t^{\text{EUB}} - \beta_t^{\text{CET}}$.

The 4 freedoms over time

First Movement, Goods, traditional approach

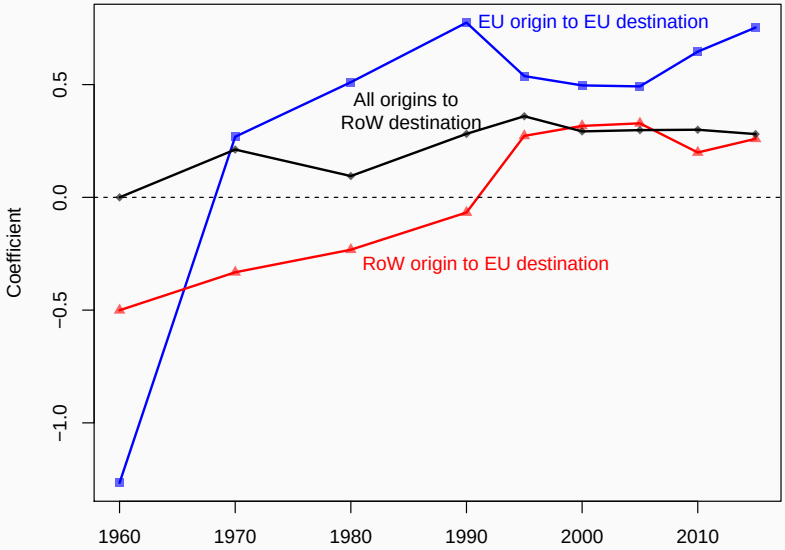


First Movement, Goods, modified approach

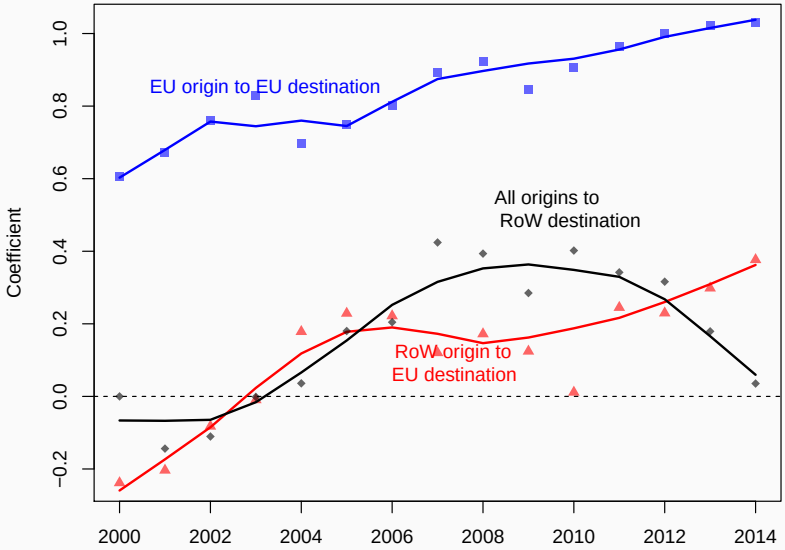


- Literature finds median $\epsilon \simeq 5$
- Allows to compute $\downarrow$ trade costs :
  - ▷ Any origin $\rightarrow$ ROW: -15%
  - ▷ ROW $\rightarrow$ EU: -22%
  - ▷ EU $\rightarrow$ EU: -39%

