# Partisan Conflict *

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**Abstract**

American politics have become increasingly polarized in recent decades. This deep political divide has caused significant government dysfunction. Political divisions make the timing, size, and composition of government policy less predictable. According to existing theories, an increase in the degree of economic policy uncertainty or the volatility of fiscal shocks results in a decline in economic activity. This occurs because businesses and households may be induced to delay decisions that involve high reversibility costs such as investment, hiring under search costs, or entry and exit. In addition, disagreement between policymakers may result in stalemate, or, in extreme cases, a government shutdown. This adversely affects the optimal implementation of policy reforms, and may result in excessive debt accumulation. Testing these theories has been challenging given the low frequency at which existing measures of partisan conflict have been computed (in most studies, the series is available only biannually). In this paper, I provide a novel high-frequency indicator of the degree of partisan conflict. The index, constructed monthly for the period 1891 to 2013, uses a search-based approach that measures the frequency of newspaper articles that report lawmakers' disagreement about policy. I show that the long-run trend of partisan conflict behaves similarly to political polarization and income inequality, especially since the Great Depression. Its short-run fluctuations are highly related to presidential elections and wars but unrelated to recessions. I use the index to study the effect of an increase in partisan conflict, equivalent to the one observed since the Great Recession, on business cycles. Using a simple VAR, I find that an innovation to partisan conflict increases government deficits and significantly discourages investment, output, and employment. Moreover, these declines are persistent, which may help explain the slow recovery observed since the 2007 recession ended.

*JEL Classification: E3, H3*

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# 1 Introduction

American politics have become increasingly polarized in recent decades (see McCarty, Poole, and Rosenthal, 2006)[1]. Intense partisan conflict, combined with a divided government, has lead to significant Congressional gridlock such as the budgetary warfare that eventually triggered the 18th government shutdown in US history in 2013. Political divisions are relevant for the evolution of economic variables because they make the timing, size, and composition of fiscal policy less predictable. This negatively affects households' and firms' investment decisions, particulary those involving high reversibility costs (e.g., entry and exit decisions, real state purchases, hiring under search costs, etc.). As a result, output and employment decline. In addition, legislative gridlock affects the optimal timing of policy reforms. As suggested by Alesina and Drazen (1991), this could result in inefficient accumulation of debt. The degree to which increasing conflict between policymakers affects the evolution of economic variables is difficult to quantify given that existing measures are available only at low-frequencies (mostly at a biannual level). Identification of its effects over the business cycle thus becomes challenging.

In this paper, I construct a novel measure of the degree of *partisan conflict* (PC). The methodology is similar to that developed by Baker, Bloom, and Davis (2013) for computing economic policy uncertainty. It is based on a search-based approach that measures the frequency of newspaper coverage of articles reporting political disagreement about government policy—both within and between national parties— normalized by the total number of news articles within a given period. Analyzing the historical series—covering the period 1891-2013—I find that PC scores declined between 1891 and the early 1920s, remained relatively stable until 1965, and exhibited an increasing trend thereafter. The rise in partisan conflict accelerated during the Great Recession, peaking with the 2013 government shutdown. This pattern is consistent with the evolution of political polarization (computed by McCarty, Poole, and Rosenthal, 2006) and with the behavior of income inequality, measured by the share of income held by the top 1%. In addition, changes in the PC trend tend to be larger under a divided government and are positively related to the share seats in Congress seats controlled by the President's party. I find that short-term increases in partisan conflict are associated with presidential elections and well-known fiscal policy debates, such as the approval of Obamacare, the debt ceiling debate, and the fiscal cliff. This is reassuring, suggesting that the indicator captures disagreement about well-known polemic issues. No clear relationship between partisan conflict and recessions is detected. For example, the index was much lower than average during the Great Depression, but reached significant levels during the panics of 1893 and 1911, and the Great Recession. While the increasing trend starting in the 1960s coincides with the one documented for economic policy uncertainty (see Baker, Bloom, and Davis, 2013), the two series behave very differently before this period, in particular during the Great Depression. Interestingly, partisan conflict subsides when the country is at war or subject to national security threats, such as World War I, Pearl Harbor, and 9/11 (the

[1]Bonica and Rosenthal (2013a) find similar results using the pattern of contributions made by legislators' supporters. Jensen, Kaplan, Naidu, and Wilse-Samson (2012) provide independent evidence of this, analyzing political discourse from Google Books and the digitalized Congressional Record during this period.

Vietnam War being an exception). This suggests that American politics are very polarized regarding economic policy, but less divided when it comes to national defense issues.

To quantify the effects of increasing partisan conflict on the real economy, I focus on the period 1981-2013, where a wider set of newspapers becomes available and a more precise search using filters can be performed. These filters allow me to exclude opinion articles, editorials, or international news. I analyze changes in deficits, employment, output, and investment that result from a 72-point innovation to PC scores (equivalent to the increase in the index between 2006 and 2013). I find a deficit of $54.2 bn upon impact, and $79.4 bn in the subsequent quarter. This is consistent with Alesina and Drazen's (1991) theory of delayed stabilization, where stalemate induces deficit creation. Employment decreases as a result of the shock, with a peak loss of 1.52 million jobs after six quarters. Investment decreases 9.7% after three quarters, and output shrinks about 1.4%. Intuitively, intense partisan conflict is associated with high volatility of fiscal policy (Azzimonti and Talbert, 2013). This deters economic activity because it increases economic policy uncertainty (Baker, Bloom, and Davis, 2013 or Fernández-Villaverde and Rubio-Ramírez, 2010). The declines documented in this paper are not only large, but also persistent, which may help explain part of the slow recovery following the Great Recession.

The paper is organized as follows. A description of how the partisan conflict indicator was constructed is included in Section 2. Section 3 describes the main determinants in the long-run trends in partisan conflict, as well as on its short-term fluctuations. The connections between partisan conflict and economic policy uncertainty are discussed in Section 4. Section 6 quantifies the effects of partisan conflict in the economy for the sub-sample 1981-2013, and Section 7 concludes.

## 2 Measuring partisan conflict

The main objective of this section is to construct an indicator of the degree of partisan conflict to analyze how it evolves over time, understand its determinants, and later assess how it effects the real economy. Existing proxies of political disagreement lack important dimensions associated with the political game which are relevant to the household's decision-making process. For example, measures based on poll data of voters' ideological differences (such as those developed by the Pew Research Center survey on values or Gallup) do not reflect the fact that voters' preferences may not be well represented in office due to the influence of interest groups or politicians' own agendas. Measures of legislators' ideological differences based on roll-call data or congressional records (McCarty, Poole, and Rosenthal, 2006; Bonica and Rosenthal, 2013b; or Kaplan, et.al. 2013) ignore filibuster threats and presidential vetoes, which constitute important sources of policy determination. The interaction between the executive and legislative branches, or between the House and the Senate under a divided government, may be an important factor affecting private sector decisions. Finally, while frequent political turnover is suggestive of partisan conflict, political instability measures (such as those developed by the World Bank, the IMF or ICRG's Political Risk Services) completely disregard the intensity of ideological differences. This paper takes on a different approach by analyzing the coverage of political news to create an indicator of the degree of

partisan conflict. In doing so, it attempts to fill a gap in the literature by quantifying a more comprehensive measure at higher frequencies.

### 2.1 Index construction

I follow a similar methodology to that in Baker, Bloom, and Davis (2013) in constructing an indicator of partisan conflict. In particular, I use a search-based approach that measures the frequency of newspaper articles reporting political disagreement about government policy. The identification assumption underlying the index is that greater media-coverage of ideologically divisive issues, legislative gridlock, presidential vetoes, or filibuster threats, indicate intense disagreement between policymakers (either across party lines or within a party).

I will compute two indexes: a benchmark *Partisan Conflict* indicator, covering the interval 1981-2013, and a *Historical Partisan Conflict* index, covering the period 1891-2013.

The search used in the construction of *Partisan Conflict* is performed in Factiva (by Dow Jones). An advantage of using Factiva's search engine versus the ones provided by each particular newspaper is that the search outcome is homogeneous and an identical set of predefined filters can be applied. In particular, I restrict the search to major US newspapers (see Table 4 in Appendix 8.1 for a full list of sources included) with news written exclusively in English, and restricted to events occurring in, or related to, the US. The top 10 news sources resulting from the search are The Washington Post, The New York Times, Los Angeles Times, Chicago Tribune, The Wall Street Journal, Newsday, The Dallas Morning News, the Boston Globe and Tampa Bay Times (see Figure 16 in Appendix 8.1 for a decomposition of sources). In addition, I exclude editorials and commentaries from the search in an attempt to reduce potential ideological biases (see the work by Gentzkow and Shapiro, 2010, on media slant). Routine general news, reviews, interviews etc. are also excluded in order to reduce the incidence of false positives. A comprehensive list of filters applied can be found in Appendix 8.2.

*Historical Partisan Conflict* is computed annually using news articles from five main newspapers which have been digitalized since 1891: The Wall Street Journal, The New York Times, Chicago Tribune, Los Angeles Times, and The Washington Post. The advantage of this second measure is that it allows us to characterize the long-run trend in partisan conflict and compare it with other slow-moving variables such as polarization. The main disadvantage is that the search cannot be refined to the same degree as the benchmark case is. While we can restrict the search to be performed over actual articles (excluding, for example, advertisements or obituaries), we cannot restrict it to domestic news. Because of this, the benchmark measure—rather than the historical series—will be used to quantify the effects of partisan conflict on the economy.

