

# **EU Integration through a Greener Lens**

## **Building Consensus around European Integration**

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# Overview

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- In the context of increased contestation, can support for the EU be rebuilt?
- Increasing salience of “green” issues and popular satisfaction with EU environmental protection
- We make use of the MEP candidates’ Twitter communication in the 2019 EP elections, and use a mix of manual and machine label content in 10 (9) countries

# Research Questions

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1. **Do politicians use environmental issues as a means for increasing support and legitimacy of the EU and European integration?**
2. **To what extent does this vary among parties?**

# Framing the EU in a Green light

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- History of **EU leading on green issues**, seeks to promote itself as an environmental leader
- **Citizens concerned about the environment** & view it as an international issue
- EU should handle environmental issues, motivates voting behavior in EP elections
- **Expect Green/environmental issues increase the appeal that EU integration has for (at least some) political actors**

# Dominant parties

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- EU salience driven by challenger Eurosceptic parties **contesting EU polity and policy**
- Dominant pro-EU parties traditionally **refrained from engaging in EU polity debates**, but changing since 2014
- History of **emphasising issues** in response to challenger parties **when electorally advantageous**
- Can apply this to the **environment and EU linkage**

# Other parties

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## Green Parties

- Affinity between Green Parties ideology and EU integration
- Central role of green issues in 2019 fueled electoral success

## Far-right Parties

- Not always averse to environmental issues (green patriotism)
- Reject cosmopolitan values, international cooperation, and (perceived) cosmopolitan “elite” guiding the climate agenda

# Other parties

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## Far-left Parties

- Often strong supporters of environmental issues
- But generally critical of the EU
- Less clear expectations about Green/EU issue linkage

# Hypotheses

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H1 **When politicians co-mention the EU with green issues, they express higher support for the EU in comparison to any other EU mentions.**

## **Parties**

- H1.1 **Dominant party** politicians are **more likely to be pro-EU** when they link the EU and Green issues.
- H1.2 **Green party** politicians are **more likely to be pro-EU** when they link the EU and Green issues.
- H1.3 **Far-right** party politicians are **more likely to be anti-EU** when they link the EU and Green issues.

Compared to when talking about the EU in any other way



# Online Public Reaction (Twitter/X)

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- Twitter offers politicians opportunities to shape interactions around politics
- Can use social media strategically, to emphasise issues and events that benefit these political actors
- Used to manipulate politicization of EU issues by limiting the diffusion of such issues.

H2 Politicians' Tweets that associate support for the EU with environmental issues, will get a **higher level of engagement** than the other EU-related communication.

## **EP 2019 Political campaigning on twitter dataset**

- All tweets by MEP candidates, as well as public replies, mentions, and retweets
- 16 million tweets
- 28 countries, 31 languages
- 500,000 MEP candidate tweets
- 23 April – 30 May 2019

# Manual Coding

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- 17 research assistants coded Tweets across 9 languages
- 9,000 tweets per coder
- Tweets split by candidate/public, then by country and language
- Random sample taken for each language
  - Weighted 75% candidates, 25% public
- Languages with multiple coders, 2,000 Tweets used for inter-coder reliability checks

**Table: Tweet language distribution and sampling**

<b>Country</b>	<b>Language</b>	<b>All Candidate Tweets</b>	<b>Sampled Candidate Tweets</b>
UK	English	131,332	13,500
France	French	62,403	13,500
Spain	Spanish	52,824	13,500
Poland	Polish	43,770	13,500
Italy	Italian	17,826	7,500
Ireland*	English	14,697	14,697
Netherlands	Dutch	13,793	7,500
Germany*	German	13,156	13,156
Greece*	Greek	4,349	4,349
Hungary*	Hungarian	326	326