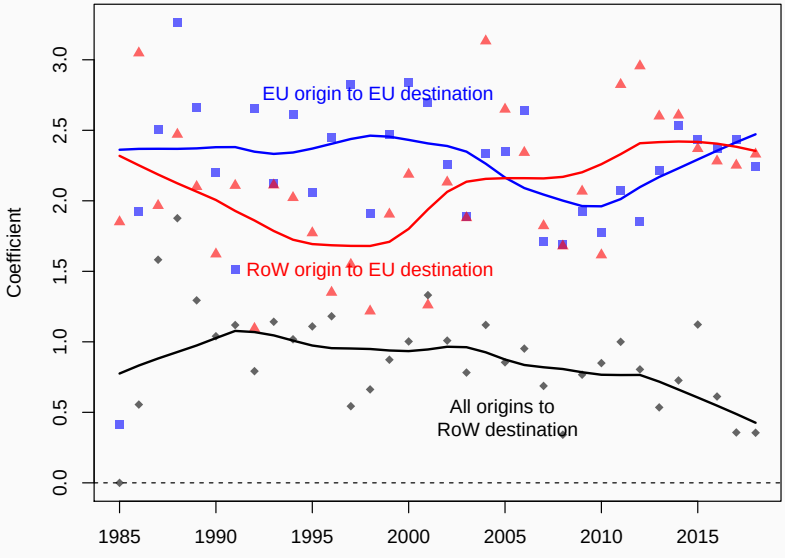
Second Movement, Persons



Third Movement, Services



Fourth Movement, Capital

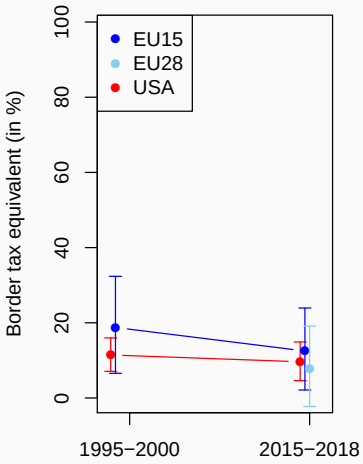


Comparing levels of border barriers with the United States

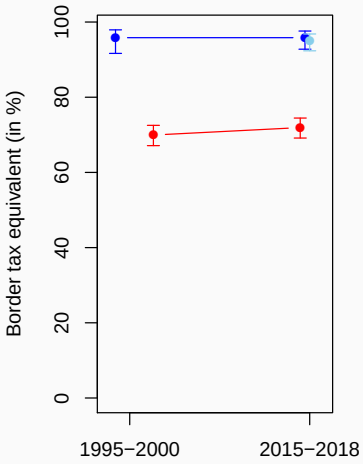
EU vs US

- First keep a version of equation (3), where $\text{EU}_{nt} = \text{EU}_{it} = \text{EU}_{nit} = 1$,
- Leaves us with only one border coefficient to be estimated (β)
- Measures the tendency of EU countries to trade less with EU partners than with themselves.
- We then estimate an analogous equation for the USA where the flows are between and within states.
- Compare tax equivalent of border effects for 3 movements

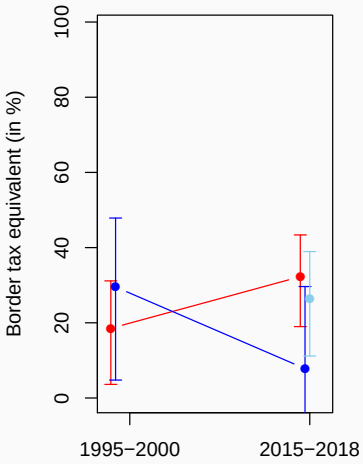
3 comparable movements EU vs US: AVE



(a) Goods



(b) Migrants



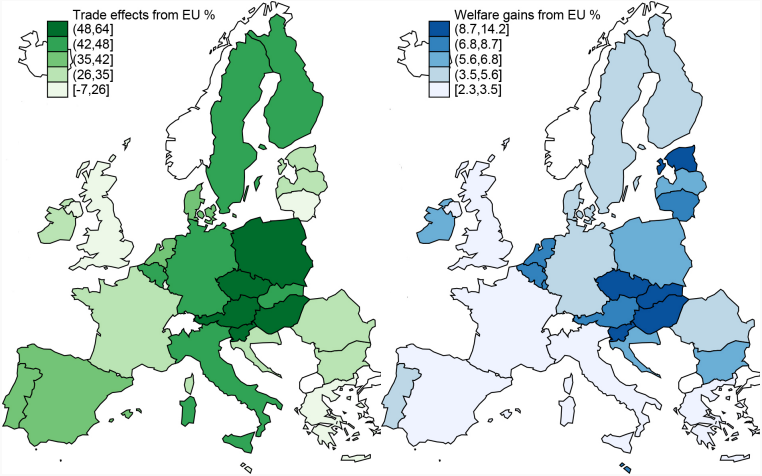
(c) Capital (M&A)

Welfare effects of the EU and Brexit

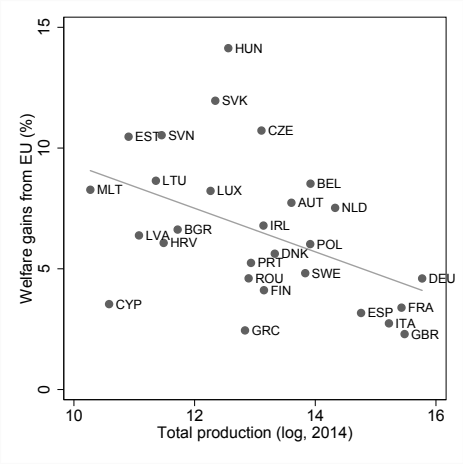
Welfare effects of the EU and Brexit

- Once endowed with trade effects of the EU, one can do many scenarios
  1. End of the EU
  2. Brexit
- We do those in a paper published in Economic Policy in 2019
- Effects are large, and a substantial part comes from the return of NTBs

