

Errors have been made, others will be blamed: issue engagement  
and blame shifting in Prime Minister speeches during the  
economic crisis in Europe

## APPENDIX

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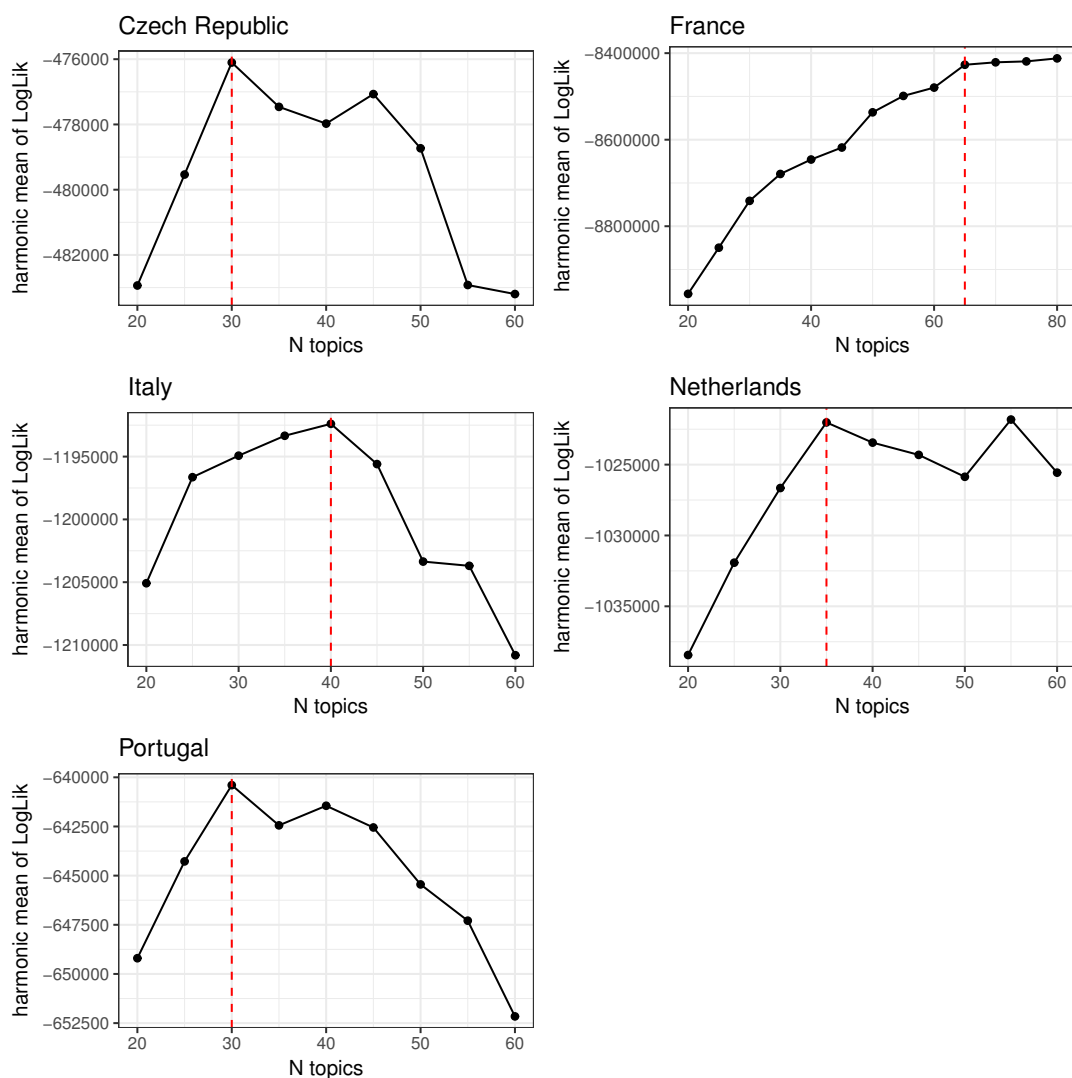
## A EUSpeech dataset

EUSpeech is a dataset of 17,184 speeches from EU leaders (i.e., prime ministers in 10 member states, EU commissioners, party leaders in the European Parliament, and ECB and IMF leaders) from 2007 to 2015. These speeches vary in sentiment, topics and ideology, allowing for fine-grained, over-time comparison of representation in the EU.

