Why Has U.S. Policy Uncertainty Risen Since 1960?

Scott R. Baker (Stanford), srbaker@stanford.edu, 579 Serra Mall, Stanford, CA 94305, Tel: 415 244 8274

Nicholas Bloom (Stanford), nbloom@stanford.edu, 579 Serra Mall, Stanford, CA 94305, Tel: 650 455 7179

Brandice Canes-Wrone (Princeton), bcwrone@princeton.edu, Corwin 34, Princeton, Princeton NJ 08544, Tel: 609 258 9047

Steven J. Davis (Chicago Booth) steven.davis@chicagobooth.edu 5087 South Woodland Ave, Chicago IL 60637, Tel: 773 702 7312

Jonathan Rodden (Stanford), jrodden@stanford.edu. 616 Serra Street, Stanford, CA 94305, Tel: 650 723 5219

Corresponding Author: Nicholas Bloom

Session Title: Recessions and Recoveries

Session Chair: Justin Wolfers (no discussants)

Abstract: We consider two classes of explanations for the rise in policy-related economic uncertainty in the United States since 1960. The first stresses growth in government spending, taxes, and regulations. A second stresses increased political polarization and its implications for the policy-making process and policy choices.

We consider two classes of explanations for the rise in policy-related economic uncertainty in the United States since 1960. The first stresses growth in government spending, taxes, and regulations. A second stresses increased political polarization and its implications for the policy-making process and policy choices.

I. Rising Policy Uncertainty

There appears to be a strong upward drift in policy-related uncertainty after 1960. As evidence, Figure 1 plots a newspaper-based index of economic policy uncertainty (EPU) for the United States, showing a secular rise over the last half century. The EPU index, drawn from Baker, Bloom and Davis (2013), relies on scaled frequency counts of newspaper articles that contain terms pertaining to the economy, uncertainty, and economic policy.[1] Baker et al. (2013) also find a strong rise in the frequency of discussions of policy-related uncertainty in the Federal Reserve's periodic "Beige Book" releases from 1983 (first release) to 2012, suggesting that Beige Book survey respondents also perceive a rise in policy uncertainty. This rise in economic policy uncertainty is potentially damaging to US growth (Bloom, 2013).

II. Policy Uncertainty and the Scale of Government Activity

Alongside the EPU index, Figure 1 plots two measures for the scale of government activity. One measure shows the rise in government spending from about 20 percent of GDP in the early 1950s to about 35 percent by 2010. This secular increase likely brought with it a greater prevalence and intensity of concerns related to uncertainty about government spending programs and about tax rates and rules. Figure 1 also reports a page count index for the *Code of Federal Regulations*, an annual publication that compiles all federal regulations in effect in a given year.

[1] Specifically, Baker et al. search the digital archives of 6 newspapers (Boston Globe, Chicago Tribune, Los Angeles Times, New York Times, Wall Street Journal, and Washington Post) for articles containing 'uncertain' or 'uncertainty'; plus 'economy', 'economic', 'industry', 'industrial', 'commerce' or 'business'; plus 'congress', 'deficit', 'federal reserve', 'legislation', 'regulation' or 'white house'. The monthly frequency counts for each paper are scaled by the number of all articles in the same paper and month, and averaged for the overall index.

The index rose more than six-fold after 1950, highlighting a tremendous expansion in the extent and complexity of federal regulations. Uncertainty about the existence, meaning and enforcement of government regulations likely increases with their scale and complexity. The size and complexity of the U.S. tax code also grew dramatically in recent decades, as discussed in Joint Committee on Taxation (2001) and National Taxpayer Advocate (2012).