The index is computed as follows. First, I count the number of articles that discuss disagreement between political parties, branches of government, or political actors (e.g. candidates not yet in office, legislators, etc.) in a given interval of time. In particular, I search for articles containing at least one keyword in the following two categories: (i) political disagreement and (ii) government. Figure 2.1 summarizes the terms used in each category. I focus on articles including keywords at the intersection those two categories. In addition, I also search for specific terms related to partisan conflict, such as 'divided party', 'partisan divisions',

and 'divided Congress'. Note that the search involves terms related to the political debate (e.g. 'fail to compromise'), as well as the outcome of the partisan warfare (e.g. 'gridlock' and 'filibuster').[2]

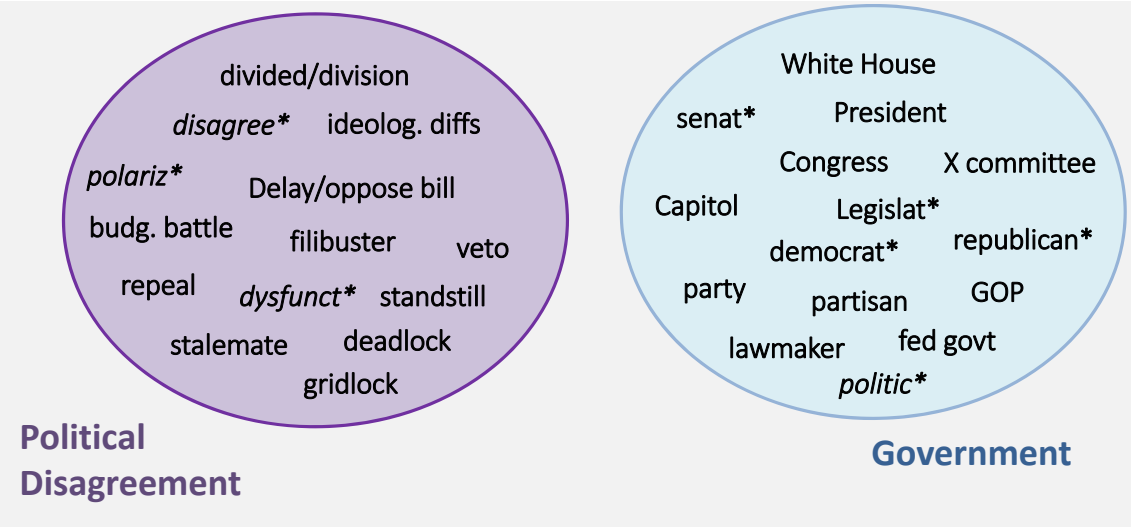



**Figure 1:** Sample keywords used in the search.

**Notes**:The term 'X committee' stands for: Appropriations Committee, Finance Committee, or Ways and Means Committee.

The search captures disagreement not only about economic policy (e.g., related to budgetary decisions, tax rates, deficit levels, welfare programs, etc.), but also about private sector regulation (e.g., financial and immigration reform), national defense issues (e.g., wars, terrorism), and other dimensions that divide policymakers' views (e.g., same sex marriage, gun control, abortion rights, among others). A representative article that the search picks up can be seen in Appendix 8.3.

Because the volume of digitized news varies over time, I scale the raw partisan conflict count by the total number of articles in the same newspapers over the same time interval. To do this in the benchmark index, I perform a search every month from January 1981 to December 2013 containing the word "today."[3] For the historical series, I divide the raw partisan conflict count by the number of articles every year that contain the word "the," rather than "today," due to the fact that, early in the sample, there was usually a delay between the date in which an event happened and the date in which it was reported. Finally, I normalize PC scores to average 100 in the year 1990.

[2]The words "polarization' and "dysfunctional' are excluded from the historical search because these words entered the media language only in the 1980s. In addition "political' and "disagreement' have also been excluded because, in the coarser search, they retrieved a disproportionate amount of foreign news. This shortcoming does not arise in the benchmark search where we can restrict it to domesitic articles.

[3]Using the word "the" to count the total number of articles instead causes no noticeable difference in the index.

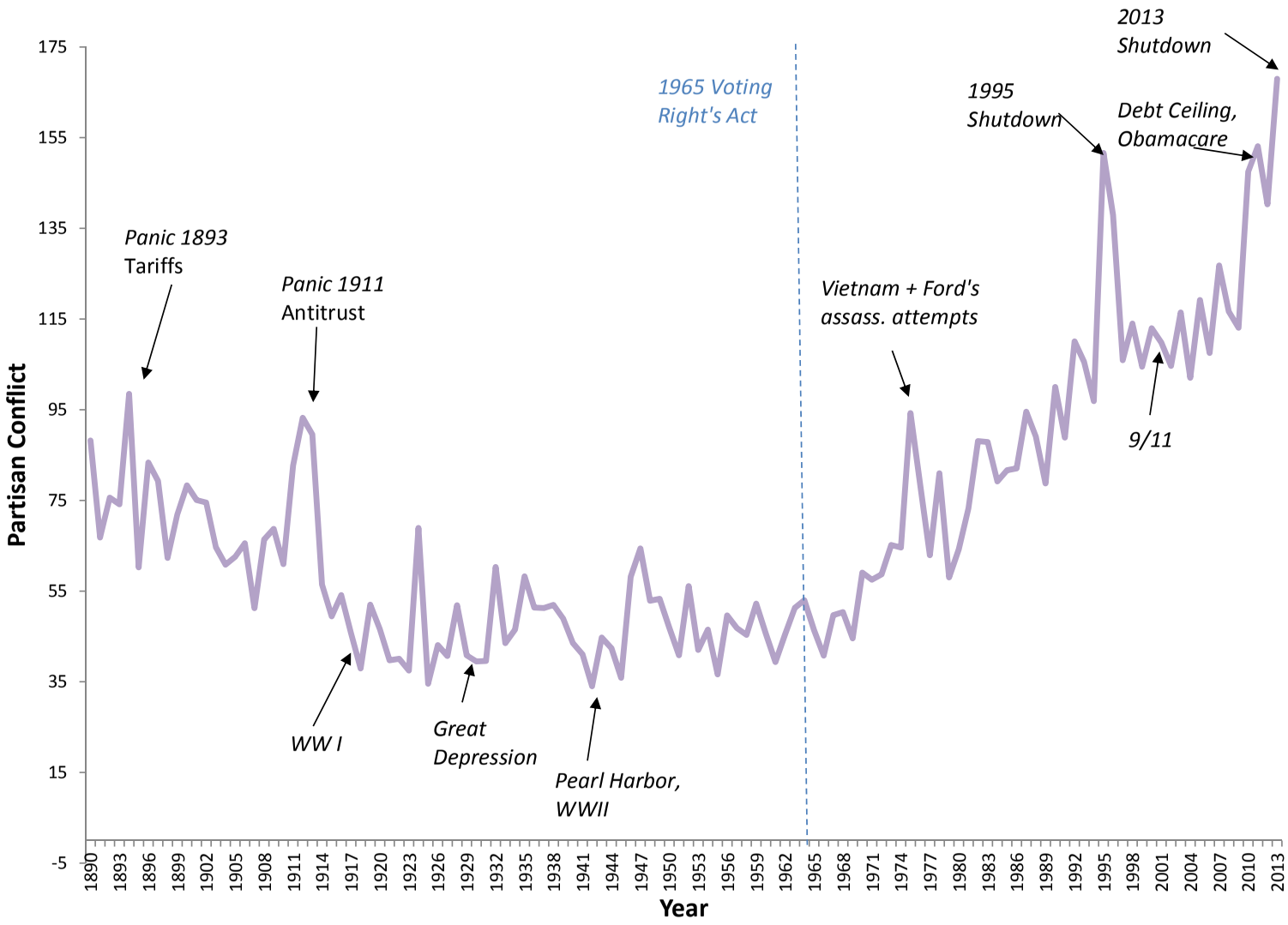



**Figure 2:** Partisan conflict, 1891-2013.

# 3 The evolution of partisan conflict

What explains the evolution of partisan conflict? The analysis will be divided into two parts: (i) analyzing the long-run trend and (ii) understanding short-term fluctuations.

## 3.1 Long-run trend

Partisan conflict declined between 1891 and the early 1920s, remained relatively stable until 1965, and exhibited an increasing trend thereafter, as seen from Figure 2. The rise in partisan conflict accelerated during the Great Recession, peaking with the 2013 government shutdown.

**Polarization** Polarization is possibly one of the most important factors (although not the only one) determining partisan conflict. We should expect partisan conflict to intensify when political polarization rises. Intuitively, it should be more difficult for parties to agree on the course of social and economic policy when their ideological differences are large. Interestingly, McCarty, Poole, and Rosenthal (2006) document that polarization between political parties has risen significantly in the post-war era. Its causes and consequences are summarized by Barber and McCarty (2013). This pattern is consistent with the sustained increase in partisan conflict scores over the same period, as shown in Figure 3.

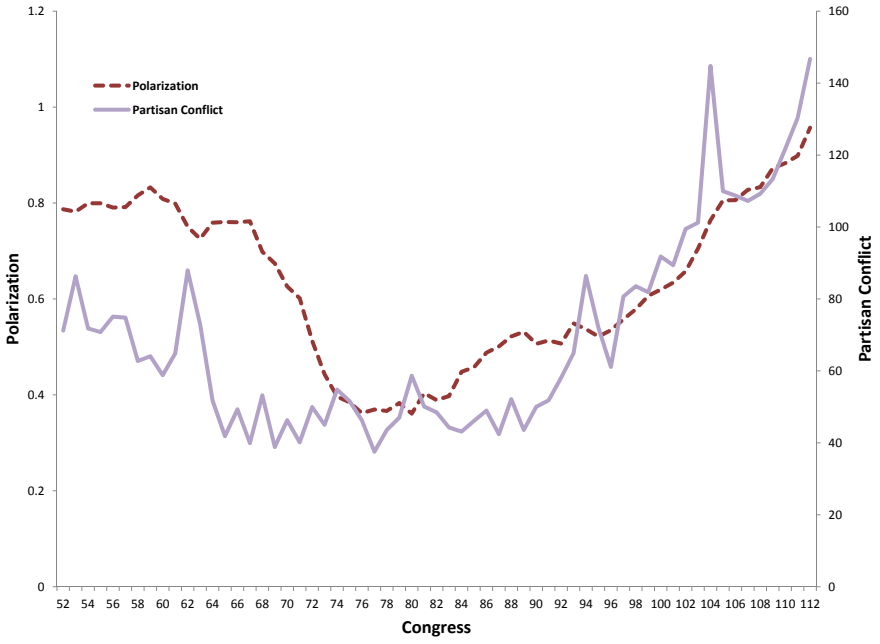



**Figure 3:** Partisan conflict and political polarization.

**Notes**: Polarization obtained from McCarty, Poole, and Rosenthal (2006), who use information on roll-call votes in Congress to compute legislators' ideal points in each Congress. Measure normalized to 100 in 1990. Data obtained from *http://voteview.com/downloads.asp.*

While both series exhibit a decline early in the sample, partisan conflict decreases at a much faster rate and lies below polarization until the 72nd Congress. There are two potential explanations for this. One of them is that news-reporting styles changed over time. For example, if newspapers were highly partisan early in the sample (e.g. less independent), PC scores could be underestimated. The second possibility is that while ideological differences influence the extent of disagreement between policymakers, there are other factors beyond polarization which are relevant to determining partisan conflict. Because PC scores identify political outcomes rather than policymakers' preferences, the measure is likely to be affected by, for example, how the government's power structure is organized. Whether Congress is divided or not, and the degree of influence exerted by the president in Congress, could be important determinants of the outcome of the political game. Notice that gridlock is usually observed in instances where two political parties share power in the legislature, rather than in cases where one party controls both chambers of Congress and/or the presidency (see Binder, 1999). Vetoes are an important instrument used by the President when he or she does not have a majority to block a particular bill. This suggests that the disparities observed between polarization and partisan conflict could be due to changes in government composition—affecting the decision-making power of each party—even if their ideological views remained unchanged. To see this, note that between the 63rd Congress and the 71st one, a period where the two series diverge the most, both Chambers had a Democratic majority. Even if partisan divisions were large, de-facto disagreement, as measured by PC scores, was not. Since economic agents' decisions depend on expected policy (i.e., the outcome of the political game), partisan conflict may be a more relevant indicator of actual disagreement than existing measures of polarization.