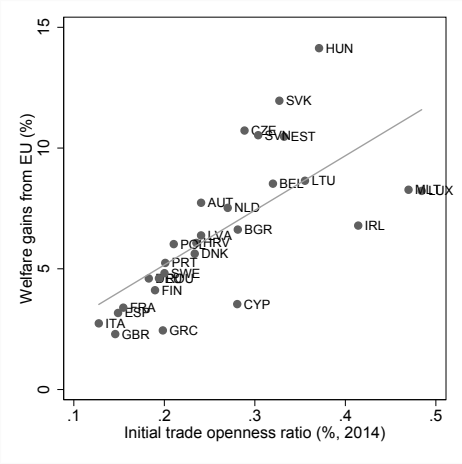
Trade-related welfare effects of EU membership



Trade-related welfare effects of EU membership



(a) Size and welfare gains



(b) Openness and welfare gains

Note: Welfare gains under an RTA scenario with intermediate goods.

Accounting for Brexit reduces gains from the EU

Counterfactual Assumption	(1) to RTA with intermediates baseline	(2) to RTA Brexit	(3) Difference (1)-(2)
EU (mean)	6,8%	6,3%	0,5%
IRL	6,8%	4,1%	2,7%
MLT	8,2%	6,6%	1,6%
LUX	8,2%	6,6%	1,6%
BEL	8,5%	7,8%	0,6%
DNK	5,6%	5,2%	0,5%
NLD	7,4%	6,9%	0,5%
HUN	14,2%	13,8%	0,4%
CYP	3,5%	3,1%	0,4%
CZE	10,6%	10,4%	0,3%
DEU	4,5%	4,3%	0,3%
POL	6,0%	5,7%	0,3%
FRA	3,4%	3,1%	0,3%
FIN	4,1%	3,8%	0,3%
ESP	3,2%	3,0%	0,2%
ITA	2,8%	2,6%	0,2%

Brexit welfare effects

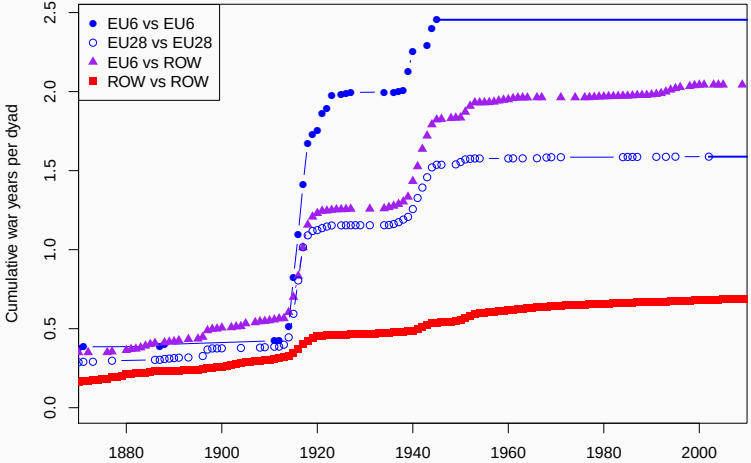
Counterfactual Assumption	to RTA with intermediates	to MFN with intermediates	to RTA without intermediates	to MFN without intermediates
EU (mean)	-0,4%	-0,5%	-0,2%	-0,2%
GBR	-2,4%	-2,9%	-0,8%	-1,0%
AUT	-0,1%	-0,1%	0,0%	0,0%
BEL	-0,6%	-0,8%	-0,2%	-0,3%
BGR	-0,1%	-0,2%	-0,1%	-0,1%
CYP	-0,4%	-0,5%	-0,2%	-0,2%
CZE	-0,3%	-0,3%	-0,1%	-0,1%
DEU	-0,3%	-0,4%	-0,1%	-0,1%
DNK	-0,4%	-0,5%	-0,2%	-0,2%
ESP	-0,2%	-0,3%	-0,1%	-0,1%
EST	-0,2%	-0,3%	-0,1%	-0,1%
FIN	-0,2%	-0,2%	-0,1%	-0,1%
FRA	-0,3%	-0,3%	-0,1%	-0,1%
GRC	-0,1%	-0,2%	0,0%	-0,1%
HRV	-0,1%	-0,1%	0,0%	0,0%
HUN	-0,3%	-0,4%	-0,1%	-0,1%
IRL	-2,6%	-3,2%	-1,0%	-1,2%
ITA	-0,2%	-0,2%	-0,1%	-0,1%
LTU	-0,4%	-0,5%	-0,1%	-0,2%
LUX	-1,5%	-1,9%	-0,8%	-1,0%
LVA	-0,2%	-0,3%	-0,1%	-0,1%
MLT	-1,5%	-1,9%	-0,8%	-1,0%
NLD	-0,6%	-0,8%	-0,2%	-0,3%
POL	-0,3%	-0,3%	-0,1%	-0,1%
PRT	-0,2%	-0,3%	-0,1%	-0,1%
ROU	-0,1%	-0,1%	0,0%	-0,1%
SVK	-0,3%	-0,3%	-0,1%	-0,1%
SVN	-0,1%	-0,2%	0,0%	-0,1%
SWE	-0,3%	-0,4%	-0,1%	-0,2%