\*All candidate tweets were manually coded for these countries

# Coding Scheme

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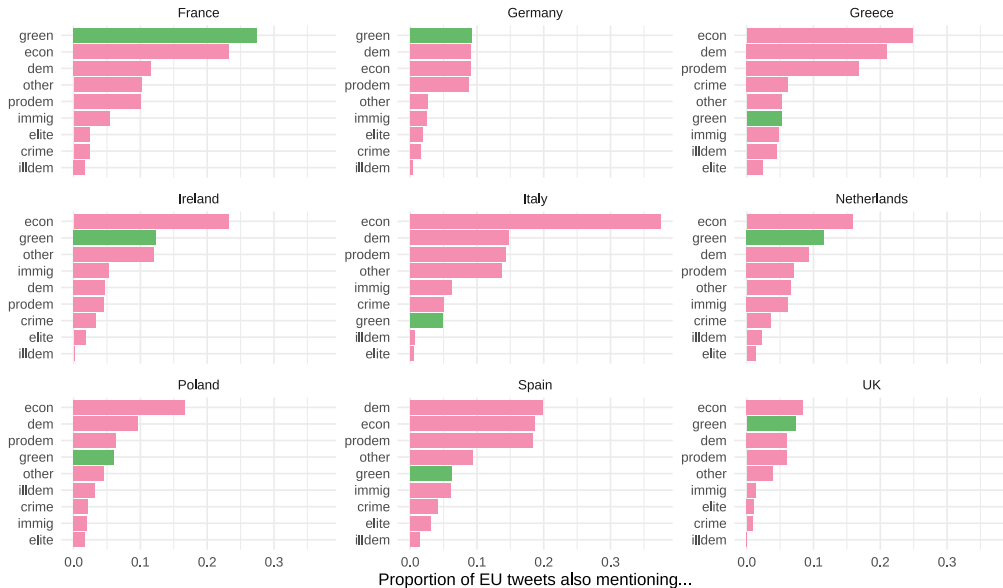
1. **Does the Tweet contain political content?**
2. **Does the Tweet mention a political issue?**
3. **Does the Tweet mention EU or Green issues?**
4. **Is the EU mentioned in positive/neutral/negative light?**

# Machine Learning Classifier

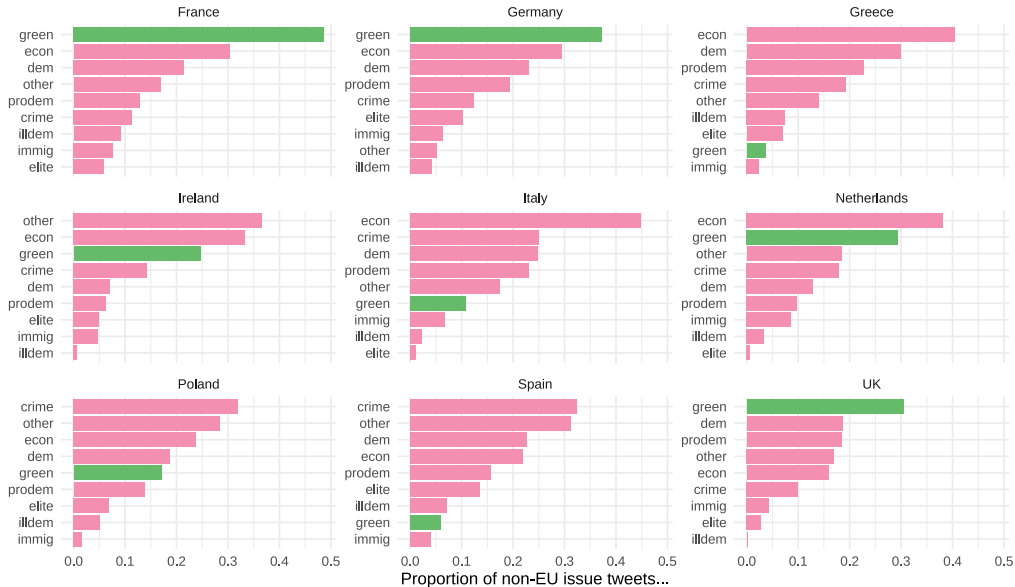
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- For countries where not all tweets are manually coded, we use joint classifiers based on all coded data:
  - **Binary classification:** political content, political issue (general), EU issue, Green issue, and EU position(s)
  - **Baseline comparison:** within-country classifiers (no data from other contexts)
- We compare regularized logistic regression & xgBoost across 5 inputs:
  1. English tf-idf (bi-grams)
  2. Multilingual document embeddings
  3. English document embeddings
  4. English tf-idf and Multilingual document embeddings
  5. English tf-idf and English document embeddings
- Models have same training-test split and we decide based on F1-scores

# Issue salience for EU Tweets (co-occurrence)



# Issue salience for non-EU Tweets





# Regression Analysis

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- **Outcome variable:** Pro-EU 1 vs. 0
- **Predictors:** Green issues (1 vs. 0), party categories (party dummies and nominal variable), and country fixed effects
- Focus on multiplicative interaction effect between green issues and party categories
- **Main model:** OLS for all data combined

