Credit Shocks and Populism

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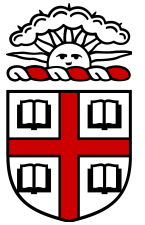
Introduction

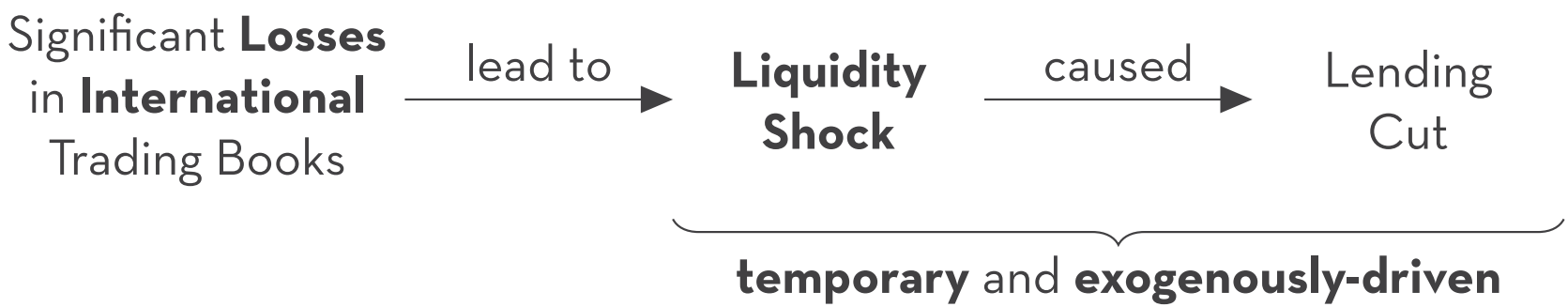


- Populist parties have experienced a spectacular electoral growth following the Great Financial Crisis.
- Among other economic factors (unemployment, trade disruptions...), a major feature of the crisis was the sudden drop in bank lending.
- Can credit shocks fuel populism in modern democracies?
- This paper uses Germany as a testing ground for this question as it
  a) provides an exogenous **credit shock**, and
  b) offers heterogeneity of populism.