Brexit and signature with third countries

Counterfactual	(1) To RTA with intermediate	(2) To MFN with intermediate	(3) To RTA without intermediate	(4) To MFN without intermediate
GBR	0,48%	0,48%	0,17%	0,17%
AUS	0,05%	0,05%	0,02%	0,02%
CAN	0,12%	0,12%	0,04%	0,04%
USA	0,06%	0,06%	0,02%	0,02%
IRL	-0,01%	-0,01%	-0,01%	0,00%

Political integration: An ever closer union?

The end of wars as we knew them



Source: Correlates of War. The dependent variable is the cumulative number of years of military disputes (hostility $\geq$ 3 on 5-point scale) between country pairs since 1816 divided by the number of possible at-war dyads. Each symbol corresponds to a dispute.

Measuring political alignment using UN votes

- Following Signorino and Ritter (2012), similarity measure between i and n is

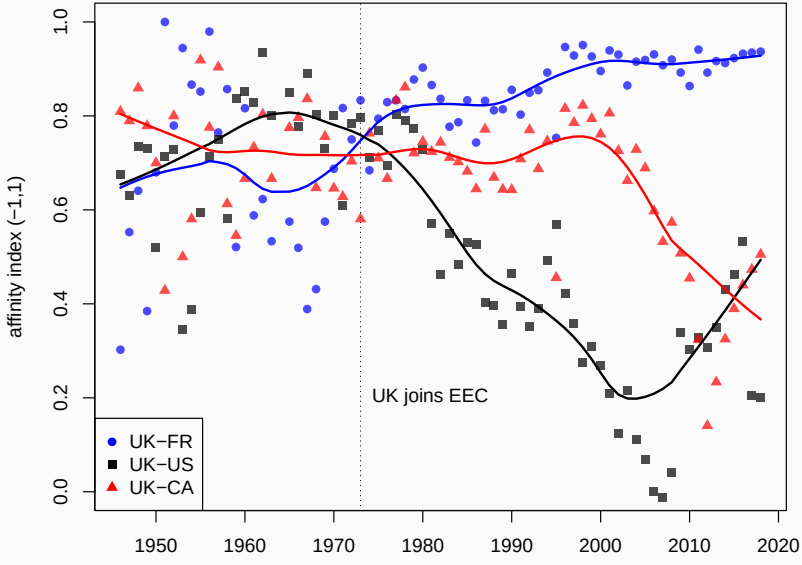
$$S_{nit} = 1 - \frac{\sum_r \mid V_{ir} - V_{nr} \mid}{\sum_r \mathbb{I}_{ir}\mathbb{I}_{nr}},$$

$\rightarrow$ V_{ir} is 1 for Yes votes on roll call r, 2 for abstentions and 3 for No votes.