**Power Structure** I conjecture that polarization and power structure affect PC scores differently, a hypothesis that will be further tested next. I proxy the decision-making power of each party with two variables. The first one, *Divided* is a dichotomic variable that equals 1 when a party has a majority in the House and the other party a majority in the Senate. The second one, *Pres Seats i*, denotes the share of seats in $i = \{House, Senate\}$ held by the President's party. Political polarization is obtained from McCarty, Poole, and Rosenthal (2006, see note in Figure 3 for more details).

Because polarization exhibits almost no short-run fluctuations and it is measured bi-annually, I will only focus on the effects of the trend in polarization on the trend of partisan conflict, deferring the discussion of cycles to the next section. To isolate long-run trends from short-term fluctuations, I apply an HP-filter (with weight $w = 6.25$, as in Ravn and Uhlig, 2002) to all the continuous variables (e.g., polarization, partisan conflict, and the share of seats).[4] Figure 4 shows the evolution of the resulting two components of partisan conflict.

Table 1 summarizes the results from a simple linear regression of the first differences in the trend of partisan congress on the change in the trend of polarization, *d.Polarization*, and the *Divided* dummy variable. The sample period is 1891-2012 (from the 62nd to the 112th Congress).

[4]HP-filtered has been chosen rather than first differences because the trend is not completely removed from the series when using differences (more details on this available upon request to the author).

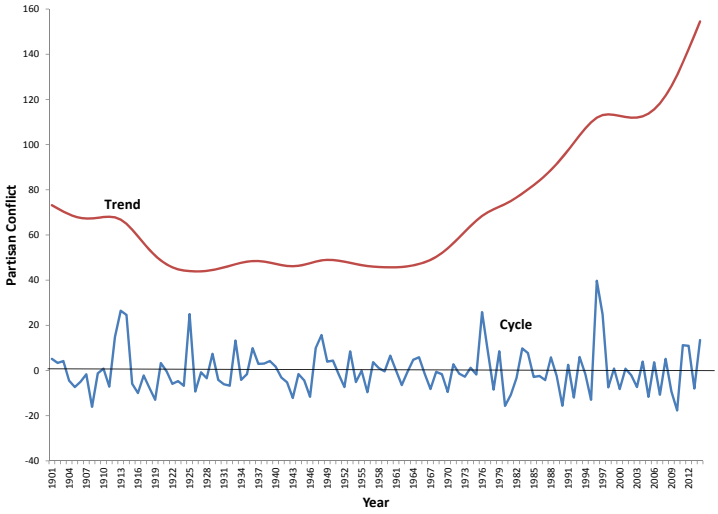



**Figure 4:** Partisan conflict, HP-filtered ($w = 6.25$).

**Table 1:** Determinants of the long-run behavior of partisan conflict

| | (1) | (2) | (3) |
|---|---|---|---|
| *d.Polarization* | 0.386*** | 0.342*** | 0.301*** |
| | (0.110) | (0.102) | (0.0977) |
| *Divided* | 2.791*** | 2.133*** | 1.888*** |
| | (1.008) | (0.710) | (0.689) |
| *d.Pres Seats H* | | -36.14** | |
| | | (17.64) | |
| *d.Pres Seats S* | | | 2.369 |
| | | | (12.67) |
| Observations | 60 | 52 | 52 |
| R-squared | 0.221 | 0.205 | 0.155 |

**Notes**: The dependent variable is the first difference in the trend of partisan conflict. The independent variables in specification (1) are: *Divided* and the first difference of the polarization trend. Specification (2) includes the first difference in the trend component of the share of seats controlled by the president's party in the House, *d.Pres Seats H*, while specification (3) includes the equivalent measure in the Senate, *d.Pres Seats S*. Sample period 1891-2012. Each observation corresponds to a Congress. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Both coefficients are positive and statistically significant at the 1% level, indicating that polarization and partisan conflict are positively related, and that PC scores are higher under a

divided congress. The second specification shows that partisan conflict declines as the share of seats controlled by the president's party in the House rises. The share of seats controlled in the Senate has no significant impact on partisan conflict according to the results of specification (3), since the coefficient of *d.Pres Seats S* is statistically insignificant.

**Income Inequality** When income is unequally distributed, disagreement over redistributive policy is likely to arise in a democratic society. Figure 5 shows that in the post-war period the evolution of partisan conflict is remarkably similar to that of income inequality, proxied by the share of income held by the top 1%. The increase in inequality observed since the late 1960s may be an important determinant of the rising trend in partisan conflict.

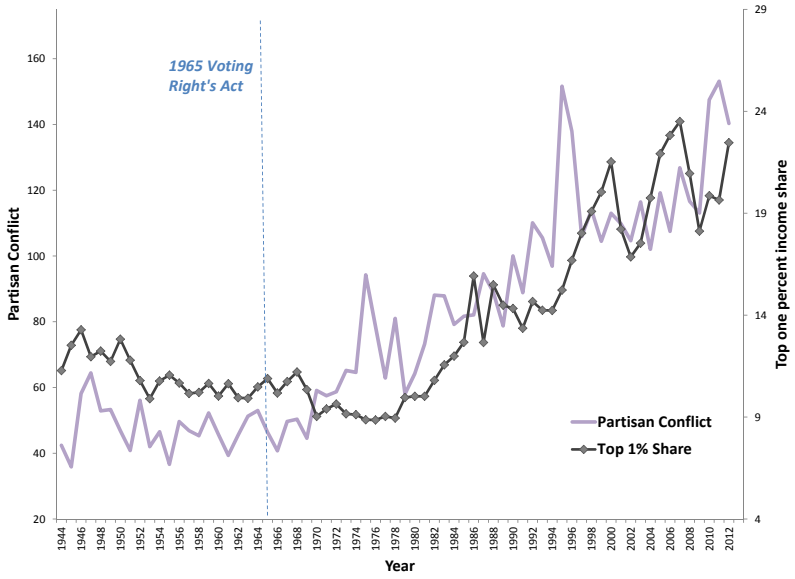



**Figure 5:** Partisan conflict and income inequality, 1944-2012.

**Notes**: Income inequality measured by the share of income held by the top one percent, from Alvaredo, Atkinson, Piketty, and Saez. Data downloaded from *http://topincomes.parisschoolofeconomics.eu/*.

This is consistent with McCarty, Poole, and Rosenthal (2003), who show that partisanship became more stratified by income between 1956 and 1996. Prior to this period, according to the authors, race and religion (rather than income and wealth) were the dominant determinants of political ideology. Causality, however, cannot be established, as argued by McCarty, Poole and Rosenthal (2006). Income inequality reduces electoral incentives for parties to move back to the center, exacerbating political conflict through a rise in polarization. But political disagreement can also affect income inequality by hampering support for redistributive policies, especially since congressional Republicans have moved further to the

right. These reinforcing effects indicate that the relationship between the trend observed in partisan conflict and that of inequality is not necessarily coincidental.

### 3.2 Short-run fluctuations

In this section we will abstract from the long-run trend in partisan conflict, focusing on short-term fluctuations instead (denoted by 'cycle' in Figure 4).

**Elections** The most natural source of short-run fluctuations in the PC indicator is the arrival of election dates. This is seen clearly in Figure 6, which displays the evolution of the refined monthly measure of partisan conflict between 1981 and 2013 (solid line). The circles indicate months associated with presidential elections (either when the election is held or the previous month), while the vertical bars represent those in which Congress held midterm elections.

We should expect the index to be higher than average during elections purely for mechanical reasons: newspapers increase the proportion of articles covering political debates and emphasize differences between candidates at those periods. In addition, partisan conflict may also intensify endogenously, as legislators try to pursue a particular agenda or block specific legislation to tilt election results in their party's favor (see Gilmour 1995; Groseclose and McCarty 2001 on strategic disagreement). All agents in the political game (incumbent legislators, the opposition, the president, etc.) have incentives to exaggerate their positions to signal a particular type in an attempt to attract votes. To test whether this is indeed the case, a two-sided t-test was performed with results summarized in Table 2.[5] The first column in the table displays the mean value of historical PC scores in off-election years, while the second one shows its mean in election years. On average, partisan conflict scores are significantly higher when presidential elections are held, even at the 1% level (the p-values associated with the test are presented in the fourth column).

We cannot reject the hypothesis, however, that PC scores during mid-term election years are the same as those in off-election periods. This result should be taken with caution, however, since there is a mid-term election every other year in the historical sample. When analyzing shorter intervals (e.g., at a monthly frequency), periods surrounding a mid-term election are indeed characterized by higher partisan conflict. The results of the test using the benchmark measure of partisan conflict, computed monthly, are summarized at the bottom of Table 2. An "election period" is defined by an indicator variable that takes a value of 1 in the month at which an election takes place or the month prior to an election, and zero otherwise. The rationale for including the month before an election takes place is that sometimes elections are held early in the month, implying that most of the news associated with the event are documented the month before. In this case, both mid-term elections and presidential elections are associated with higher-than-average detrended partisan conflict.[6].

[5] ANOVA tests were also conducted for robustness and the findings are consistent with the results in this table.

[6] For robustness, I also computed the two-sided t-test for actual election months (that is, not including the previous month). I find that the difference between off-election months and election months is statistically significant for presidential elections, but insignificant for midterm elections.