Contribution

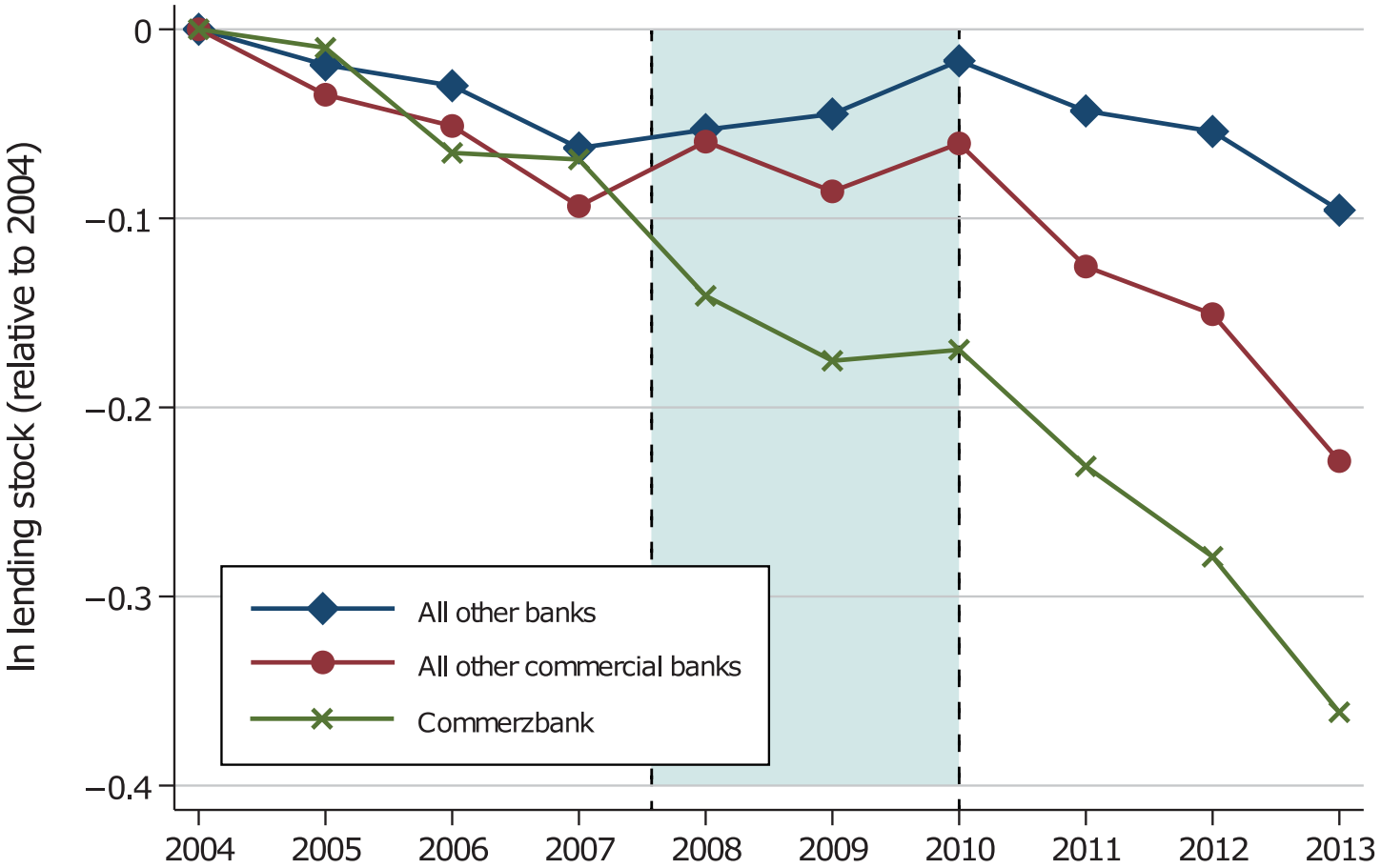
- We investigate the effect of the credit shock on revealed political preferences and the likelihood to support a populist party;
- We contribute to the LITERATURE on the economic drivers of populism by focusing on the banking channel;
- Differently from previous studies on populism, we use text analysis to test how changes in the supply of populist rhetoric influence political preferences;
- We compare voters' preferences toward parties with a populist rhetoric and parties that simply focus on bank-related topics.

Background: Commerzbank's Lending Cut (Q3 2008)



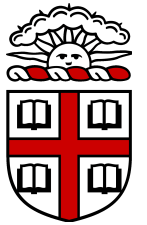
The cut anticipates the wider downturn in domestic credit (Huber, 2018)

Background: Lending Stock of German Banks



Notes: The picture describes the ln lending stock to German non-financial customers, relative to the year 2004 in 2010 billions of euros. Source: Huber (2018).

Methodology



- Exploit the spatial variation in exposure to the credit contraction at county level to observe the effect on individual political preferences
- These patterns will be informative about the change in voters' demand for populism activated by the credit crunch
- Describe the response on the supply side with the help of text analysis techniques, accounting whether voters shift preferences in favour of more populist and topic-biased parties

Exposure to the Credit Shock

Firm-Level Data on Bank Accounts

- Create a measure of Commerzbank exposure at county-level in 2006 as a proxy for the exposure to the credit shock using firm-level data Descriptives Pre-Shock

- AMADEUS: data on bank accounts held by each firm ($\sim$ 640, 000) established before 2006

