

# The United States of Europe?

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Motivation

Modified gravity

The 4 freedoms over time

Comparing levels of border barriers with the United States

Welfare effects of the EU and Brexit

Political integration: An ever closer union?

Conclusion

# 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:** More than 170 years after Hugo’s speech and 75 years after Churchill’s, have the European states achieved the objective of creating a “United States” in Europe?
- **Even more critical question:** What are the welfare gains of the process?

## Measuring unification: 4 freedoms + alignment

- Taking the literal interpretation of **supranational entity, Europe is clearly not united** (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 other papers what those trade gains mean in terms of welfare with and without Brexit + future integrations (Western Balkans and Ukraine).

1. Regarding economic integration:
  - 1.1 use **gravity** to examine the inter-temporal changes in intra-EU frictions.
  - 1.2 use gravity to **compare** EU frictions cross-sectionally to those prevailing in the **United States**, a natural benchmark of full integration.
  - 1.3 **price-based assessments** of intra-EU frictions.
2. 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

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

- Fixed effects  $\alpha_{it}$  and  $\gamma_{nt}$  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:**  $\beta_t$ , the coefficient on the “both EU” dummy:

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

- Focusing on tariffs,  $\beta_t$  **only identifies the ratio of CET vs pref. rates**
- $\beta_t$  could be rising over time due to falling  $\text{pref}_t$  or rising  $\text{cet}_t$  (“fortress Europe”).

## Modified Gravity with self-trade ( $X_{nt}$ ) included

- Let  $B_{ni}$  be a dummy for border-crossing (no tariffs / NTBs inside borders):

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

- Estimated coefficients have interpretations

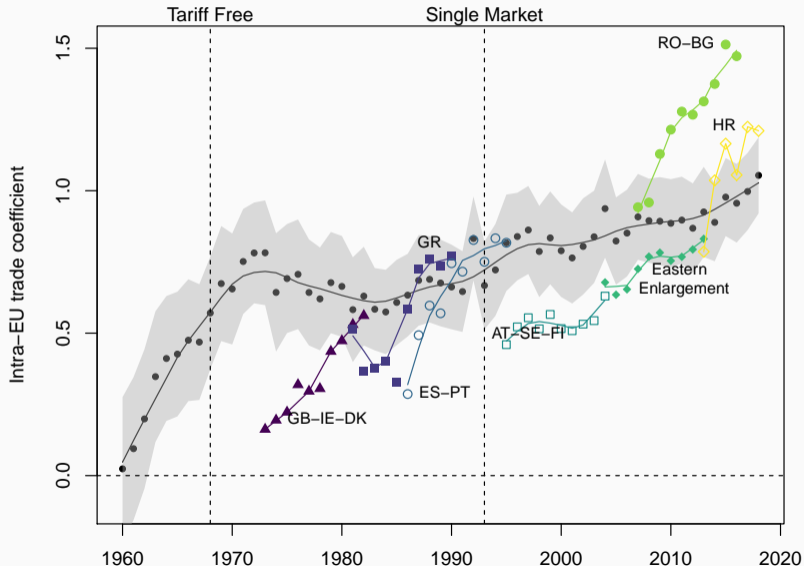
$$\begin{aligned} \beta_t^{\text{EUB}} &= -\epsilon \ln[(1 + \text{pref}_t)(1 + \rho_t)], \\ \beta_t^{\text{CET}} &= -\epsilon \ln[(1 + \text{cet}_t)(1 + \nu_t)], \quad \text{and} \\ \beta_t^{\text{ROW}} &= -\epsilon \ln[(1 + \text{row}_t)(1 + \kappa_t)]. \end{aligned} \quad (4)$$

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

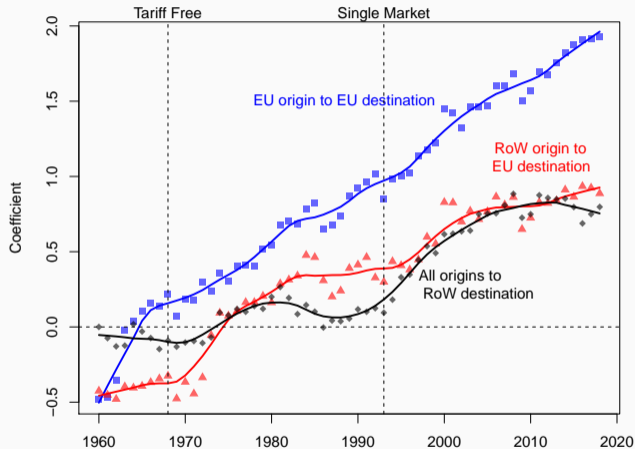
## The 4 freedoms over time

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# First Movement, Goods, traditional approach