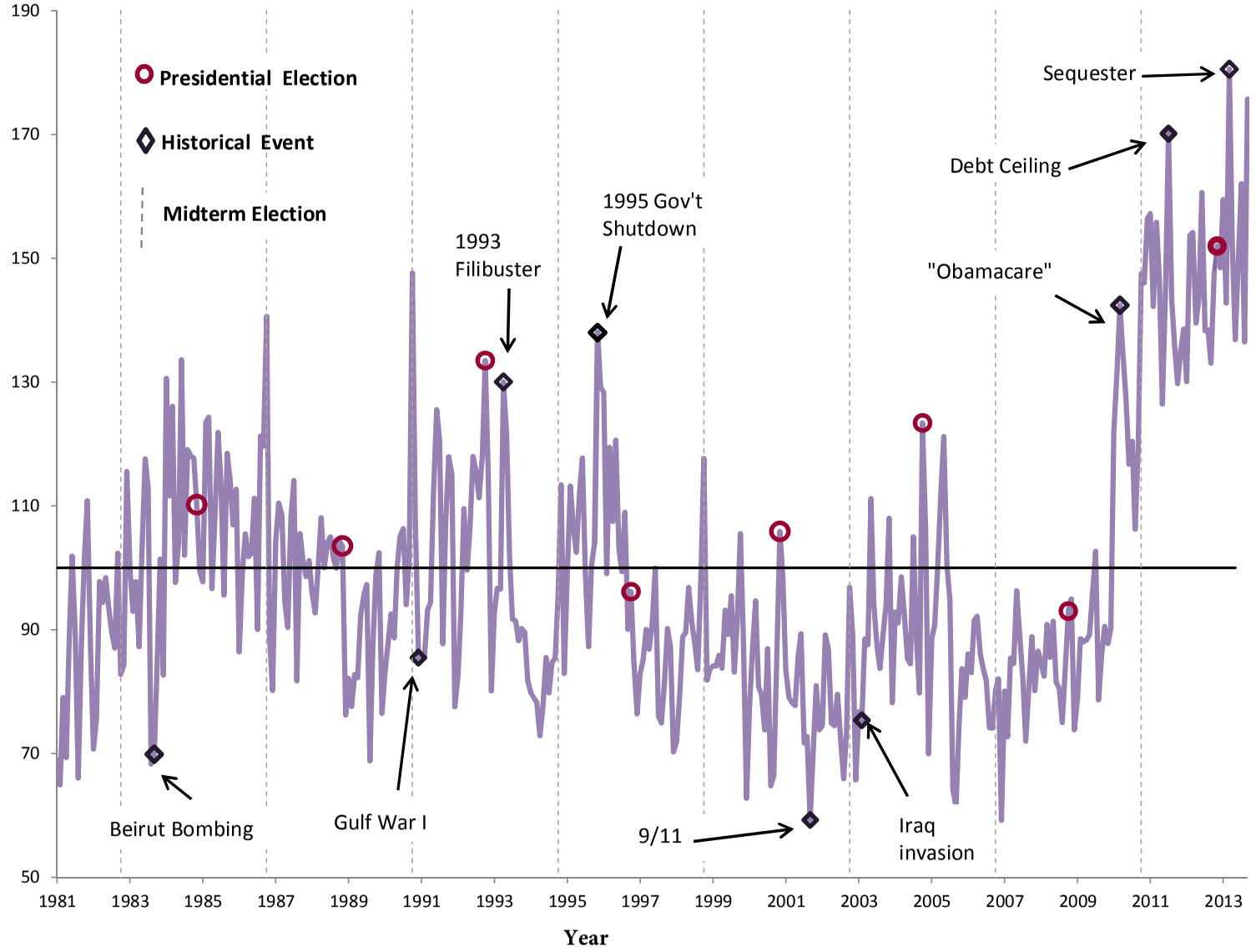



**Figure 6:** Partisan conflict, refined measure, 1981-2013. Circles represent presidential elections (month of election or the month before); diamonds historical events and vertical lines are midterm elections.

**Table 2:** Means test, $H_o$ : Diff $= 0$ and $H_a$ : Diff $< 0$

| | Off-election | Election | Diff | $Pr(T < t)$ | Obs. |
|---|---|---|---|---|---|
| **Historical (yearly)** | | | | | |
| *Mid-term* | -0.77 | 0.78 | -1.55 | 0.19 | 62 , 61 |
| *Presidential* | -0.90 | 2.68 | -3.58 | 0.04 | 92 , 31 |
| | | | | | |
| **Benchmark (monthly)** | | | | | |
| *Mid-term* | -0.79 | 9.02 | -9.82 | 0.0008 | 362 , 32 |
| *Presidential* | -0.37 | 8.72 | -9.09 | 0.0069 | 378 , 16 |

**Note**: The first row displays average de-trended historical PC scores in off-election years, while the second row shows this average in election years. "Mid-term" refers to Congressional elections, while "Presidential" refers to presidential elections. The column Obs. denotes the number of observations (first number during election years, second number off-election years). Each observation corresponds to a year, over the sample period 1891-2013. The third row displays the mean value of benchmark PC scores in off-election periods, while the froth row shows this average in election periods (e.g. the month when an election takes place and the month prior to an election). The number of observations is denoted in the column Obs. The sample period is January 1981 to December 2013. The fourth column documents the p-value associated with a two-sided t-test (unequal variances) for each mean. PC scores are detrended using an HP-filter ($w = 6.25$).

**Recessions** The state of the economy could potentially be a factor affecting the pattern of PC scores in the short run. For example, recessions are periods where automatic stabilizers (such as unemployment benefits) kick in. Several of these stabilizers are highly redistributive in nature, and thus potentially conflictive. We should expect partisan conflict to intensify in 'bad times,' where revenues tend to be low and spending needs large. The 2007 recession is an example, where the subsequent conflict over tax-cut expirations lead to gridlock, and hence extreme values in the PC index. When testing this hypothesis over the period 1891-2013, we found no evidence that partisan conflict is higher during recessions than in normal times. The results of a two-sided t-test are relegated to Appendix 8.4, Table 5. We also tested whether these results were an artifact of the low values of PC scores observed during the Great Depression, but even when the Great Depression is excluded we found no effect of recessions on PC scores.

**Wars** Interestingly, lower-than-average PC scores are recorded during war or under national security threat episodes. In the historical series, the First War World and the Second War World are associated with low PC scores (see Figure 2). The same pattern is observed in the benchmark measure of partisan conflict, as seen in Figure 6, where PC is below average during both Gulf Wars, the Beirut and Oklahoma city bombings and, particularly, September 11th when it decreased dramatically from the spike associated with the Bush vs Gore election. To test this more formally, I construct a dummy variable, war, which takes a value of 1 if there are more than 1 military death per 100,000 people in the population in a given year and 0 otherwise.[7] This variable captures, for example, the Spanish-American war,

[7]Data is obtained from http://violentdeathproject.com/countries/united-states

WWI, WWII, Korea and the most violent years for the Vietnam war. Table 3 shows that wartime is associated with significantly lower-than-average (de-trended) partisan conflict. Taken together, the results indicate that political parties disagree more about economic policy than about defense issues. Suggestive evidence supporting this claim is given by disapproval ratings, discussed in more detail in Appendix 8.5.

**Table 3:** War means test, $H_o$ : Diff = 0 and $H_a$ : Diff > 0

| *Category* | *Value* | *Obs* |
|---|---|---|
| War | 0.87 | 18 |
| Peace | -5 | 105 |
| Diff | 5.93 | |
| $Pr(T > t)$ | 0.0005 | |

**Note**: The first row displays the mean value of de-trended historical PC scores during wars, while the second row shows this average in peacetime. Each observation corresponds to a year over the interval 1891-2013. The last row documents the p-value associated with a two-sided t-test (unequal variances) for each mean. PC scores are detrended using an HP-filter ($w = 6.25$).

One may argue that lower PC scores are observed during wars because newspapers devote a larger percentage of news to documenting events related to the war itself, rather than discussing government policy. Inspection of the evolution of economic policy uncertainty index, computed by Becker et.al. (2013), suggests that this is not the case, as their series increases significantly during these events. An example is given by the large spike in EPU observed during 9/11, a period where partisan conflict reaches record lows (relative to trend). This will be discussed in more detail in the next section, where we compare the evolution of partisan conflict and EPU.

**Issues** Another source of short-term fluctuations is given by the occurrence of polemic issues in the legislative agenda over which a decision must be taken. This feature was noted as early as 1902 by Laurence Lowell who stated *...the amount of party voting depends largely upon the accident of some question in which the parties are sharply divided happening to come up for decision...in England, parties frame the issues. In America the issues do not, indeed, make the parties, but determine the extent of their opposition to each other in matters of legislation.*

Figure 10 depicts the benchmark PC scores together with a series of tax expirations obtained from Becker et al. (2013). The figure illustrates that partisan conflict intensifies when Congress is forced to make a dated decision affecting the federal budget, triggered by one of these expirations. The monthly correlation between the two series is 0.7. A higher-than-normal sequence of tax-expirations since 2007 could then explain the increase in partisan conflict over the same period.

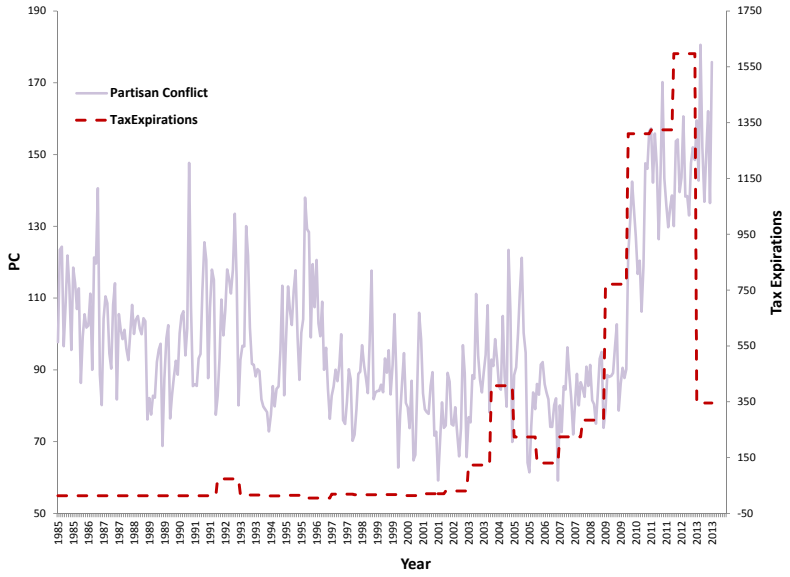



**Figure 7:** Partisan conflict and Tax Expirations.

At very short frequencies, the partisan conflict index will not only capture general ideological differences in the liberal-conservative spectrum, but also the degree of disagreement over particular topics. The government shutdown of 1995, the passage of "Obamacare," the debt ceiling debate, and the period surrounding the fiscal cliff are noticeable examples (see Figure 6). These issues are not only divisive, but also important for individual decision-making, and thus receive extensive coverage in the news.

It is impossible, unfortunately, to disentangle at a particular point in time whether partisan conflict is high because parties are ideologically far apart on a particular issue, from the relevance of the issue per se. Polarization levels cannot, therefore, be inferred from PC levels at very short frequencies (as in the benchmark indicator, where PC is computed monthly). The index can be a better indicator of polarization over longer time-spans (as in the case of the historical series) where specific issues are 'averaged out.'

# 4 Partisan conflict and economic policy uncertainty

Partisan conflict and EPU share a similar trend, as seen from Figure 8.

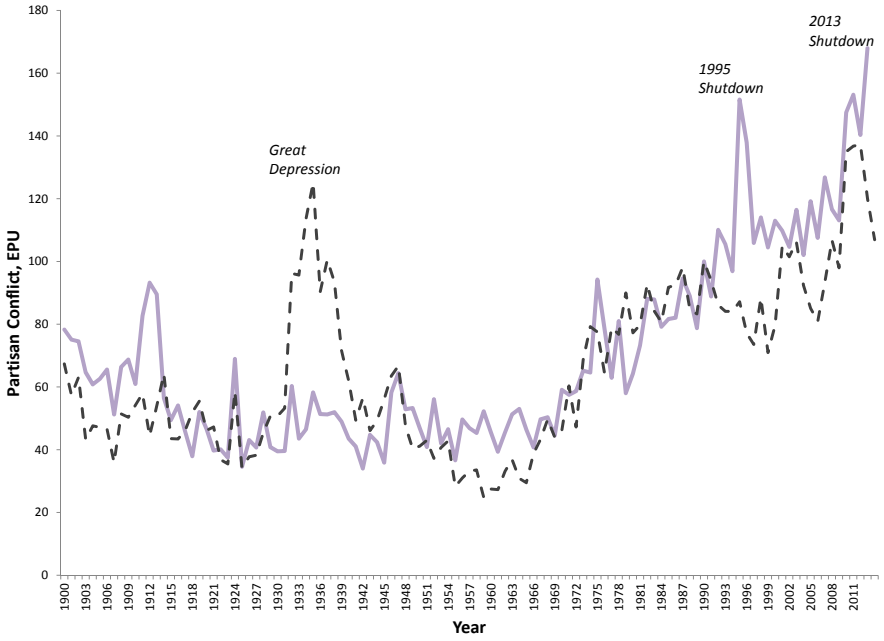



**Figure 8:** Partisan conflict (solid) and News-based economic policy uncertainty (dashed). Both series normalized to 100 in 1990.