- $\sim$ 950, 000 bank relationships, 99, 000 of which are Commerzbank's

Exposure to the Credit Shock

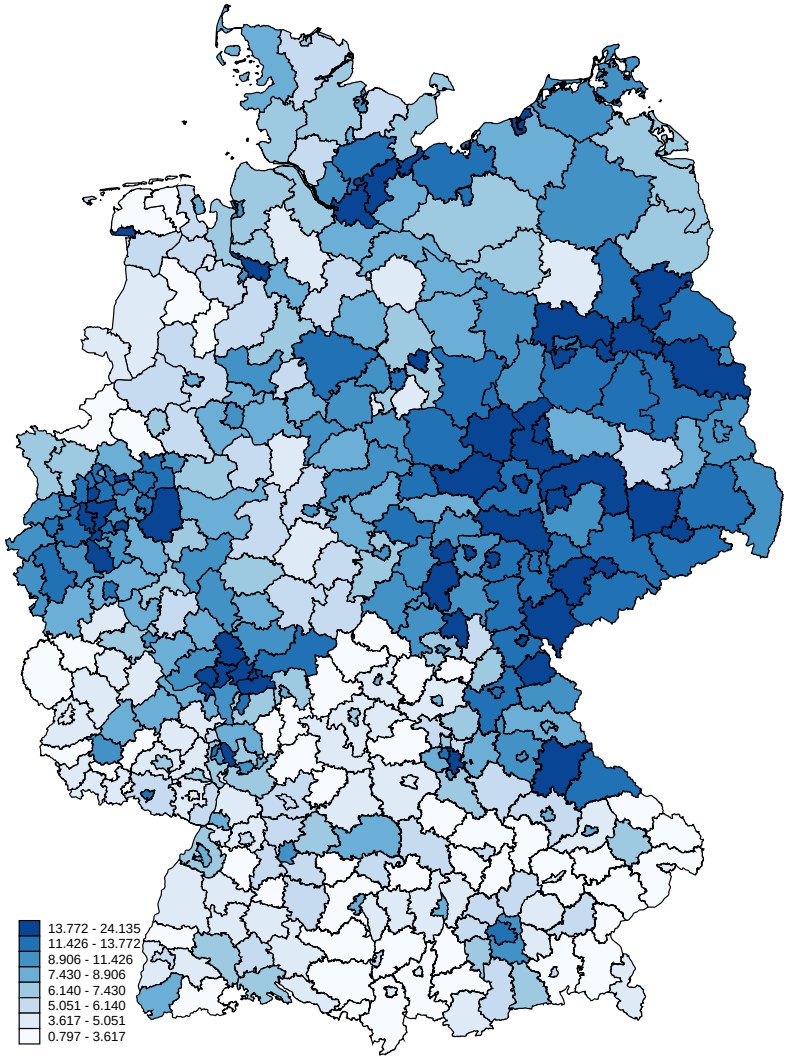
Measuring Commerzbank Dependence

Following Huber (2018),

$$\text{Exposure}_k = \frac{1}{F_k}\left[\sum_{f \in F_k}\left(\frac{\#\text{ Commerzbank Branches}_f}{\#\text{ Total Bank Relationships}_f}\right)\right] \in (0,1)$$

- $\#$ Commerzbank Branches$_f$ is the number of bank relationships of firm $f \in F_k$ in county k that are with Commerzbank branches
- $\#$ Total Bank Relationships$_f$ is the total number of bank relationships of firm f
- We average firm-level exposure across firms within the county to construct an index of exposure at regional level

Spatial Variation of Exposure



Exposure to the Credit Shock

Is Commerzbank Exposure Exogenous?

As documented in Huber (2018):

- Commerzbank expanded its branch network around three head offices: Düsseldorf, Frankfurt and Hamburg;
- The Allies forced the creation of these three head offices in 1948-1957;
- The objective was to break up German banks into separate entities to hinder the ability of the Nazis to wage war
- The cities were chosen due to historical and strategic criteria unrelated to local economic or political conditions:
  - Düsseldorf: capital of North-Rhine Westphalia since it was the only city with a large building that survived bombing;
  - Frankfurt: where the Americans founded the new central bank; not a financial centre yet;
  - Hamburg: the British ordered the surviving bankers to set up a central office in the city.