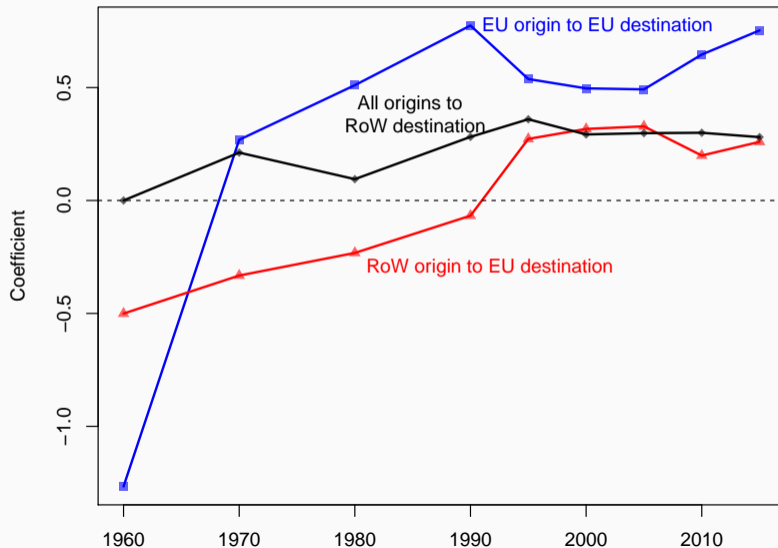


# First Movement, Goods, modified approach

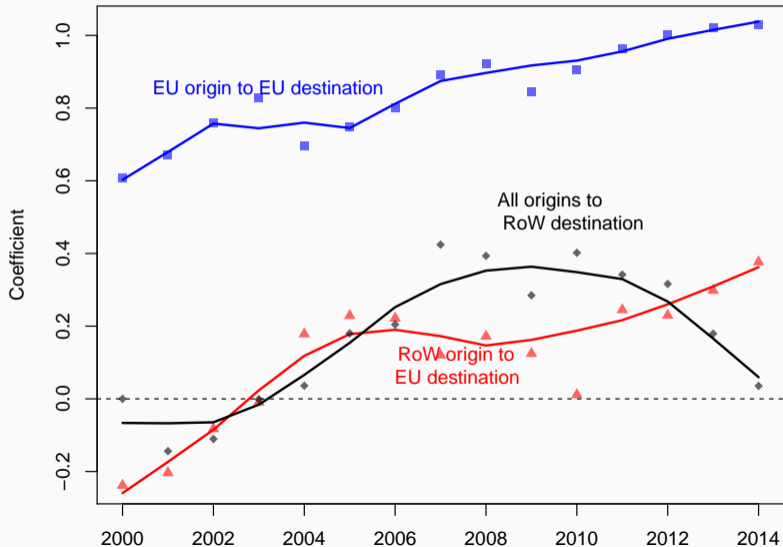


- Literature finds median  $\epsilon \simeq 5$
- Allows to compute  $\downarrow$  trade costs :
  - ▷ Any origin  $\rightarrow$  ROW: -15%
  - ▷ **ROW  $\rightarrow$  EU: -22%**
  - ▷ **EU  $\rightarrow$  EU: -39%**