Even though the methodology used to compute PC is similar to the one followed by Becker et.al. (2013) to construct EPU, the two indices represent different concepts, and as such are characterized by distinctive features. In contrast to partisan conflict, EPU tends to be high during recessions. A clear example is given by the large spike in EPU observed during the Great Depression (see Figure 8), a period where historical partisan conflict remained basically unchanged.

In addition, EPU is affected by financial shocks (such as Lehman's collapse or the series of defaults in Latin American countries) and monetary policy (such as interest rate cuts by the Federal Reserve), while PC scores are completely nonresponsive to these events. This is reasonable, as those events are unrelated to government policy but do introduce economic uncertainty about monetary policy. Figure 9, which depicts the benchmark measure of PC (solid line) together with the news-based EPU index (dashed line), illustrates this point. Another important difference results from the behavior of the two variables in the presence of military conflict: while the EPU increases during wars or under national security threats (for example, 9/11 or the Gulf Wars), partisan conflict tends to remain relatively low or even decrease. Because of these factors, the correlation between partisan conflict and the news-based index of economic policy uncertainty developed by Becker et.al. (2013) is only

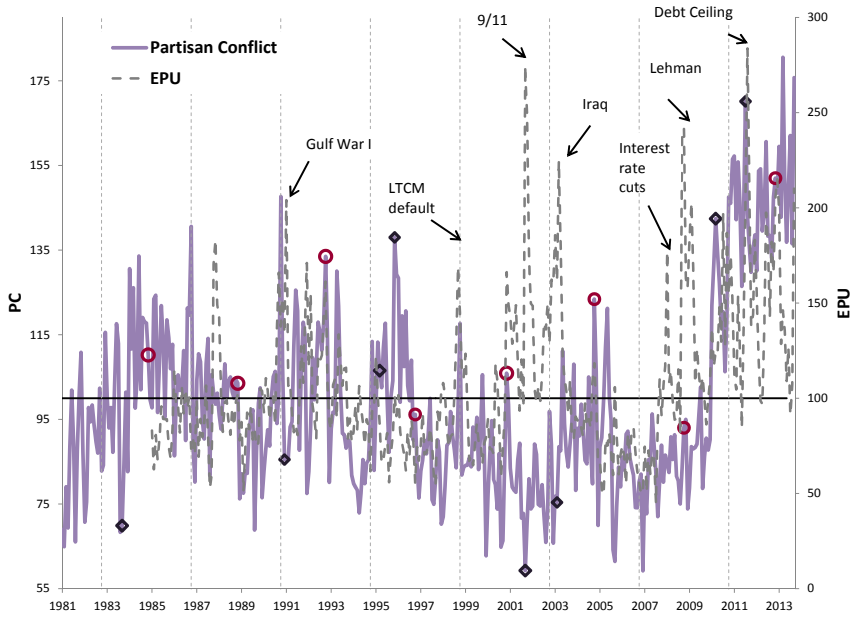



**Figure 9:** Partisan conflict (solid) and News-based economic policy uncertainty (dashed). Circles represent presidential elections (month of election or month before), diamonds historical events and vertical lines mid-term elections. Both series normalized to 100 in 1990.

0.44.[8]

Finally, a period of gridlock could be a period of full policy certainty, since the status-quo remains unchanged when extreme disagreement leads to government inaction. We should then expect PC scores to increase significantly during a shutdown, but economic policy uncertainty to remain at low levels. This is consistent with the behavior of the benchmark and historical series (Figures 8 and 9). When Congressional deadlock is accompanied by policy expirations (as in Figure 10), however, we should expect both EPU and partisan conflict to move in tandem. The deadline forces policymakers to reach a decision regarding whether or not to continue the policy by a particular date. This, in turn, increases uncertainty about the course of economic policy.

[8]This correlation is computed using only the news-based index of economic policy uncertainty and not the final EPU. The reason is that tax expirations account for about one-third of the EPU index, which I wanted to exclude to make the comparison. If I use the benchmark EPU measure, which includes tax expirations, the correlation between the two indexes is about 0.5.

# 5 Robustness

In this subsection I analyze whether the benchmark PC is robust to restricting the search to involve specific terms related to fiscal policy and to seasonally adjusting the series by subtracting the average effects of elections.

**Robustness to the set of words:** The article search focuses on political disagreement, without being specific about particular policy terms. As a robustness check, I re-computed the historical index conditioning articles to involve specific public policies. The index is computed using articles containing at least one word at the intersection of the following three categories: (i) political disagreement, (ii) government, and (iii) public policy. The terms involved in the first two categories are identical to the ones used to construct the historical index. The list of terms used in the third category can be found in Appendix 8.6.[9]

On average, these articles correspond to about 60 percent of the total number of counts obtained in the original search, with the ratio increasing to over 76 percent since 2006.

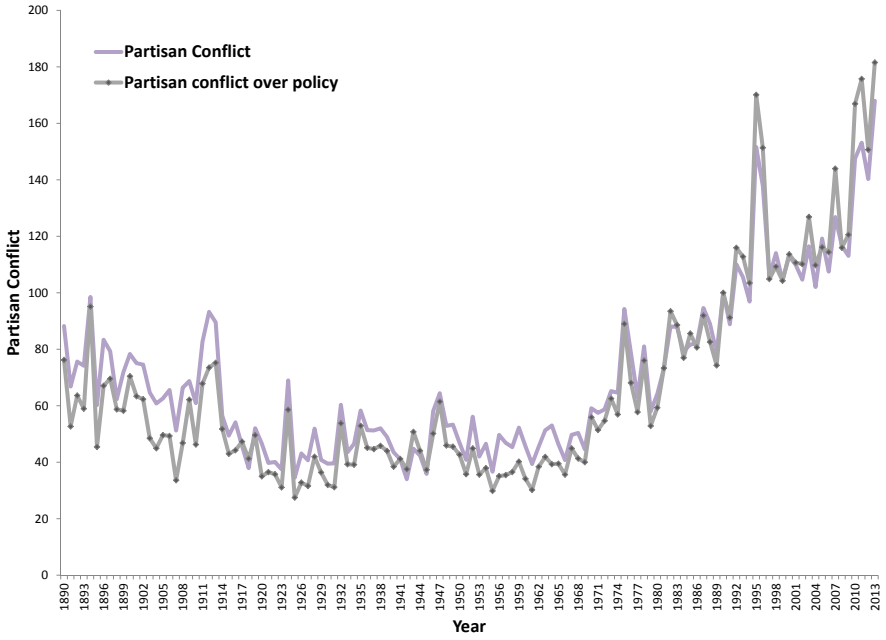



**Figure 10:** Partisan conflict: historical series vs. conflict over specific policies.

The resulting index (computed following the methodology described in Section 2.1), *Partisan conflict over policies*, can be found together with the historical series in Figure **??**. When conditioning the search to contain specific policy terms, the resulting index is on av-

[9]The list includes all the policy terms used in Becker et.al. (2013), plus the following additional terms: tax (taxation, taxes, taxed), budget, war, constitutional amendment, immigration, sovereign debt, monometallist, bimetallist, (silver or gold) coinage, duty (or duties), alcohol (or liquor) prohibition, federal credit, grant in aid, commerce competition, and commerce clause.

erage lower than the historical one until about 1968, year after which the two series become virtually identical. This is consistent with the observation that race and religion (rather than wealth) were the dominant determinants of political ideology before the 1970s. For example, the policy terms listed above do not capture terms related to the debate on voting participation that lead to the Voting Rights Act of 1965.

**Seasonally adjusted PC:** The spikes in PC scores around election dates described at the beginning of this section could be due to two factors: (i) partisan conflict increases during elections or (ii) newspapers dedicate a larger share of coverage to discuss disagreement between candidates. To separate the first effect from the second one, I constructed a "seasonally adjusted" PC measure. The raw measure of PC is regressed against a constant term and an indicator variable for each type of election (midterm and presidential),

$$PC_t = \alpha + \beta I_{M,t} + \gamma I_{P,t} + \epsilon,$$

where $\alpha$ is a constant, $I_M = 1$ if there is a midterm election and zero otherwise, and $I_P = 1$ if there is a presidential election; $\epsilon$ is an error term. The seasonally adjusted PC is constructed as

$$PC_{sa,t} = PC_t - \hat{\beta} I_{M,t} + \hat{\gamma} I_{P,t},$$

where the hats denote estimated coefficient values. In other words, we subtract the average increase in the PC during election dates from our benchmark measure. Comparison of the two series does not result in sizable differences and is therefore omitted (but available upon request). This indicates that the coverage effect is not the dominant force behind the rise of partisan conflict.

# 6 Consequences of partisan conflict on the economy

There exists a growing literature studying the effects of economic policy uncertainty on the aggregate economy (see for example Baker, Bloom, and Davis, 2013; Fernández-Villaverde and Rubio-Ramírez, 2010; or Fernández-Villaverde, Guerrón, Kuester, and Rubio-Ramírez, 2012). A common assumption is that fiscal policy follows an exogenous process whose volatility changes over time. In periods of high variability, economic agents delay hiring, investment, or production decisions, and this amplifies business cycles.[10] Canes-Wrone and Park (2011) suggest that increases in fiscal uncertainty may be related to the behavior of rational agents over the electoral cycle. In particular, they argue that businesses and households have incentives to delay decisions that are subject to large reversibility costs right before elections, which are associated with high levels of economic policy uncertainty. This results in a pre-election decline in investment, a phenomenon that they refer to as "reverse electoral business cycle (REC)." In their model, uncertainty tends to be large when there is high electoral competitiveness and sufficient polarization between the major parties, two forces that would result in

[10] In this paper we are mostly concerned about uncertainty about government policy rather than uncertainty about the state of the economy. This is an important distinction in light of Bachmann, Elstner, and Sims (2013) findings (using US micro-data) that economic uncertainty is inconsistent with a 'wait-and-see' hypothesis.

higher observed levels of partisan conflict. Azzimonti and Talbert (2013) also propose a theory suggesting that political disagreement affects economic decisions and amplifies business cycles. They argue that economic fluctuations are caused not only by productivity shocks (as usually assumed in macroeconomics), but also by 'political shocks'. Using a standard partisan model of fiscal policy determination (a la Persson and Svensson, 1989) embedded in a neoclassical real business cycle model, they show that switches between left-wing and right-wing governments amplify the cycle. Moreover, they show that when party's ideological views become further apart, the volatility of fiscal and economic variables rises and long run output and investment decrease. In their model, partisan conflict increases the variability of the political shock inducing economic policy uncertainty.