Individual Political Preferences

Full Sample | 2006 Wave

German Socio-Economic Panel (SOEP) Survey Data

- Individual political preferences
  1. **Political Support**:"*Many people in Germany lean towards one party in the long term, even if they occasionally vote for another party. Do you lean towards a particular party?*"
  2. **Political Preference**: pointed out preference conditional on the previous question

- Individual and household characteristics

- Waves: from 2000 to 2016 (Δ: 1 year)

- County-level variables (DeStatis and RegionalStatistik)

German Political Spectrum

- Multi-Party System dominated by two strong, but declining, parties: the centre-right Christian-democratic party (CDU/CSU) and the centre-left socialist party;

- German populist parties come from both sides of the left-right spectrum (Popu-List by Rooduijn et al., 2019; Chapel Hill Expert Survey; Norris and Inglehart, 2019):
  - Alternative Für Deutschland (AfD) (far-right)
  - Die LINKE (far-left)
  - National Democratic Party (NPD) (far-right, extra-parliamentary)

- Outcome Variables:
  - $\mathbb{1}\left(\text{Party Preference} = \text{Populist Party}\right)$ Populist Map
  - Political Support: equal to one when positive answer Participation Map

Identification

Two-way fixed effects identification with heterogeneous treatment effects

$$y_{ikt} = \alpha + \beta \left(\text{Exposure}_k \times \text{Post} \right) + \mathbf{X}'_{ik}\Gamma + \mathbf{K}'_k\Pi + \delta_k + \lambda_t + \varepsilon_{ikt}$$

- y_{ikt} denotes the outcomes of interest for individual i resident in county (*kreise*) k in 2006 at time t
- Exposure_k is the pre-shock county-level Commerzbank exposure
- Post equals to one for each period after the end of the credit shock (2009 onward)
- $\mathbf{X}_{ik}$ and $\mathbf{K}_k$ are respectively vectors of pre-shock individual- and household- and county-level characteristics (measured in 2006)

  List of Controls
- δ_k and λ_t are respectively county and time fixed effects

Baseline Results: Positive Effect of the Credit Shock

	Political Support			Intention to Vote for Populist Party		
	(1)	(2)	(3)	(4)	(5)	(6)
$Exposure_k \times Post$	0.011**	0.013***	0.013***	0.007**	0.007***	0.007***
	(0.005)	(0.005)	(0.005)	(0.003)	(0.002)	(0.002)
Number of Observations	229,699	206,604	206,604	229,699	206,604	206,604
Adjusted R-Squared	0.129	0.139	0.139	0.078	0.076	0.076
Number of Counties	396	396	396	396	396	396
County-Level FE	Yes	Yes	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes	Yes	Yes
Basic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Household Controls	No	Yes	Yes	No	Yes	Yes
Regional Controls	No	No	Yes	No	No	Yes

Notes: $Exposure_k \times Post$ is expressed in standard deviation. Significance Levels: * 10% level, ** 5% level, *** 1% level. Robust standard errors adjusted for clustering at the county of residence in 2006 level in parentheses.

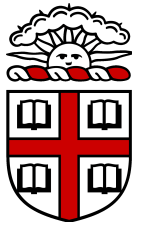
Robustness: Additional Remarks

- Negligible differences in estimates between rural and urban areas

  Rural and Urban Areas

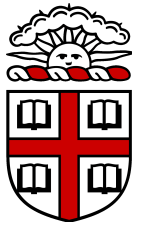
- Results are unconditional on the indication of a political preference to preserve sample size: conditioning still provides robust estimates of higher magnitude
- Results are robust to placebo tests to determine the appropriate timing of the shock

Problem with Populism as dummy variable



- The degree of populist rhetoric supplied by a party may change over time (e.g. due to issue salience or leadership change);
- Some parties may be more populist than others;
- Populist parties may also be parties that talk more about economic distress (e.g. AfD was founded by a group of Eurosceptic economists).