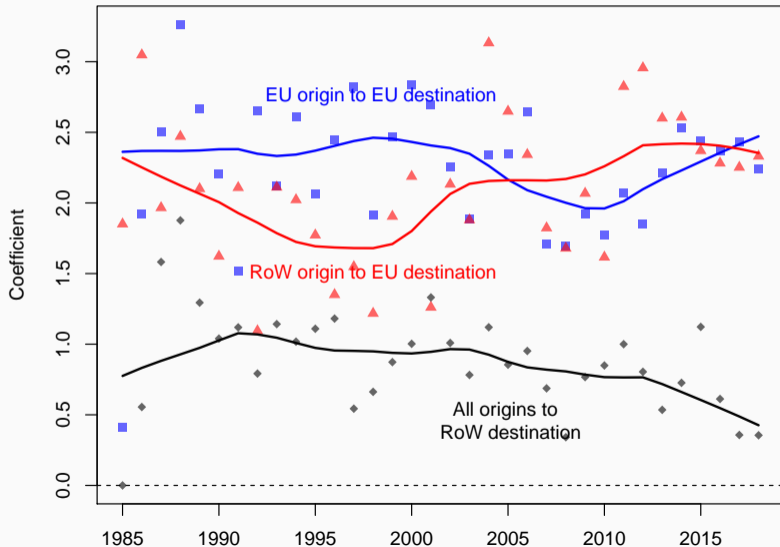
## Second Movement, Persons



# Third Movement, Services



# Fourth Movement, Capital



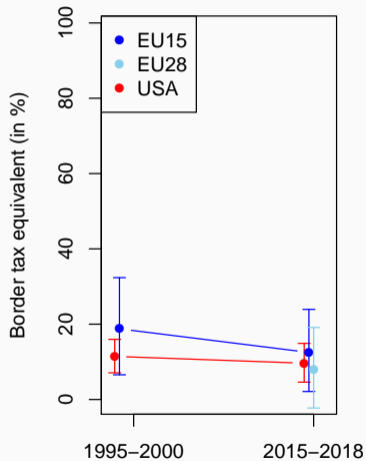


## Comparing levels of border barriers with the United States

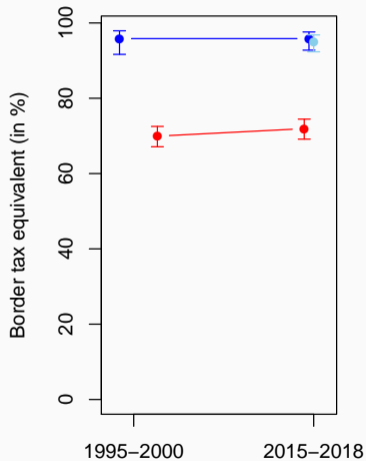
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- First keep a version of equation (3), where  $EU_{nt} = EU_{it} = EU_{nit} = 1$ ,
- Leaves us with only one border coefficient to be estimated ( $\beta$ )
- Measures the tendency of EU countries to trade less with EU partners than with themselves.
- 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

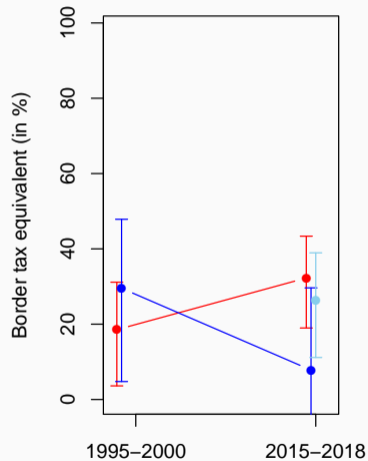
# 3 comparable movements EU vs US: AVE



(a) Goods



(b) Migrants



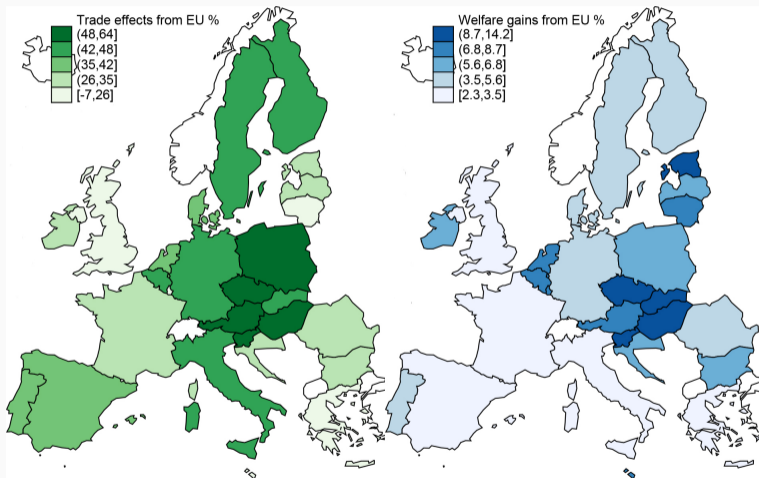
(c) Capital (M&A)