In this section I explore empirically the effects of partisan conflict on economic behavior. In particular, I test whether the implications of the models discussed above hold for the US using the PC measure developed in this paper.

### 6.1 Economic variables

Economic variables are obtained at the quarterly level for the sample period 1981:q1 to 2012:q4 from the Bureau of Economic Analysis (BEA). Consumption, output, and investment are seasonally adjusted and expressed in billions of 2005 dollars. They correspond to Personal Consumption Expenditures, Gross Domestic Product, and Gross Private Domestic Investment, respectively, and are converted in real terms using the GDP deflator. Employment is expressed in thousands of employees in the nonfarming sector (seasonally adjusted series). Interest rates are proxied by quarterly averages of the federal funds (effective) rate, obtained from the Federal Reserve Board. Finally, I compute the Solow residual to proxy the contribution of technological progress to output growth in our estimations. This residual is constructed as follows:

$$S_t = \ln(Y_t) - 0.36\ln(K_t) - 0.64\ln(L_t),$$

where $Y_t$ denotes output, $K_t$ is the stock of capital, and $L_t$ is private industries' employment in period $t$. The Solow residual represents the amount of output produced net of expenditures in the main factors of production: capital and labor. Detrended measures of the Solow residual capture productivity shocks, which are attributed to be the main factor causing fluctuations in the economy (i.e., real business cycles) in the macroeconomics literature. In this paper, I want to distinguish political shocks from technological shocks and will thus use the Solow residual to control for the latter in the VAR estimations.

The specification above assumes a capital share of 0.36 and a labor share of 0.64, close to the long-run empirical averages of the capital and labor income shares. The series for capital is constructed using the perpetual inventory method:

$$K_{t+1} = I_t + (1-\delta)K_t,$$

where $\delta$ is a constant depreciation rate of capital (set to 0.012, implying an annual depreciation rate of about 5%) and $I_t$ is real investment. The initial capital stock is chosen so that the

capital-to-output ratio in the first period (1981:q1) equals the average capital-to-output ratio over our sample period Q1:1981 to Q2:2013,

$$\frac{K_{Q1:1981}}{Y_{Q2:2013}} = \frac{1}{131} \sum_{Q1:1981}^{Q2:2013} \frac{K_t}{Y_t}.$$

The resulting series is then used to compute the Solow residual.

### 6.2 VAR estimation

To test the impact of partisan conflict on aggregate economic variables, I estimate a Vector Auto Regression (VAR) model and recover orthogonal shocks by using a Cholesky decomposition of the following: partisan conflict, the Solow residual, the federal funds rate (to control for interest rates), real deficits, log employment, log investment, log GDP, and log public spending. In the baseline specification I use quarterly data with two-quarter lags, as suggested by the Bayesian (Schwartz) Information Criterion test. I check that the VAR is stable, so impulse-response functions can be constructed. The VAR methodology allows me to detect comovements between economic variables and partisan conflict. I cannot show causality using a Granger test. This is expected, as it is likely that partisan conflict affects investment through the uncertainty channel. But it is also possible that low employment levels affect the degree of conflict across parties. The results below should then be interpreted as 'informed correlations' between a set of variables, rather than by assuming that partisan conflict is exogenous to the rest of the economy.

The main experiment is to test the effects of a 72-point increase in the PC, equivalent to the rise in partisan conflict between Q1:2006 and Q2:2013.

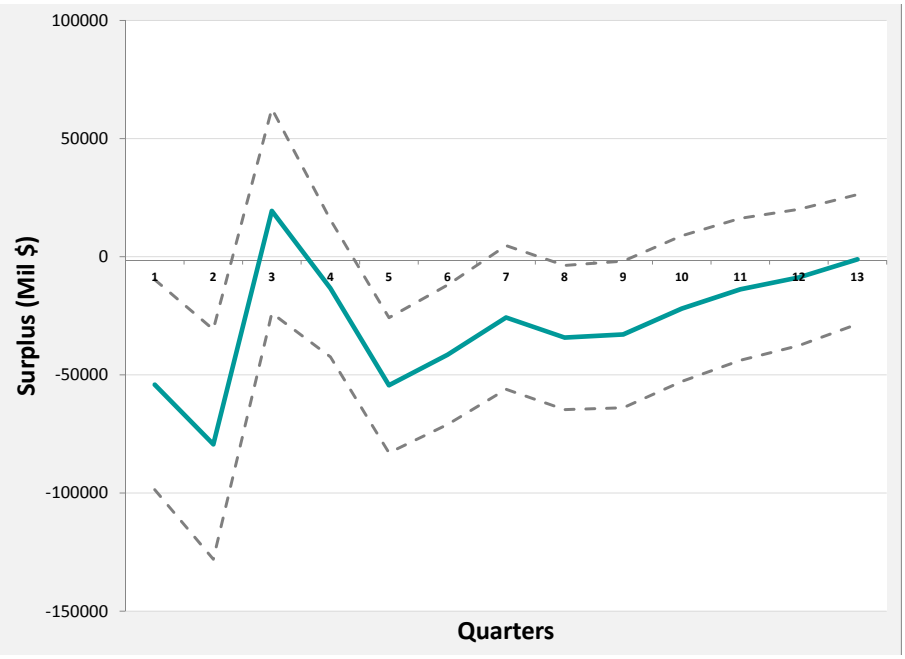



**Figure 11:** Impulse-response function of deficit to a 72 point-increase in PC, equivalent to the rise in the PC between 2006 and 2013. Solid line: mean estimate, dashed outer lines: one-standard-error bands. Estimated using a quarterly Cholesky VAR model with PC, the Solow residual, the federal funds rate, real deficits, log employment, log investment, log GDP, and log public spending (in that order).

The immediate effect of an increase in PC scores is a $54.2 bn deficit. This is consistent with Alesina and Drazen's (1991) theory of delayed stabilization that predicts an increase in debt as a result of political inaction. The largest effect is observed in the second quarter after the shock hits, where deficits increase by $79.4 bn.

To the extent that partisan conflict introduces uncertainty about the economic policies, theories suggest that we should also observe a decline in investment upon impact. The top panel of Figure 12 indicates that private investment indeed declines following the rise in partisan conflict, with a peak impact of about 9.7% after three quarters. This decrease is persistent, with investment recovering only after 8 quarters. The negative response of output can be seen in the lower panel, which shows a decrease of more than 1% in aggregate production in response to the 72-point innovation in PC levels. The degree of persistence is lower than for investment, but it is still considerable.

Figure 13 shows that this innovation causes private employment in the nonfarming sector to decrease significantly (solid line), with a peak response of 1.52 million jobs lost after six quarters. The dashed lines in the figure represent one-standard-deviation error bands and suggest that the decline in employment is statistically significant. The response of public spending (not shown) is statistically insignificant.

**Robustness:** These results are robust to the ordering of the Cholesky decomposition and to the inclusion of a time trend. Figure 14 shows how the mean estimate of the output response is affected by the number of lags used in the VAR estimation. The baseline case uses the

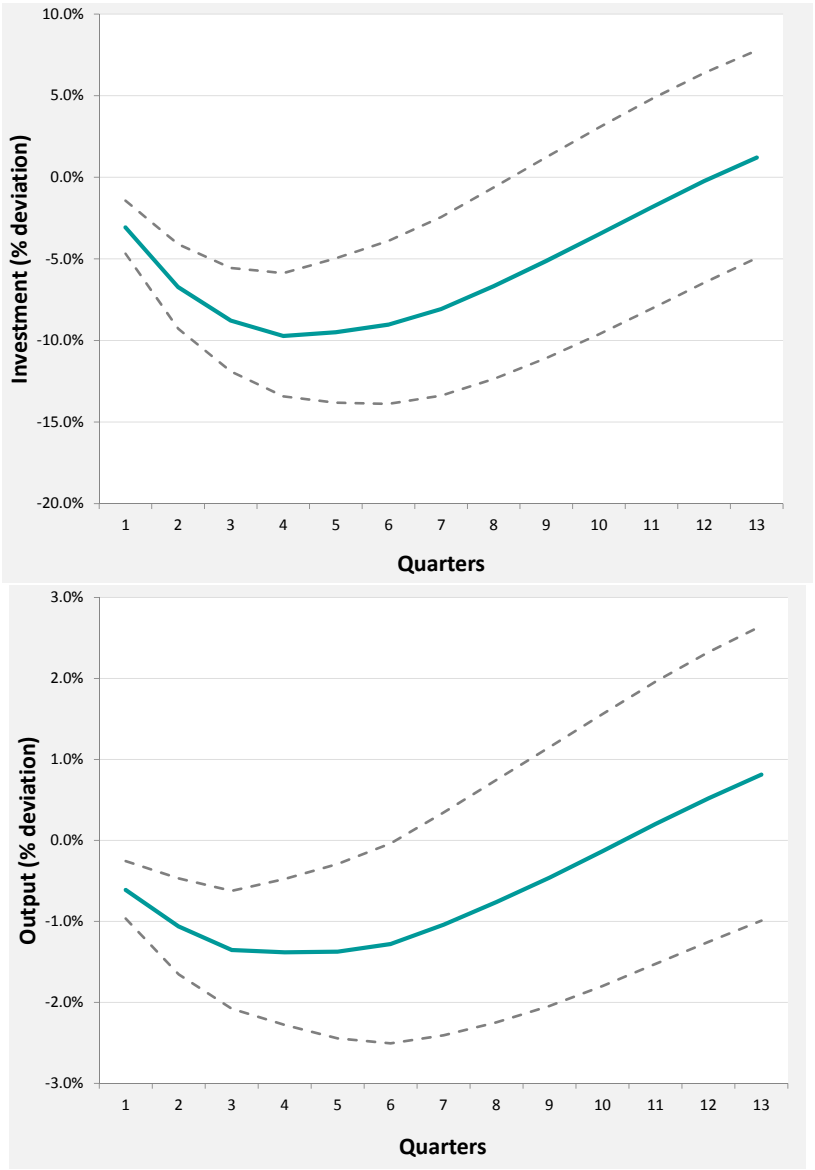



**Figure 12:** Impulse-response function of investment (top) and output (bottom) to a 72-point increase in partisan conflict (equivalent to the rise in the PC between 2006 and 2013). The central solid line is the mean estimate, while the dashed outer lines represent one-standard-error bands. These are estimated using a monthly Cholesky Vector Auto Regression (VAR) model with PC, the Solow residual, the federal funds rate, real deficits, log employment, log investment, log GDP, and log public spending (in that order).