EUSpeech can be found on the Harvard Dataverse here: <https://dataverse.harvard.edu/dataverse/euspeech>. An accompanying paper presenting the data can be found here: <http://takelab.fer.hr/poltext2016/PolText2016-proceedings.pdf>

## B Harmonic means of topic models per country

Figure 1: Harmonic means of models with different number of topics



## C Topic coding

Table 1: Example of coded topics, Germany

<b>terms</b>	<b>word prob.</b>	<b>terms</b>	<b>word prob.</b>	<b>terms</b>	<b>word prob.</b>
life	0.033	european	0.060	bank	0.063
peopl	0.025	euro	0.042	financi	0.041
age	0.024	europ	0.037	regul	0.025
famili	0.023	union	0.033	must	0.020
societi	0.021	crisi	0.025	system	0.017
feder	0.021	stabil	0.018	intern	0.014
work	0.020	member	0.017	institut	0.010
care	0.019	econom	0.017	rate	0.010
live	0.018	state	0.016	risk	0.010
year	0.017	growth	0.015	fund	0.008
chang	0.016	competit	0.014	sector	0.008
demograph	0.014	monetari	0.014	need	0.008
<b>other</b>		<b>economy</b>		<b>economy</b>	

## D Selection of relevant benchmark

Table 2: EU member states and EU mentions in prime minister speeches

	Germany	United Kingdom	Greece	Spain
Belgium	4	23	14	65
Bulgaria	47	11	32	11
Croatia	11	17	9	27
Cyprus	15	41	340	111
Denmark	21	34	9	95
Germany	4886	282	185	1056
Estonia	5	6	1	23
Finland	8	10	12	69
France	245	372	69	1157
Greece	349	113	6342	1389
Hungary	20	18	51	35
Ireland	71	557	93	251
Italy	55	152	66	683
Latvia	29	15	10	26
Lithuania	6	4	0	14
Luxembourg	11	11	6	18
Malta	8	12	23	48
Netherlands	43	20	10	49
Austria	49	22	13	66
Poland	102	76	5	253
Portugal	94	33	83	950
Romania	30	26	15	112
Slovenia	3	0	6	17
Slovakia	10	18	5	101
Spain	174	122	55	21648
Czech Republic	0	0	0	0
Sweden	14	34	40	40
United Kingdom	52	4320	12	121
European Union	3756	2830	3050	6992

In their paper, Kayser and Peress (2012) distinguish three types of benchmark: comparison of national performance with OECD median performance; comparison of national performance with performance of those countries that are more integrated into the international economy; and comparison of national performance with performance of the most important trading partners. In the current paper, however, our approach is more agnostic: rather than assuming particular comparisons we instead mine all speeches for mentions of particular countries (for purposes of clarity, we present the results of 4 countries).

To obtain the most salient comparison economies we first mined all speeches for mentions of all EU member states as well as the European Union under the assumption that these mentions indicate comparison relevance.<sup>1</sup> A few things stand out. First, the prime ministers in all countries mention their own country most often in line with the belief that voters care about domestic matters the most. The European Union comes in as the second-most often entity in all four countries (Germany, 3756; United Kingdom, 2830; Greece, 3050; Spain, 6992), thus making it salient as a benchmark for our empirical models.

<sup>1</sup>To tally mentions of the European Union, we searched the speeches for “EU”, “Europe”, “European Union”.