Populism as continuous indicator



- We account for changes in the supply of populism with a non-binary classification of parties
- We compare the degree of populist rhetoric with focus of political discourse on the banking crisis
- Methodology: text-analysis pipeline incorporating topic modelling (`seededLDA`)
  - extract populist rhetoric and banking-related topics from text data
  - create continuous text-based indexes at year-party level
  - match to individual political preferences and re-estimate the main specification
- Robustness: alternative text data + dictionary techniques based on the same seeds of topic model + different seeds

Plenaries and Electoral Campaigns

- Main Text Data: Parliamentary Speeches – ParlSpeech V2
  - Full-Text corpora of 6.3 million parliamentary speeches in the key legislature chambers of 9 representative democracies
  - German *Bundestag*: $>$ 370, 000 speeches of representatives from 1991 to 2018

- Robustness: Electoral Manifestos – Comparative Manifesto Database
  - Corpus of electoral programmes: $\sim$ 50 different countries, $\sim$ 40 languages
  - $\sim$ 2, 750 machine readable programmes
  - German National Elections: 1990, 1994, 1998, 2002, 2005, 2009, 2013 and 2017

seededLDA

- We create two groups of seeds to capture:
  - Populist rhetoric (using lexicons from Rooduijn and Pauwels, 2011 and, as robustness, from Cantarella et al., 2020)
  - Banking topics (using parsimonious lexicons)

- As in LDA, we obtain the per-topic posterior probability distribution of unique words: $\hat{\varphi}_k$

- On the basis of each $\hat{\varphi}_k$, we retrieve the subset of twenty terms which features the highest posterior probability within a topic $k \in K = \{BF, POP\}$