optimal lag structure (two lags), while the other two lines represent one-lag (dashed) and three-lag (solid with circles) specifications. I have also recomputed the VAR using quarterly averages of the seasonally adjusted indicator of partisan conflict described in Section 3, but this does not change the results significantly, as seen from the fact that the response of output

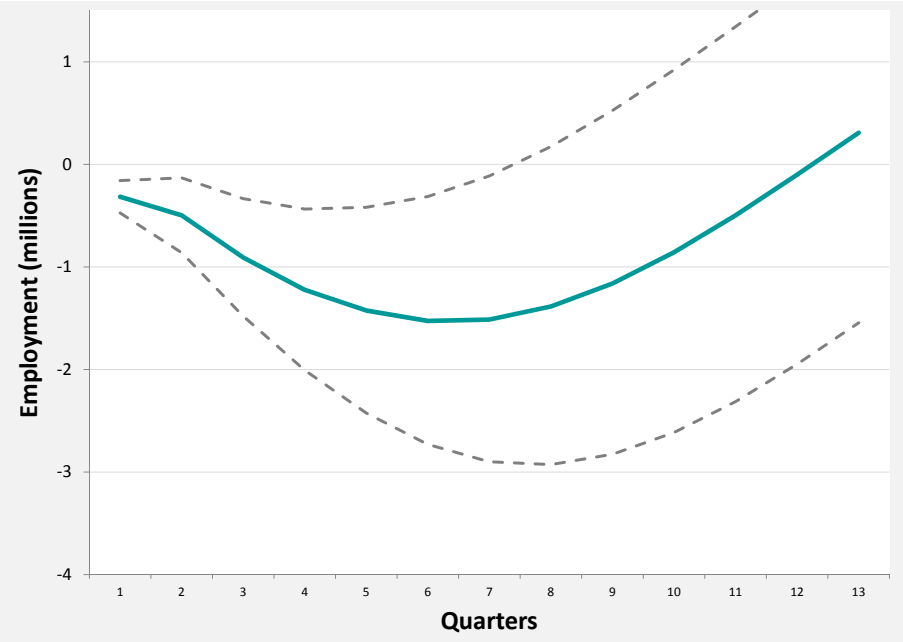



**Figure 13:** Impulse-response function of employment to a 72-point increase in partisan conflict (equivalent to the rise in the PC index between 2006 and 2013). The central solid line is the mean estimate, while the dashed outer lines represent one-standard-error bands. These are estimated using a monthly Cholesky Vector Auto Regression (VAR) model with the PC index, the Solow residual, the FF rate, log employment, log investment, log consumption, and log GDP (in that order).

to $PC_{sa}$ is basically identical to the response to the benchmark PC measure.

Finally, I have also recomputed the VAR including EPU measures. I estimate a VAR and recover orthogonal shocks by using a Cholesky decomposition of the following: partisan conflict, EPU, the Solow residual, the federal funds rate (to control for interest rates), real deficits, log employment, log investment, log GDP, and log public spending. The only difference relative to the benchmark model is the inclusion of the news-based measure of EPU computed by Baker, Bloom, and Davis (2013). Figure 15 shows the impulse-response function of output to partisan conflict (solid line) and to news-based EPU shocks (solid line with triangles). For reference, I also include the response to a 72-point increase in EPU (solid line with triangles), which is stronger and more persistent than the response to partisan conflict.

This exercise suggests that partisan conflict negatively affects economic behavior. An increase in the PC similar to the one observed between 2006 and 2013 results in a reduction of output, employment, and investment. Because the estimation controls for TFP (through the Solow residual), the results suggest that political disagreement exacerbated the detrimental effects of the last recession in the US. These effects are shown to be persistent and significant, providing additional support for theories relating partisan conflict to business cycles.

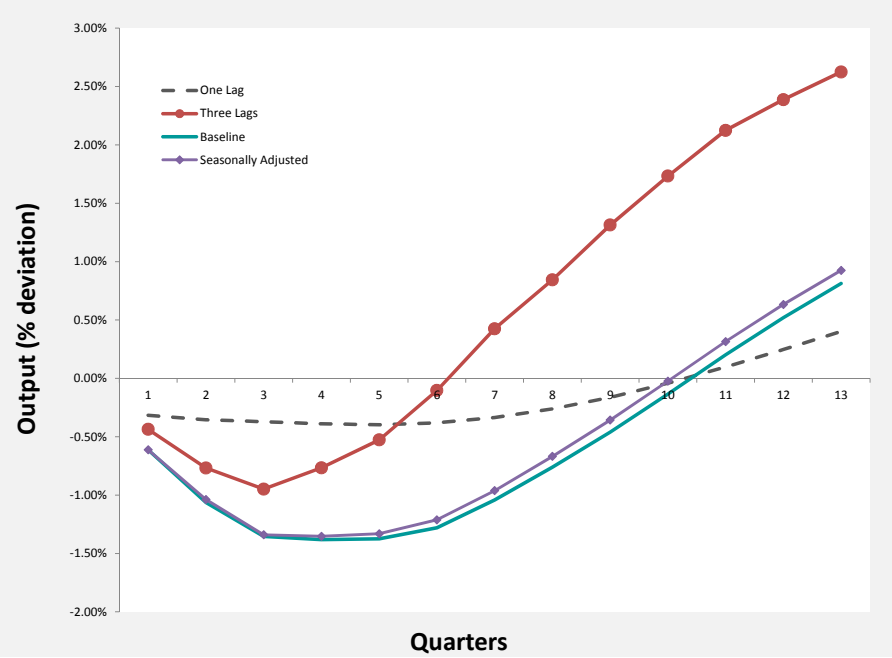



**Figure 14:** Impulse-response function of output to a 72 point-increase in PC, equivalent to the rise in partisan conflict between 2006 and 2013. Solid line: mean estimate, dashed outer lines: one-standard-error bands. Estimated using a quarterly Cholesky VAR model with PC, the Solow residual, the federal funds rate, real deficits, log employment, log investment, log GDP, and log public spending (in that order). Also response of output to PC scores under one lag and three lags, as well as the response of output to $PC_{sa}$ (under the Seasonally Adjusted label).

# 7 Conclusion

Partisan conflict has increased substantially in the United States between the 1980s and today. Commentators and researchers suggest that the deep ideological division between the two main parties may have been an important factor affecting the aggregate economy, in particular by slowing the recovery from the 2007-09 recession. This paper investigates whether these claims are supported by the data. Because testing the hypothesis requires partisan conflict to be measured at high frequencies, I first develop a novel index of partisan conflict based on news search. Using a simple VAR, I test how an innovation to the estimated index (similar in size to the one observed between 2007 and 2013) impacts employment, investment, and output. I find evidence that political disagreement does cause these variables to decline significantly and persistently. Intuitively, partisan conflict increases the volatility of fiscal policy, raising the degree of uncertainty faced by businesses and firms, which has been shown to negatively affect the economy.

In the future, I plan to study the effects of partisan conflict on the US budget cycle (following Alt and Lassen, 2006). I also plan to extend the coverage of the partisan conflict index to a larger set of countries. Analyzing whether PC tends to have larger effects in presidential than in parliamentary economies could be an interesting extension.

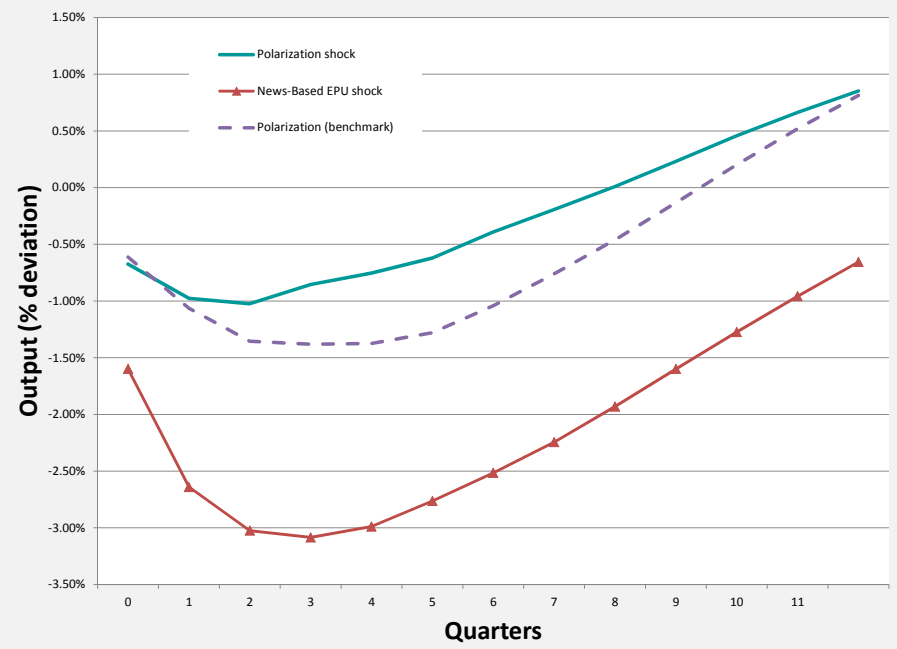



**Figure 15:** Impulse-response function of output to a 72-point increase in PC, equivalent to the rise in the partisan conflict between 2006 and 2013, for different specifications. The solid line is the mean estimate for the benchmark model (two lags), estimated using a monthly Cholesky Vector Auto Regression (VAR) model with PC, EPU, the Solow residual, the FF rate, real deficits, log employment, log investment, log GDP, and log public spending (in that order). The figure also displays the response of output to PC scores under the benchmark model (which excludes EPU) and the response of output to a 72-point EPU shock. The top panel uses the baseline EPU measure, while the second one uses the News-Based Component measure.