## Welfare effects of the EU and Brexit

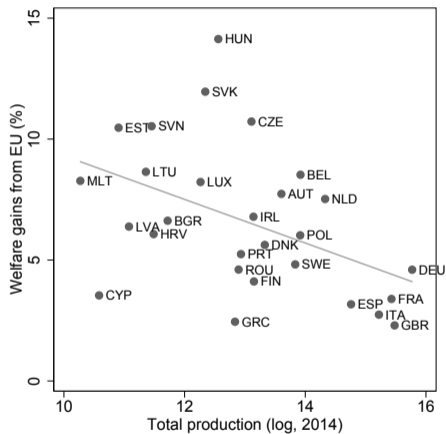
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- Once endowed with trade effects of the EU, one can do many scenarios
  1. End of the EU
  2. Brexit
  3. Western Balkans and Ukraine
- We do 1. and 2. in a paper published in Economic Policy in 2019 + 3. in recent (unpublished) work
- Effects are large, and a substantial part comes from the return of NTBs

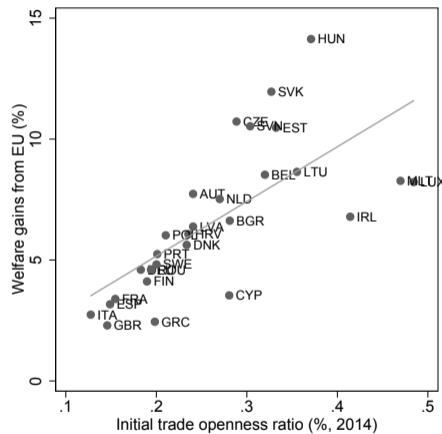
# Trade-related welfare effects of EU membership



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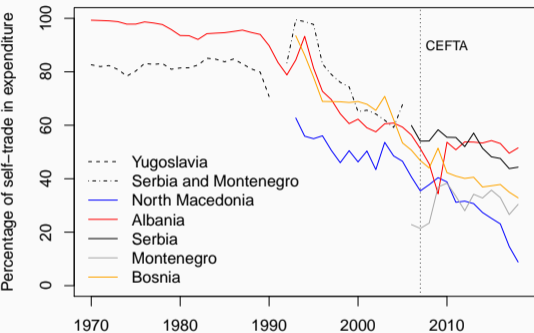
(a) Size and welfare gains



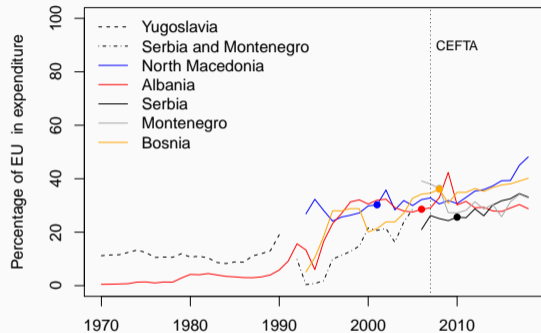
(b) Openness and welfare gains

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

# Western Balkans: Trade



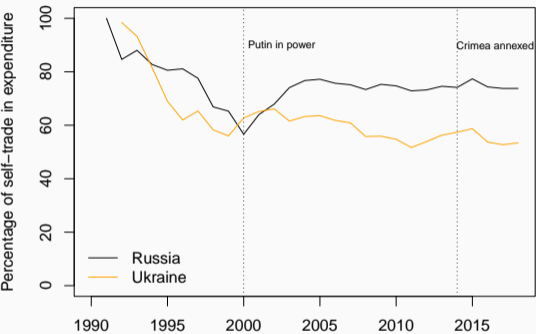
(a) Imports from self



(b) Imports from EU27



# Ukraine and Russia: Trade



(a) Imports from self



(b) Imports from EU27

## Western Balkans / CEECs / Ukraine: Welfare gains

Country	<i>Counterfactual</i>			Country	<i>Counterfactual</i>
	Balkan 3 deepening	Balkan6 deepening	Balkan6 → EU accession		CEEC → EU accession
North Macedonia	1.84	2.47	17.91	Slovenia	10.94
Bosnia	-0.01	2.21	11.15	Hungary	9.71
Serbia	0.39	1.18	8.82	Baltics	9.33
Albania	0.54	1.08	6.63	Czechia	7.93
Montenegro	-0.02	3.14	4.62	Slovakia	6.98
Kosovo	-0.02	0.95	1.26	Romania	6.03