Year-Party Aggregation

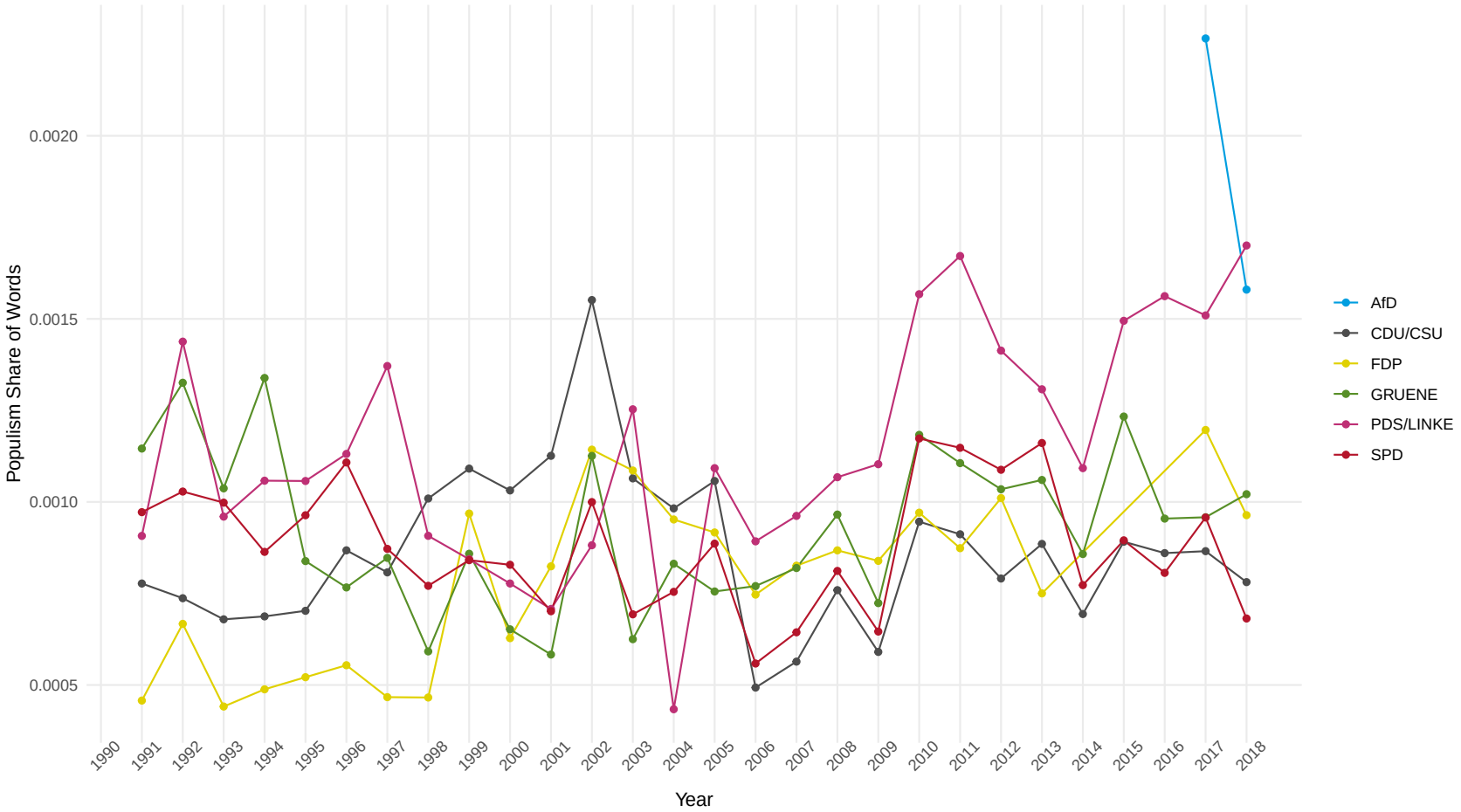
Plate Diagram | Top Terms

- Calculate the year-party index L_{pt} for each party p in year t as:

$$L_{pt} = \sum_{d \in D_{pt}} \left[\frac{\sum_{n \in N_d} \mathbb{1}\left(\omega_{dn} \in B_L\right)}{N_d} \right] \quad \forall\, L = \{BF, POP\}$$

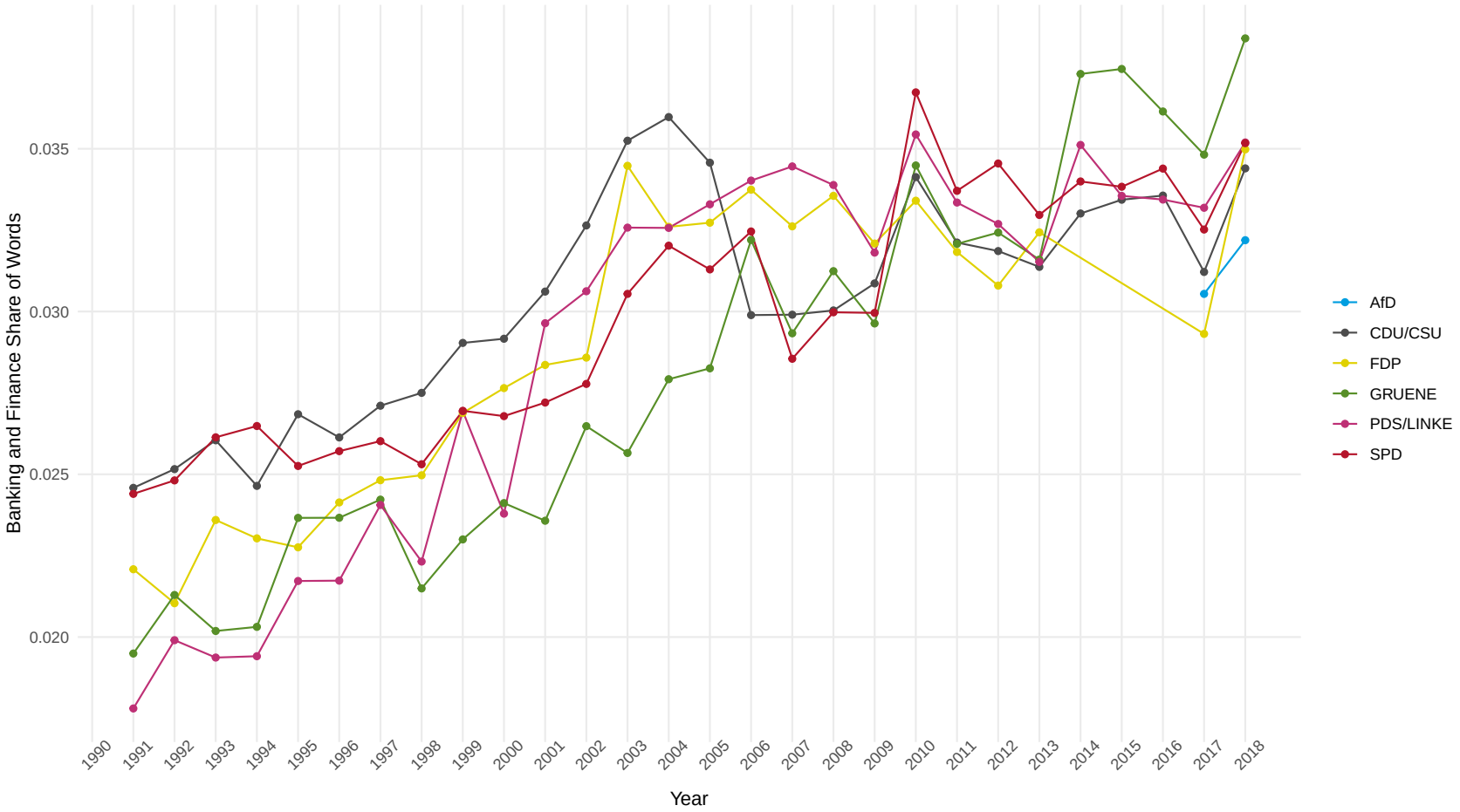
- B_L with $L = \{BF, POP\}$ are bag of words of $\nu = 20$ tokens with the highest per-topic probability $\hat{\varphi}_k$
- $D_{pt} \subset \mathcal{C}$ is the collection of speeches for party p in year t of the corpus $\mathcal{C}$
- ω_{dn} is the observed word $n \in N_d$ in document d, where N_d is the per-document d number of words