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# 8 Appendix

## 8.1 Sources

**Table 4:** Newspaper coverage in Factiva

| *News Source* | *Start Date* | *News Source* | *Start Date* |
|---|---|---|---|
| The Arizona Republic | Jan-1999 | The New York Times | Jun-1980 |
| The Arkansas Democrat Gazette | Oct-1994 | Newsday | Jul-1985 |
| The Atlanta Journal Constitution | Jan-1986 | The News-Gazette | Mar-2000 |
| The Baltimore Sun | Sept-1990 | The Oklahoman | Nov-1981 |
| Boston Herald | Jul-1991 | Omaha World-Herald | Aug-1983 |
| Buffalo News | Feb-1992 | The Orange County Register | Nov-1986 |
| Charlotte Observer | Jan-1994 | The Oregonian | Jul-1989 |
| Chicago Sun-Times | Jul-1985 | Orlando Sentinel | Oct-1987 |
| Chicago Tribune | Jan-1985 | The Philadelphia Inquirer | Oct-1994 |
| The Christian Science Monitor | Sept-1988 | Pittsburgh Post-Gazette | Jul-1990 |
| The Cincinnati Enquirer | Jan-2002 | The Plain Dealer | Mar-1989 |
| The Columbus Dispatch | Dec-1991 | The Sacramento Bee | Jan-2003 |
| The Boston Globe | Jan-1987 | San Antonio Express-News | Feb-1994 |
| The Courier Journal | Jan-2002 | The San Francisco Chronicle | Apr-2012 |
| The Dallas Morning News | Aug-1984 | San Jose Mercury News | Jan-1994 |
| The Denver Post | Aug-1988 | The Seattle Times | Dec-2008 |
| Detroit Free Press | Jan-1994 | South Florida Sun-Sentinel | Jan-1990 |
| The Detroit News | Jan-2002 | St. Louis Post-Dispatch | Jan-1992 |
| The Fort Worth Star-Telegram | Jun-2001 | St. Paul Pioneer Press | Jan-1994 |
| The Hartford Courant | May-1991 | The Star-Ledger | Jan-1991 |
| Houston Chronicle | Apr-2012 | Star-Tribune | Jan-1986 |
| Indianapolis Star | Jan-2002 | Tampa Bay Times | Nov-1986 |
| Investor's Business Daily | Jan-2002 | Tampa Tribune | Jul-2011 |
| The Kansas City Star | Jan-1991 | The Times-Picayune | Apr-1992 |
| Los Angeles Times | Jan-1985 | USA Today | Apr-1987 |
| The Miami Herald | Oct-1994 | U-T San Diego | Jan-2000 |
| The Milwaukee Journal Sentinel | Jan-2000 | The Wall Street Journal | Jun-1979 |
| New York Daily News | Dec-1992 | The Washington Post | Jan-1984 |
| New York Post | Sept-1997 | Washington Post.com | Oct-2007 |

**Note**: This table contains the names of the main US newspapers used in constructing the political polarization index (PC), together with the coverage start month in Factiva's database.

The top 10 news sources are the Washington Post, Los Angeles Times, the New York Times, Chicago Tribune, the Wall Street Journal, Newsday, The Dallas Morning News, the Boston Globe, Tampa Bay Times, and The Wall Street Journal (see Figure 16 for a decomposition).

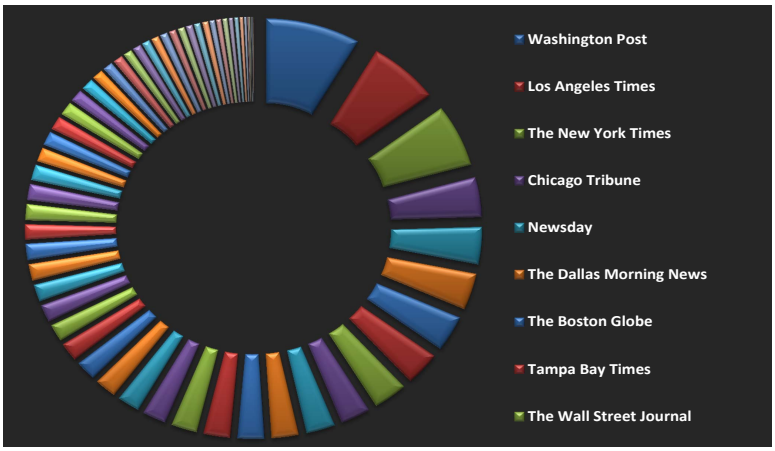



**Figure 16:** Percentage of news search in which these subjects are mentioned over the sample.

## 8.2 Filters

| | | | |
|---|---|---|---|
| NADVTR | Advertorials | GLIFE | Lifestyle |
| NEDC | Commentary/opinion | GROYAL | Royal Family |
| NCOPRO | Country Profile | GCOM | Society/Community/Work |
| NEDI | Editorial | GWEA | Weather |
| NITV | Tv listings | NRGN | Routine general news |
| NLET | Letters | E52 | Eurozone currency news |
| NOBT | Obituaries | GRAPE | Rape |
| NPEO | People profiles | GJURI | Juri |
| NPAN | Personal announcements | gdoga | Dog attacks |
| NRAN | Rankings | gdomv | Domestic violence |
| NRVW | Reviews | ghara | Harrassment |
| GSPO | Sports | gprob | Probation |
| GENT | Entertainment | gtrff | Traffic violations |
| GAWARD | Awards/Lotteries | gvand | Vandalism |

In addition, news are restricted to contain at least 200 words.

## 8.3 A representative article

Tampa Bay Times

POLITIFACT
BUSINESS

### SHUTDOWN CAUSED SOME CEOS TO DELAY HIRING FOR SIX MONTHS

JULIE KLIEGMAN

Times Staff Writer
473 words
27 October 2013
Tampa Bay Times
STPT
SOUTH PINELLAS
2D
English
Copyright 2013 Times Publishing Company. All Rights Reserved.

The statement

"Half of all CEOs say that the shutdown and the threat of shutdown set back their plans to hire over the next six months."

President Barack Obama, Oct. 17 in a public address

* * *

The ruling: MOSTLY TRUE

The White House pointed us to a recent Business Roundtable survey.

"Fifty percent of responding CEOs indicated that the ongoing **disagreement** in **Washington** over the 2014 budget and the **debt ceiling** is having a negative impact on their plans for hiring additional employees over the next six months," the report reads.

On its face, that's in line with what Obama said, but we wanted to see how Business Roundtable acquired its results. Their report notes, "Responses were received from 134 member CEOs, 63 percent of the total Business Roundtable membership."

Business Roundtable's membership tends to be larger companies. Spokeswoman Amanda DeBard told us CEOs are invited based on revenue, industry and market capitalization, so it's safe to say the poll responses don't reflect a random sample of U.S. businesses.

## 8.4 Partisan conflict during recessions

**Table 5:** Means test, $H_o$ : Diff $= 0$ and $H_a$ : Diff $< 0$

| | All Recessions | Panics | No Great Dep. |
|---|---|---|---|
| Downturns | 0.16 | 0.018 | 0.015 |
| Normal Times | -0.36 | -0.43 | -0.055 |
| Diff | 0.52 | 0.45 | 0.07 |
| $Pr(T < t)$ | 0.6 | 0.53 | 0.51 |

**Note**: The first row displays average de-trended historical PC scores during downturns (NBER defined), while the second row shows this average in normal times. The fourth row documents the p-value associated with a two-sided t-test (unequal variances) for each mean. PC scores are detrended using an HP-filter ($w = 6.25$). Each observation corresponds to a year, over the sample period 1891-2013. The second column re-computes these averages during panics, while the last column excludes the Great Depression.

## 8.5 Gallup and partisan conflict

Figure 17 depicts the PC index (left axis) together with the disapproval ratings (right axis), a series collected by Gallup in which respondents are asked "Do you approve or disapprove of the way Congress is handling its job?" The shaded area represents the percentage of surveyed people that disapproves Congress' actions.[11]

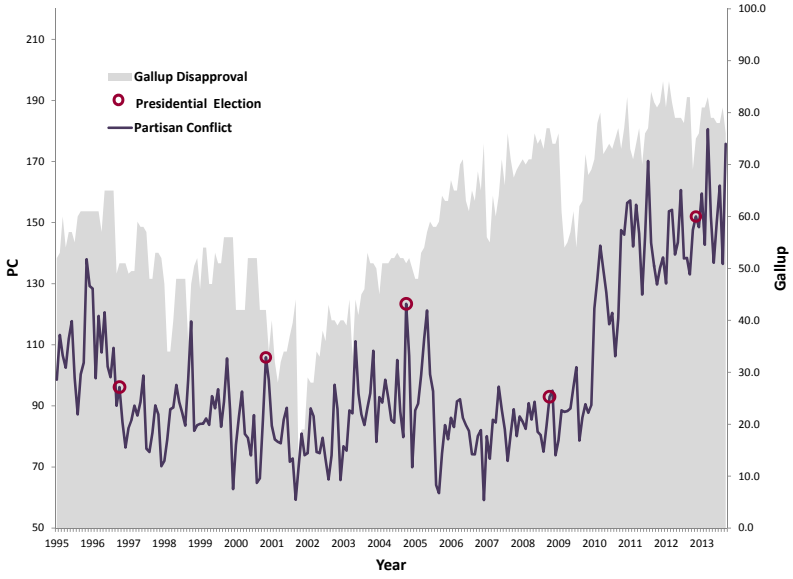



**Figure 17:** Partisan conflict and Congress disapproval ratings (Gallup).

[11]Data can be found at http://www.gallup.com/poll/1600/congress-public.aspx#1.

The low levels of PC observed during military conflicts or national security threats coincide with low disapproval rates, suggesting that partisan warfare was not present during those episodes. The two series follow a similar pattern, exhibiting an upward trend towards the end of the sample, but behave differently in periods when presidential elections are held (displayed with circles). During those months, partisan conflict intensifies, while—as should be expected—the disapproval ratings remain fairly stable.

### 8.6 Keywords

The list of terms used in the robustness check are summarized below.

- **Govt policy**: tax (taxation, taxes, taxed), tariff, fiscal stimulus, health care, social security, debt ceiling (or limit), welfare, Medicare, Medicaid, part d, affordable care act, food stamps, AFDC, tanf, oasdi, earned income tax credit, EITC, public assistance, nutritional assistant program, head start program, entitlement program, wic program, government subsidies, deficit, budget, national (federal or sovereign) debt, government policy, public policy, government spending (or expenditures), entitlement spending (or expenditures), unemployment insurance (or benefits), disability insurance (or benefits), health insurance (or benefits), medical insurance reform, constitutional reform, welfare reform, duty (or duties).

- **Regulation**: prescription drugs, drug policy, food and drug admin, FDA, Gramm-Rudman, Bank supervision, thrift supervision, malpractice reform, constitutional reform, financial reform, medical insurance reform, welfare reform, tort reform, constitutional amendment, Glass-Steagall, Dodd-Frank, housing financial services committee, capital requirement, security exchange commission, sec, deposit insurance, fdic, fslic, ots, occ, firrea, truth in lending, monometallist, bimetallist, (silver or gold) coinage, alcohol (or liquor) prohibition.

- **Labor**: minimum (or living) wage, union rights, card check, national labor rel. board, nlrb, collective bargaining, right to work, closed shop, worker compensation, maximum hours, wages and hours, advanced notice requirement, affirmative action, overtime requirements, at-will employment, Davis-Bacon, equal employment opportunity, eeo, osha, immigration.

- **Competition**: monopoly, patent, copyright law, federal trade commission, ftc, unfair business practice, cartel, competition law, price fixing, price discrimination, class action, antitrust, merger policy, competition policy, commerce competition, and commerce clause..

- **Environment**: carbon tax cap and trade, pollution controls, environmental restrictions, clean air act, clean water act, energy policy, drill* restrict*.

- **Trade**: dumping, trade policy (act, agreement, or treaty), duty (or duties), import tariff (or barrier).

- **Defense**: national security, military invasion (conflict, embargo, or procurement), war, armed forces, police action, base closure, saber rattling, naval blockade, no-fly zone, defense spending (or expenditures), military spending (or expenditures).