## E Descriptives

Figure 2: Distribution of economic topic proportion

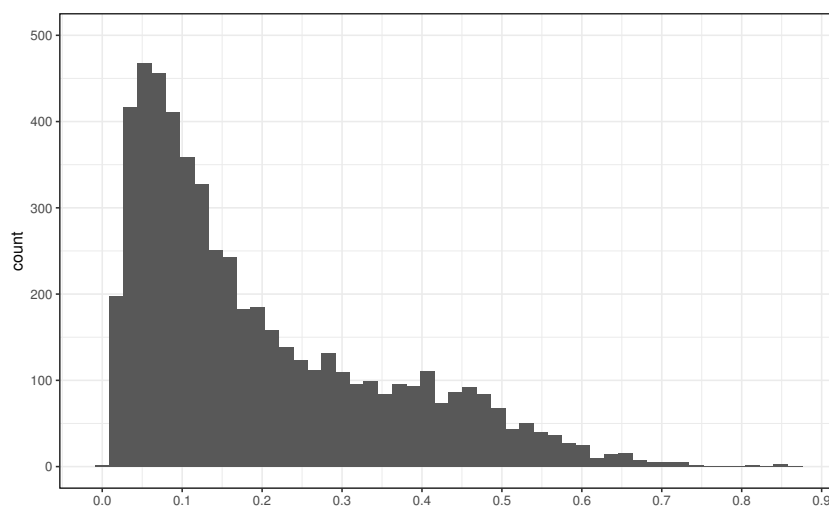


Table 3: Descriptive statistics

	n	mean	sd	min	max
Economic topic proportion	5553	0.20	0.16	0.01	0.87
Unemployment	5553	11.56	6.66	3.60	27.90
Unemployment, difference national-EU	5553	2.13	6.39	-5.70	17.00
Unemployment EU	5553	9.43	1.23	6.80	11.00
GDP Growth	5553	0.07	0.86	-3.50	2.05
GDP Growth, difference national-EU	5553	-0.14	0.73	-4.09	1.14
GDP Growth EU	5553	0.21	0.66	-2.64	1.02
Negative sentiment towards banks	5553	0.62	1.66	0.00	20.00
Negative sentiment towards EU	5553	1.33	1.88	0.00	16.67
Negative sentiment towards the Troika	5553	0.31	1.15	0.00	11.67
Negative sentiment towards Greece	5159	0.31	1.20	0.00	20.00
Negative sentiment towards Germany	4981	0.46	1.39	0.00	16.67

## F Study 1: Determinants of issue engagement

Table 4: Determinants of issue engagement: separate models for different economic indicators

	Model 1	Model 2	Model 3	Model 4
(Intercept)	18.03*** (1.12)	20.85*** (1.13)	10.84** (3.75)	20.83*** (1.14)
Unemployment	0.37*** (0.07)			
GDP growth		-1.67*** (0.37)		
Local unemployment			0.31*** (0.08)	
EU unemployment			1.10** (0.37)	
Local GDP growth				-1.75*** (0.40)
EU GDP growth				-1.34 (0.72)
Right-wing government (ref:left)	-0.64 (0.53)	0.88 (0.48)	-0.51 (0.53)	0.89 (0.48)
Country fixed effects	✓	✓	✓	✓
AIC	45651.32	45651.54	45649.42	45651.92
BIC	45737.41	45737.63	45742.13	45744.63
Log Likelihood	-22812.66	-22812.77	-22810.71	-22811.96
Num. obs.	5553	5553	5553	5553
Num. groups: quarter	36	36	36	36
Var: quarter (Intercept)	6.82	7.57	6.31	7.68
Var: Residual	215.02	215.04	214.99	215.05

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

## G Study 2: Blame shifting

Figure 3: Sentiment: Distribution of country averages (quarterly)