Time-Party Variation in Populist Rhetoric



Notes: The picture displays the evolution of the populism rhetoric index in parliamentary speeches by party from 1991 to 2018. The indicator is computed on the ParlSpeech V2 database of (Rauh and Schwalbach, 2020).

Time-Party Variation in Banking-Related Issues



Notes: The picture displays the evolution of the banking and finance index in parliamentary speeches by party from 1991 to 2018. The indicator is computed on the ParlSpeech V2 database of (Rauh and Schwalbach, 2020).

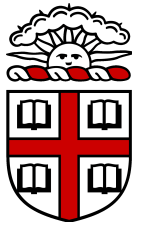
Positive Supply Side Response to the Shock

Dictionary Based Results

	Banking and Financial Crisis				Populism			Combined	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Parliamentary Debates									
$Exposure_k \times Post$	0.058***	0.060***	0.060***	0.128***	0.120***	0.120***	0.066***	0.067***	0.067***
	(0.015)	(0.016)	(0.016)	(0.024)	(0.025)	(0.025)	(0.016)	(0.017)	(0.017)
Number of Observations	105,720	93,533	93,533	105,720	93,533	93,533	105,720	93,533	93,533
Adjusted R-Squared	0.590	0.584	0.584	0.556	0.560	0.560	0.570	0.566	0.566
Number of Counties	393	393	393	393	393	393	393	393	393
Panel B: Electoral Manifestos									
$Exposure_k \times Post$	0.081***	0.084***	0.083***	0.049***	0.049***	0.050***	0.084***	0.087***	0.086***
	(0.013)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.015)	(0.014)
Number of Observations	25,842	22,816	22,816	25,842	22,816	22,816	25,842	22,816	22,816
Adjusted R-Squared	0.601	0.593	0.594	0.341	0.337	0.338	0.593	0.586	0.587
Number of Counties	387	387	387	387	387	387	387	387	387
County-Level FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Basic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Regional Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Significance Levels: *** 1% level, ** 5% level, * 10% level. Robust standard errors adjusted for clustering at the county of residence in 2006 level in parentheses. Outcome and treatment are expressed in standard deviation.

Conclusion



- Based on data on Germany, we show that credit shocks increase the support for populist parties
- Credit shock of 2008–09 increased the electoral support for parties that a) use a populist rhetoric, and b) focus more on banking
- These findings show that a populist rhetoric pays off when a credit shock hits
- However, they also suggest that voters are not "blinded" by populist rhetoric, as they are sensitive to the topics populist discuss