# Regression Analysis

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- **Alternatives and robustness checks:**
  - Logistic regression, hierarchical models with tweets nested in politicians, nested in parties
  - Human coded data only
  - Alternative, CHES based, party categorization
  - Split focus on EU neutral and anti-EU content categories on human coded data

# Results - Overall

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## Pro-EU stances as a function of Environmental issue mentions

	Model 1
Intercept	0.453*** (0.008)
Green issue	0.246*** (0.008)
Country fixed-effects	Yes
R <sup>2</sup>	0.057
N	41141

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

# Results – Parties

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## Predicted pro-EU stance across party categories, nominal predictor

	without Green	w Green
Dominant mainstream	0.407	<b>0.486</b>
Green-challenger	0.405	<b>0.807</b>
Eurosceptic FR	0.130	<b>0.065</b>
Eurosceptic	0.058	<b>0.006</b>
Other challengers	0.317	<b>0.469</b>

Country fixed to Germany.

## Results – Public Retweets

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### Predicted number of retweets for EU tweets

	without Green	w Green
Pro-EU tweets	17.4	<b>19.35</b>
Anti-EU tweets	15.61	<b>12.13</b>

Country fixed to France, Dominant party, median followers.

# Summary

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- Potential of environmental issues to build consensus around EU integration and increase its legitimacy, but:
- Environmental appeals harden eurosceptic stances of far-right and far-left parties
- (Twitter) public slightly more likely to endorse pro-EU messages when linked with environmental issues (preliminary)

# **Appendix**

# References

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# Predicted pro-EU stance across party categories, Logistic HLM

	1	2	3	4	5
Intercept	-0.108 (0.078)	-0.693*** (0.087)	-0.152 (0.079)	0.187* (0.073)	0.092 (0.079)
Green issue	0.536*** (0.075)	0.935*** (0.113)	0.325*** (0.082)	0.556*** (0.076)	0.661*** (0.077)
Sitting MEP	0.004 (0.101)	-0.206* (0.095)	-0.019 (0.101)	-0.088 (0.091)	-0.011 (0.098)
Dominant		0.909*** (0.068)			
Dominant x Green issue		-0.617*** (0.140)			
Green party			0.255* (0.114)		
Green party x Green issue			0.873*** (0.150)		
Far-right				-1.578*** (0.097)	
Far-right x Green issue				-1.556*** (0.421)	
Far-left					-1.294*** (0.166)
Far-left x Green issue					-0.956** (0.293)
N Tweets	41141	40329	40329	40329	40329
N Candidates	1524	1481	1481	1481	1481
Var (Intercept)	0.856	0.700	0.847	0.623	0.786
Var (Tweets)	0.000	0.000	0.000	0.000	0.000

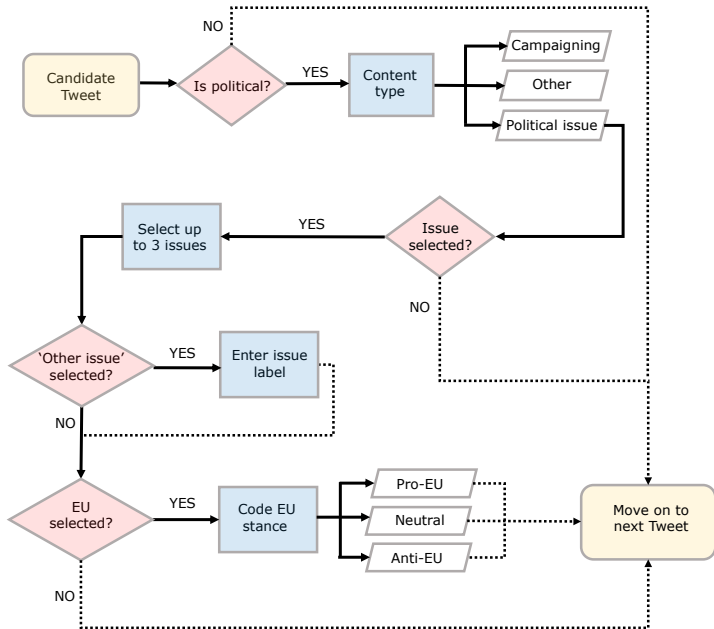
## Level of support (RT count) for EU tweets-ML linear