In summary, secular growth in government spending and taxes relative to GDP and the greater scale and complexity of both government regulations and the tax code are likely contributors to the rise in policy-related economic uncertainty. The payoffs associated with private economic decisions are increasingly affected by government activities and policies that are subject to change. Of course, an expanded role for government could bring benefits that outweigh the costs, and a greater role for government could lower overall economic uncertainty even as it raises policy-related uncertainty. For example, an expansive tax-funded social safety net serves as an automatic fiscal stabilizer that dampens fluctuations in output and employment. Moreover, many financial regulations seek to reduce uncertainty associated with financial crises and their spillovers to the rest of the economy. Nevertheless, Figure 1 suggests that the secular growth in government is one reason for rising policy uncertainty.[2]

III. Political Polarization and Policy Uncertainty

Another class of explanations for rising policy uncertainty stresses the potential for political polarization to produce the expectation of more extreme policies, less policy stability, and less capacity of policy makers to address pressing problems. In recent years, American politics appears at odds with the classic model of two-party electoral competition. Rather than

[2] The web appendix shows that newspaper-based indexes of sectoral economic uncertainty (for agriculture, manufacturing and finance, insurance and real-estate) vary with sectoral shares of aggregate output. This pattern indicates that larger sectors typically attract more media coverage about economic uncertainty, supporting the view that the growth in government leads to more concern about government-related economic uncertainty.

converging on preferences of the median voter, the economic policy positions of the parties' most prominent figures have diverged sharply. At the same time, partisan control of Congress has switched frequently, and presidential elections have been competitive. Thus, national elections often produce spikes in policy uncertainty, especially around close presidential contests (e.g., Canes-Wrone and Park, 2012 and Baker et al., 2013).

Even amidst partisan rancor, investors in the U.S. economy traditionally take solace in the extensive checks and balances embedded in the American constitution. Presidents are often derailed by divided government, Senate obstructionism, and opposition from co-partisan legislators. In recent years, however, these sources of status quo bias have often reinforced rather than reduced policy uncertainty. The status quo is unattractive when the debt ceiling must be raised to avoid default or fiscal adjustment is required for a sustainable debt path. Yet change from the status quo under American-style separation of powers typically requires the agreement of both parties, creating tension that leads to high-stakes bargaining scenarios in which players face political incentives for brinkmanship that in turn generate high levels of uncertainty.

Political polarization can also increase policy uncertainty in more subtle ways. Presidents of both parties have increasingly politicized the bureaucracy by appointing partisan loyalists and shifting key policy decisions to White House operatives not subject to Senate confirmation (e.g., Moe, 1985). In contrast to the early postwar period, when appointed regulators held the upper hand vis-à-vis political appointees, the policy environment is now more prone to rapid swings between an aggressive regulatory stance and a more hands-off approach. The tendency toward rapid switching of regulatory regimes intensifies when presidents respond to legislative gridlock by implementing policy agendas through executive orders and other forms of "unilateral action"

(e.g., Howell 2003). Because successor presidents can readily reverse unilateral executive actions, the effect is to increase long-term policy uncertainty.

III.a. Polarization of voters and districts?

The most popular measure of Congressional polarization is based on the NOMINATE scores of Poole and Rosenthal (1985), which estimate the ideal points of legislators based on their roll-call voting behavior. As displayed in Figure 2, the ideological gap between Democrats and Republicans has been increasing since the 1960s according to this measure. Several alternative Congress-based measures, including ones based on campaign finance records (Bonica 2013) and textual analysis of the congressional record (Jensen et al. 2012), also show a pronounced secular increase in the ideological distance between Democratic and Republican legislators and a precipitous decline in moderate legislators.

One potential reason for this increasing polarization of policymakers is the increasing polarization of voters. Yet an important puzzle for political scientists is the absence of evidence for a corresponding polarization in the policy preferences of the public during the same period (Fiorina, 2010), and relatedly, the growing number of Americans who classify themselves as "independents." Voter preferences seem to be unipolar – most voters report preferring centrist policies – and this pattern has not changed much over time. The correlation between policy attitudes and voting behavior has increased somewhat, but this "sorting" has taken place almost exclusively on non-economic dimensions of partisan conflict (e.g., Ansolabehere, Rodden, and Snyder, 2006). Also, polarization of the economics-oriented content of published party platforms has fluctuated rather than consistently increased. Yet as shown in Figure 2, voters *perceive* the

parties' overall platforms to be diverging steadily[3], a perception that is highly correlated with the newspaper-based EPU index.