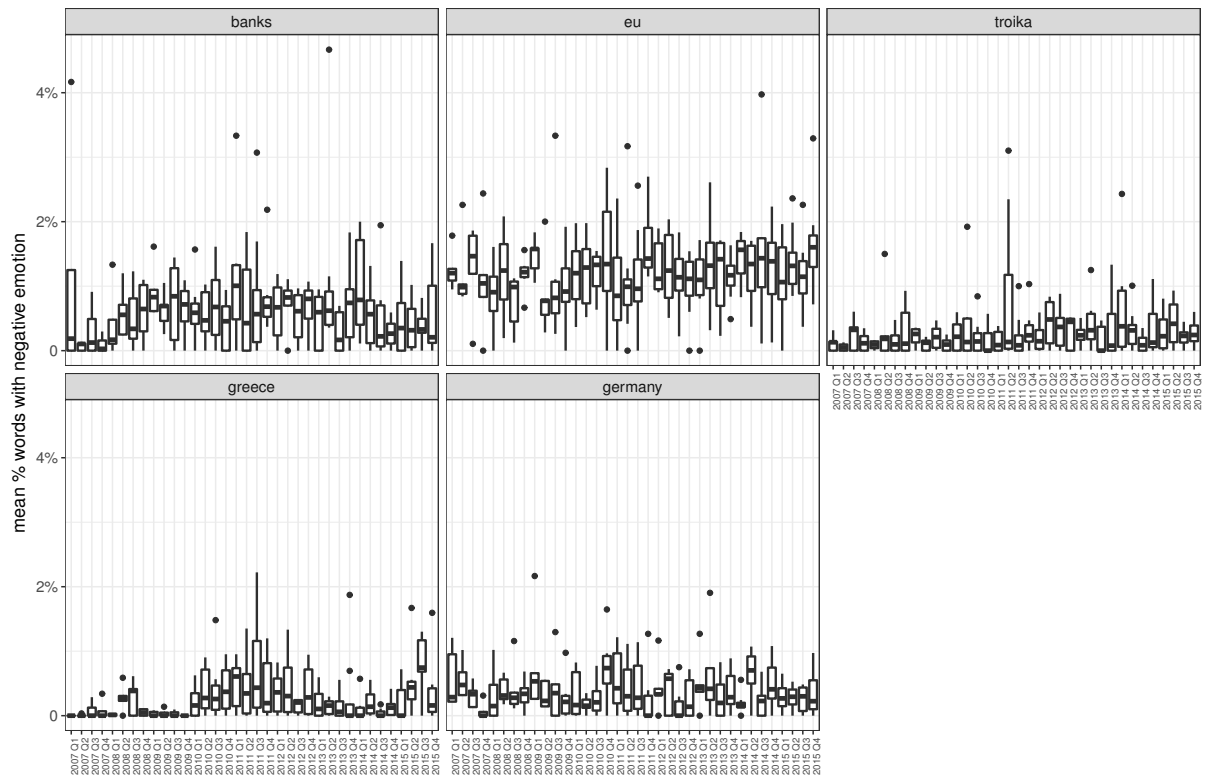


Table 5: Determinants of blame shifting (counts)

	Model 1	Model 2	Model 3	Model 4	Model 5
	Banks	EU	Troika	Greece	Germany
(Intercept)	-5.42*** (1.25)	-40.70*** (3.41)	-2.37*** (0.43)	-2.89*** (0.83)	-2.82*** (0.75)
Local Unemployment	0.24*** (0.03)	0.32*** (0.09)	0.06*** (0.01)	0.08*** (0.02)	0.02 (0.02)
EU Unemployment	-0.09 (0.12)	0.57* (0.29)	0.02 (0.04)	0.05 (0.07)	0.02 (0.06)
Local GDP Growth	-0.71*** (0.13)	-0.60 (0.42)	-0.12* (0.05)	0.35** (0.12)	-0.10 (0.09)
EU GDP Growth	-1.01*** (0.21)	-0.09 (0.51)	-0.12 (0.07)	0.21 (0.14)	0.01 (0.11)
Right-wing government	-0.98*** (0.17)	0.87 (0.57)	-0.16* (0.06)	-0.06 (0.12)	-0.13 (0.12)
Speech length (log)	1.56*** (0.07)	7.94*** (0.23)	0.54*** (0.03)	0.41*** (0.05)	0.61*** (0.05)
Country fixed effects	✓	✓	✓	✓	✓
AIC	32914.97	46389.55	22246.24	26537.64	25988.70
BIC	33027.54	46502.12	22358.82	26642.41	26092.91
Log Likelihood	-16440.48	-23177.77	-11106.12	-13252.82	-12978.35
Num. obs.	5553	5553	5553	5159	4981
Num. groups: quarter	36	36	36	36	36
Var: quarter (Intercept)	0.59	2.43	0.05	0.23	0.13
Var: Residual	21.56	246.73	3.15	9.83	10.61

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

*Note:* Model 4 and Model 5 exclude speeches of Greek and German prime ministers, respectively.

*Discussion:* We find that the higher domestic unemployment the more prime ministers mention banks, EU, Troika and Greece in their speeches. Two of these effects are sizable: an increase of about 3% in unemployment (compared to EU unemployment) is predicted to lead to one more mention of banks and the EU. The effects of unemployment on the Troika and Greece are much weaker. We also find that weak GDP growth is associated with mentioning banks and the Troika more. Interestingly, higher GDP growth is associated with mentioning Greece more. Clearly, the well-performing countries picked out Greece, whereas the under-performing countries picked on other blame units. In the case of the bank mentions, the negative effect of EU growth implies that the weaker the EU economy, the more these two blame units are mentioned in PM speeches. We also find that left-wing governments mention banks and the Troika more often than right-wing governments. Finally, our model was not able to predict mentions of Germany.