	ML linear log(RT)	ML linear for log(RT)
Intercept	2.312*** (0.137)	2.324*** (0.136)
Green issue	-0.043 (0.049)	-0.206** (0.065)
Pro EU	0.073** (0.026)	0.040 (0.027)
log(Followers)	-0.081*** (0.015)	-0.081*** (0.015)
Green X Pro_EU		0.316*** (0.083)
AIC	183869.534	183860.320
N Tweets	41141	41141
N candidates	1524	1524
Var Intercept (tweet)	0.817	0.817
Var Intercept (candidate)	0.148	0.136
Residual	4.901	4.900

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

## Tweet examples

	Tweet
Stand-alone	<p>Today (9th May) is Europe Day. It is appropriate to reflect on the peace and prosperity achieved in Europe over seven decades. We cannot take this for granted #TakingEuropeSeriously</p> <p>Happy #EuropeDay A day to commemorate the European Project and its achievements! The EU is far from perfect. It is up to us to continue shaping a stronger Europe. We cannot take this Union for granted! #StrongerTogether</p>
with Green	<p>If elected to #Ep2019, I'll work &amp; campaign for a sustainable Europe that prioritises environmental protection &amp; climate action. I want a Bottle Return Deposit Scheme to encourage consumers to recycle plastic. Here's how a similar scheme works in London #Dom4Europe #ClimateAction</p> <p>Great to have such support from leading European Green MEP @ph_lamberts. Belgium is experiencing the #GreenWave and I'm hopeful about joining Philippe and his new colleagues in the Greens group in the EUropean Parliament after Friday! #EP2019</p>
with other issue	<p>The protection of citizens' rights irrespective of gender, sexual orientation, religion, ethnicity or disability has been one of the EU's greatest achievements. More must be done, and Fianna Fail will work towards creating a Europe of Equals. #MakingEurope-Work</p> <p>"...ministers have refused to recognise the vital contribution made by international students, particularly from the EU, in our universities." - @AngelaRayner shadow education secretary via @alexwickham</p>



**Table: F1-score comparison across setups: Political issue**

	en-tfidf	en_emb	orig_emb	tfidf+orig_emb	tfidf+en_emb	xgBoost
Full sample	0.769	0.760	0.760	0.786	0.784	0.768
France	0.841	0.841	0.841	0.862	0.855	0.853
Ireland	0.796	0.800	0.800	0.819	0.820	0.794
Italy	0.784	0.790	0.790	0.811	0.797	0.772
Netherlands	0.754	0.737	0.737	0.766	0.774	0.755
Poland	0.769	0.751	0.751	0.775	0.784	0.762
Spain	0.642	0.622	0.622	0.663	0.654	0.636
UK	0.750	0.725	0.725	0.755	0.759	0.742

**Table: Classifier performance: test set performance**

		Accuracy	Precision	Recall	F1	Mixture
Political	Full sample	0.912	0.928	0.977	0.952	Ridge
Political issue	Full sample	0.792	0.801	0.767	0.784	Ridge
Green	Full sample	0.921	0.862	0.762	0.809	Lasso
EU	Full sample	0.897	0.726	0.563	0.634	Lasso
	UK	0.866	0.876	0.884	0.880	Lasso
Pro-EU	Full sample	0.778	0.770	0.693	0.730	Ridge
	UK	0.715	0.696	0.680	0.688	Elastic Net
EU neutral	Full sample	0.706	0.662	0.596	0.628	Elastic Net
	UK	0.667	0.604	0.587	0.595	Ridge
Anti-EU	Full sample	0.842	0.479	0.486	0.483	Lasso
	UK	0.810	0.274	0.349	0.307	Lasso

## Issue tweet distribution across countries

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	Issue tweets	Politicians	EU	Green	Both	<u>Both</u> <u>EU</u>	<u>Both</u> <u>Green</u>
France	32,399	318	3,717	14,210	888	0.24	0.06
Germany	5,514	178	2,143	1,450	197	0.09	0.14
Greece	1,587	50	423	64	22	0.05	0.34
Ireland	6,274	39	724	1,458	89	0.12	0.06
Italy	7,561	212	667	663	26	0.04	0.04
Netherlands	5,464	165	1,129	1,344	118	0.10	0.09
Poland	16,158	270	1,962	2,114	87	0.04	0.04
Spain	20,971	235	1,776	1,181	70	0.04	0.06
UK	53,729	354	28,552	7,776	1,963	0.07	0.25