Perhaps the most basic solution to this puzzle lies in the country's rapidly changing political geography. The Democrats have become the party of the post-industrial urban core and inner suburbs, and the Republicans have become the party of the outer suburbs and rural periphery. Partly as a result, there has been a slow and steady decline in the number of competitive Congressional seats over recent decades. Aggregating presidential votes to the level of Congressional districts, Figure 2 shows that the standard deviation of the Democratic vote share has increased substantially since the 1980s and is reasonably correlated with the newspaper-based measure of policy uncertainty.

However, the solution to the puzzle of Congressional polarization cannot lie exclusively in the outward movement of the tails of the distribution of district-level partisanship. The distribution over districts remains unimodal, with a large density of rather evenly divided districts in the middle, while the distribution of roll-call votes has become sharply bimodal. Moreover, various analyses indicate that Congressional polarization emerges from the radically different roll-call voting behavior of Democratic and Republican representatives from otherwise identical districts, rather than the polarization of districts (e.g., Lee, Moretti and Butler, 2004). Although partisan gerrymandering is frequently cited in the media as a major source of polarization, academic studies fail to find evidence of a causal impact (e.g., McCarty, Poole, and Rosenthal, 2009). McCarty et al. (2013) suggest the large difference in roll-call voting behavior between Democrats and Republicans is related to the internal ideological heterogeneity of many suburban and exurban "centrist" districts. Given that voter perceptions of party platforms are

[3] The American National Election Study has maintained a consistent question asking respondents if they see any important differences between the major parties. From each survey we display the percent of all respondents who answer in the affirmative.

driven by highly vocal partisans from the ideologically homogeneous districts in the tails of the distribution, it is difficult for candidates in heterogeneous centrist districts to credibly position themselves as moderates. Rather, they opt for a strategy of mobilizing core supporters who are more likely to turn out, especially in primaries. The growing availability of household-level data for use in micro-targeted campaign materials only enhances the appeal of such a strategy.

Two other factors frequently mentioned as solutions to rising political polarization are rising media polarization and rising income inequality. While media polarization does not appear to have directly polarized voters or districts, this phenomenon has perhaps encouraged politicians to cater to core supporters rather than independents. Research finds that the direct link between partisan media and political polarization is weak. Polarization began more than a decade before the advent of Fox News and MSNBC, political views have been relatively constant, and notably, most voters either avoid partisan news altogether or select an ideological spectrum of programming (e.g., Gentzkow and Shapiro, 2011). At the same time, however, cable TV itself may have contributed to polarization by letting viewers choose entertainment over news, thereby decreasing politicians' exposure to less partisan voters and incentivizing their focus on politically active partisans (Prior, 2013).

Likewise, rising income inequality could facilitate legislative polarization in a number of ways, even if mass opinion has not polarized. One possibility is that greater income inequality raises the political stakes for the rich as they realize the median voter has more to gain from redistributive policies. A related argument is that politicians are more responsive to rich than poor voters (e.g., Gilens, 2012). Thus, as the right tail of the income distribution pulls outward, the right-leaning party shifts away from centrist policies.

III.b. Institutional dynamics

When discussing political polarization, media pundits and reformers often stress institutional factors that might be amenable to change, such as campaign finance and the structure of primary elections. One claim is that low-turnout primary elections are an important factor in the rise of polarization. Anecdotal evidence suggests that incumbents now avoid casting bipartisan votes that would have been uncontroversial in the 1970s, because they fear inducing a well-funded primary challenger. Incumbent candidates certainly face primary threats, and these threats may influence roll-call voting incentives. However, most states introduced congressional primaries before the rise in polarization, and even in states that adopted primaries more recently, electoral reform is not associated with increased within-state polarization (Hirano et al., 2010).

A more significant change to elections and campaigns since the 1970s involves campaign finance. In particular, individual donors have replaced political action committees (PACs) as the most important source of campaign finance. While PACs tend to be more ideologically moderate and flexible than the major parties, individual donors tend to be more extreme and rigid. Barber (2013) links these developments to polarization; when states increase individual donor limits, state-level legislative polarization increases.

IV. Conclusion

As government has steadily expanded its reach since 1960, the rhetoric of the major parties has become more polarized, and their legislators have found fewer incentives to cast the bipartisan votes that are required to solve basic problems in a political system with divided powers. These trends have tracked closely with a secular increase in policy uncertainty. We have introduced a nascent research agenda aimed at explaining the interplay of uncertainty, polarization, and government growth. The next step in this agenda is a focus on causality, which will require investment in cross-state and cross-national analysis as well as historical research.