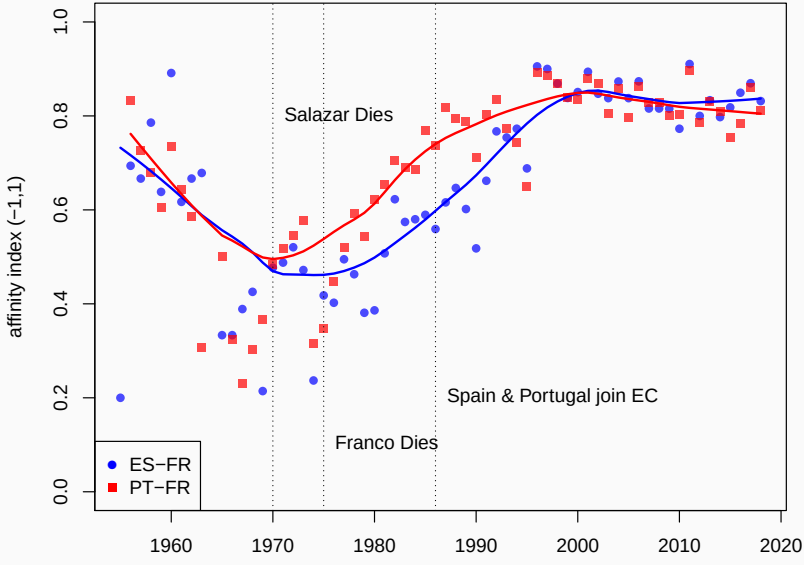
$\rightarrow$ The indicator $\mathbb{I}_{ir}$ takes a value of 1 for votes that i participated in.

- $S_{nit} = 1$ if i and n voted the same way on every vote, -1 if they voted in the opposite direction on every vote.

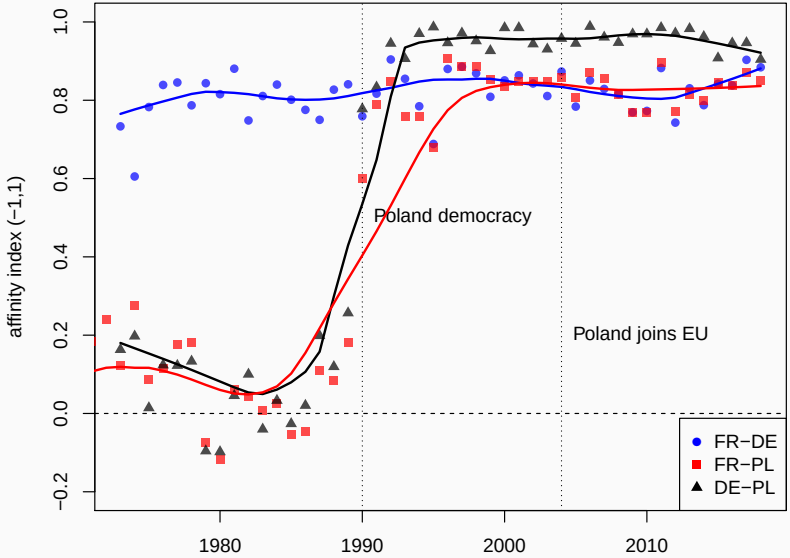
UK similarity in UN votes with France, Canada and the US



Democracy is important, v1



Democracy is important, v2



How EU membership affects UN vote similarity

Dep. var	S_{nit}	S_{nit}	S_{nit}	Proximity	S_{nit}
Years:	2018	1950 –2018	1950 –2018	1950 –2018	1992 –2018
EC/EU	0.692[a]	0.547[a]	0.396[a]	0.875[a]	0.196[a]
	(0.044)	(0.048)	(0.032)	(0.096)	(0.018)
FTA (not EU)	0.105[a]	0.114[a]	0.068[a]	0.213[a]	0.029[a]
	(0.021)	(0.023)	(0.016)	(0.045)	(0.007)
ln distance	-0.043[a]	-0.048[a]			
	(0.007)	(0.006)			
Common language	0.007	0.013[b]			
	(0.006)	(0.005)			
Both full democracies	0.146[a]	0.303[a]	0.087[b]	0.377[a]	-0.045[a]
	(0.048)	(0.049)	(0.038)	(0.130)	(0.012)
Both communist regimes	0.299[a]	0.401[a]	0.328[a]	1.59[a]	
	(0.011)	(0.059)	(0.060)	(0.259)	
Std. Dev. of DV	0.290	0.316	0.316	0.841	0.307
Observations	35,156	1,543,224	1,543,224	1,542,358	900,394
R^2	0.71137	0.68722	0.84387	0.80448	0.9215
Within R^2	0.31965	0.20541	0.04423	0.04355	0.01505
Fixed effects	$i + n$	$it + nt$	$it + nt + in$	$it + nt + in$	$it + nt + in$

Conclusion

Conclusion

- In terms of formal institutions, the European Union is little closer to being a “United States of Europe” than it was 16 years ago when Alesina and Perotti dismissed the idea.
- A perspective based on economic and political outcomes delivers a more upbeat assessment.
- On multiple fronts, EU integration now matches or even beats the equivalent measurement for states.
- Regarding the most sensitive of the four movements, migration, our estimates suggest that barriers remain considerably higher in Europe.