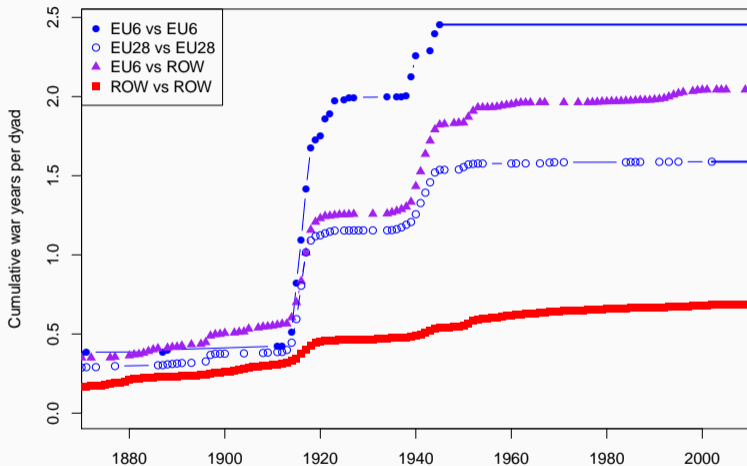
Note: Percentage rise in welfare obtained from an exact hat algebra calculation. The CEEC gains from accession are calculated as minus their losses from leaving the EU.

- Same exercise with **Ukraine**: 4.94% gain.

## 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.

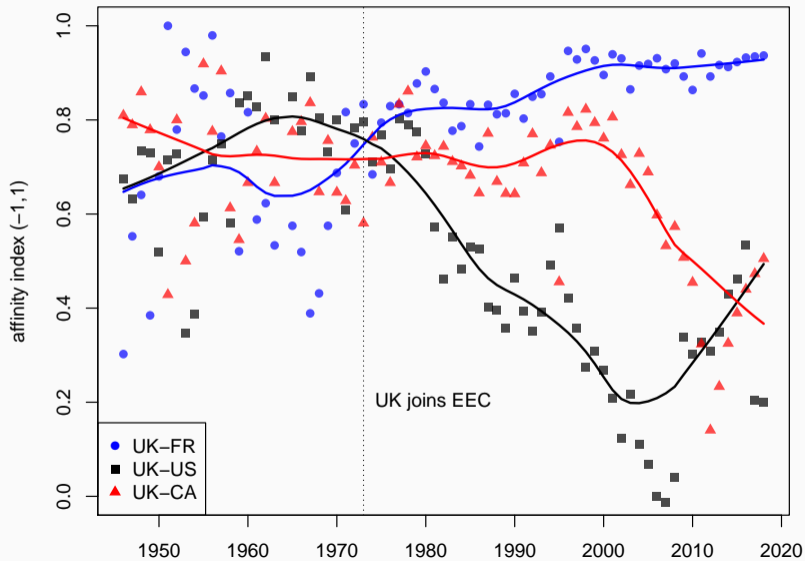
## Measuring political alignment using UN votes