Ansolabehere, Stephen, Jonathan Rodden, and James M. Snyder, Jr. 2006. “Purple America.” *Journal of Economic Perspectives* 20, 2: 97-118.

Baker, Scott R., Nicholas Bloom and Steven J. Davis, 2013. “Measuring Economic Policy Uncertainty,” working paper.

Barber, Michael, 2013. “Ideological Donors, Contribution Limits, and the Polarization of State Legislatures.” Working paper.

Bloom, Nicholas, 2013 “Fluctuations in uncertainty, NBER Working Paper 19714.

Bonica, Adam. 2013. “Mapping the Ideological Marketplace.” *American Journal of Political Science*. First published online 30 OCT 2013 DOI: 10.1111/ajps.12062.

Canes-Wrone, Brandice, and Jee-Kwang Park. 2012. "Electoral Business Cycles in OECD Countries." *American Political Science Review* 106(1): 103-122.

Crews, Clyde Wayne, Jr., 2013. *10,000 Commandments, 2013: An Annual Snapshot of the Federal Regulatory State,* Competitive Enterprise Institute.

Dawson, John W. and John J. Seater, 2013. “Federal Regulation and Aggregate Economic Growth,” *Journal of Economic Growth*, 18, 137-177.

Fiorina, Morris. 2010. *Culture War? The Myth of a Polarized America*. NY: Pierson Longman.

Gentzkow, Matthew and Shapiro, Jesse, 2011. “Ideological Segregation Online and Offline” *Quarterly Journal of Economics,* 126, no. 4 (November).

Gilens, Martin, 2012. *Affluence and Influence: Economic Inequality and Political Power in America*. Princeton, NJ: Princeton University Press.

Hirano, Shigeo, James Snyder, Stephen Ansolabehere, and John Hansen. 2013. “Primary Elections and Partisan Polarization in the U.S. Congress,” *Quarterly Journal of Political Science* 5,2: 169-191.

Howell, William G. 2003. *Power without Persuasion: The Politics of Direct Presidential Action*. Princeton: Princeton University Press.

Jensen, Jacob, Suresh Naidu, Ethan Kaplan, and Laurence Wilse-Samson. 2012. "Political Polarization and the Dynamics of Political Language: Evidence from 130 Years of Partisan Speech." *Brookings Papers on Economic Activity* 2012 (Fall): 1-60.

Joint Committee on Taxation, 2001. *Study of the Overall State of the Federal Tax System and Recommendations for Simplification* (JCS-3-01), April.

Lee, David, Enrico Moretti, and Matthew Butler. 2004. "Do Voters Affect or Elect Policies? Evidence from the U.S. House." *Quarterly Journal of Economics* 119, 3: 807-859.

McCarty, Nolan, Keith T. Poole, and Howard Rosenthal, 2009. "Does Gerrymandering Cause Polarization?" *American Journal of Political Science,* 53, no. 3 (July), 666-680.

McCarty, Nolan, Jonathan Rodden, Boris Shor, Chris Tausanovitch, and Chris Warshaw, 2013. "Geography and Polarization." Paper presented at the Annual Meeting of the American Political Science Association, Chicago, IL.

Moe, Terry. 1985. "The Politicized Presidency," in The New Direction in American Politics, ed. John E. Chubb and Paul E. Peterson. Washington, DC: Brookings Institution.

National Taxpayer Advocate, 2012. *Annual Report to Congress*, at www.TaxpayerAdvocate.IRS.gov/2012AnnualReport.

Poole, Keith T. and Howard Rosenthal. 1985. "A Spatial Model for Legislative Roll Call Analysis." *American Journal of Political Science* 29(2): 357-384.

Prior, Markus. 2013. "Media and Political Polarization." *Annual Review of Political Science* 16:101-127.