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

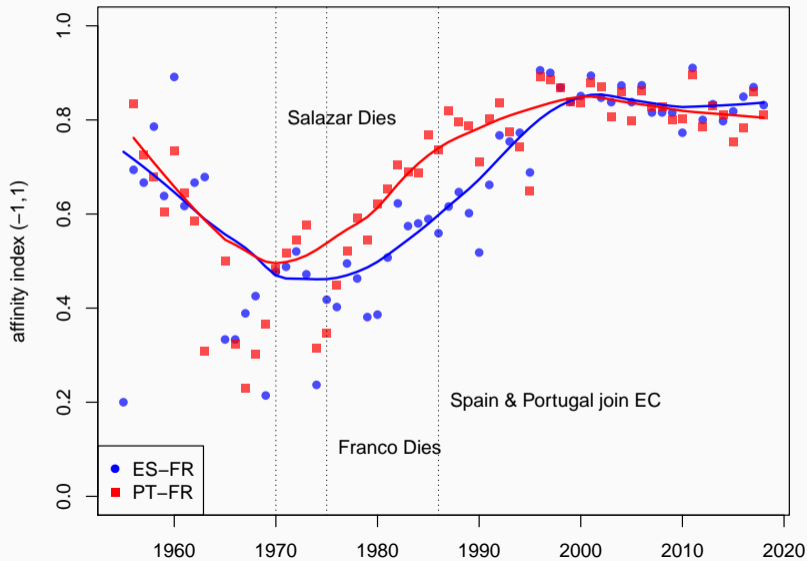
$$S_{nit} = 1 - \frac{\sum_r |V_{ir} - V_{nr}|}{\sum_r \mathbb{I}_{ir} \mathbb{I}_{nr}},$$

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

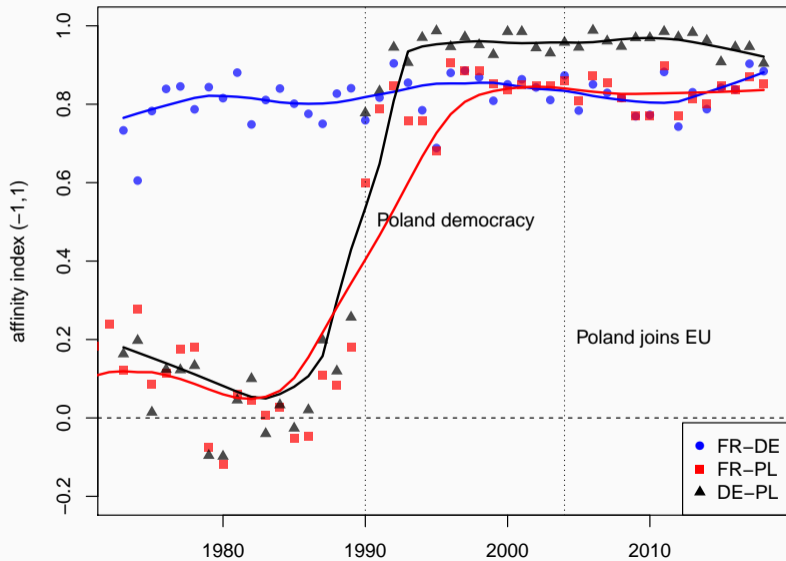
# UK similarity in UN votes with France, Canada and the US



# 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	1950	1950	1992
		-2018	-2018	-2018	-2018
EC/EU	0.692 <sup>a</sup> (0.044)	0.547 <sup>a</sup> (0.048)	0.396 <sup>a</sup> (0.032)	0.875 <sup>a</sup> (0.096)	0.196 <sup>a</sup> (0.018)
FTA (not EU)	0.105 <sup>a</sup> (0.021)	0.114 <sup>a</sup> (0.023)	0.068 <sup>a</sup> (0.016)	0.213 <sup>a</sup> (0.045)	0.029 <sup>a</sup> (0.007)
In distance	-0.043 <sup>a</sup> (0.007)	-0.048 <sup>a</sup> (0.006)			
Common language	0.007 (0.006)	0.013 <sup>b</sup> (0.005)			
Both full democracies	0.146 <sup>a</sup> (0.048)	0.303 <sup>a</sup> (0.049)	0.087 <sup>b</sup> (0.038)	0.377 <sup>a</sup> (0.130)	-0.045 <sup>a</sup> (0.012)
Both communist regimes	0.299 <sup>a</sup> (0.011)	0.401 <sup>a</sup> (0.059)	0.328 <sup>a</sup> (0.060)	1.59 <sup>a</sup> (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 <sup>2</sup>	0.71137	0.68722	0.84387	0.80448	0.9215
Within R <sup>2</sup>	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

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- 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.
- Welfare effects are far from negligible, particularly for small open members.
- 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.

## 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%	<b>-0,5%</b>	-0,2%	-0,2%
GBR	-2,4%	<b>-2,9%</b>	-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%	<b>-3,2%</b>	-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)	(2)	(3)	(4)
	To RTA with intermediate	To MFN	To RTA without intermediate	To MFN
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%