Web Appendix for "Why Has U.S. Policy Uncertainty Risen Since 1960"

Scott Baker (Stanford), Nicholas Bloom (Stanford), Brandice Canes-Wrone (Princeton), Steven J. Davis (Chicago Booth) and Jonathan Rodden (Stanford)

Sector Size and Newspaper Coverage of Sectoral Economic Uncertainty

As mentioned in the main text (footnote 2), newspaper coverage of sectoral economic uncertainty is likely to trend over time in the same direction as sectoral shares of aggregate output. To investigate the relevance of this sectoral size effect, we consider three sectors that underwent large secular changes in their shares of aggregate output in recent decades: Agriculture, Manufacturing, and FIRE (i.e., Finance, Insurance and Real Estate). For each sector, we first construct frequency counts of articles about sectoral economic uncertainty following the same approach as described in footnote 1 of the main text, except that we replace the policy-related terms ('congress', 'deficit', etc.) with the following sector-specific terms:

- Agriculture: 'farms' or 'farming' or 'farmers' or 'agriculture' or 'agricultural'.
- Manufacturing: 'manufacturing' or 'manufactures' or 'factories' or 'factory'.
- FIRE: 'finance' or 'insurance' or 'real estate', or 'banks'.

We use the same "economy" and "uncertainty" terms as in the EPU index.

We scale these sectoral uncertainty measures by the frequency of articles that discuss any form of economic uncertainty. In this manner, we obtain a ratio for the count of articles about economic uncertainty in a specific sector to the count of articles about any aspect of economic uncertainty. We construct these scaled sectoral uncertainty counts by year and average to decades to highlight low-frequency variation. Figure A.1 shows that these ratio measures closely tracks sectoral output shares for Agriculture, Manufacturing and FIRE in recent decades. This

result supports the idea that secular changes in sectoral output shares affect the trend behavior of newspaper coverage of sectoral economic uncertainty in the same direction.

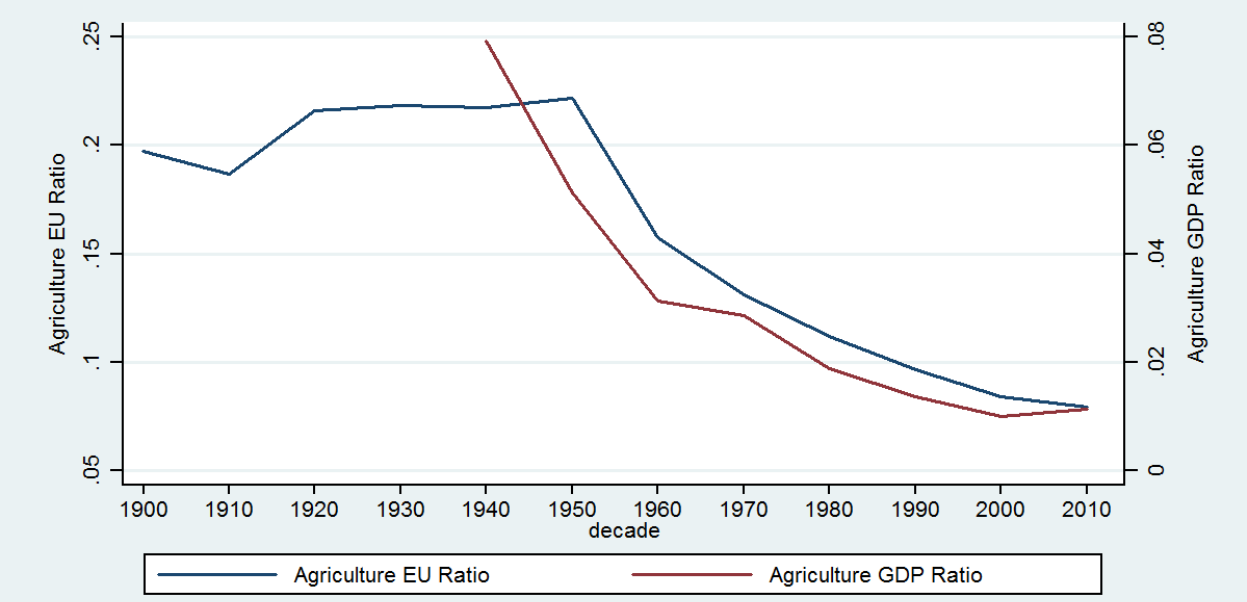
Rescaling the Newspaper-Based Index of Economic Policy Uncertainty

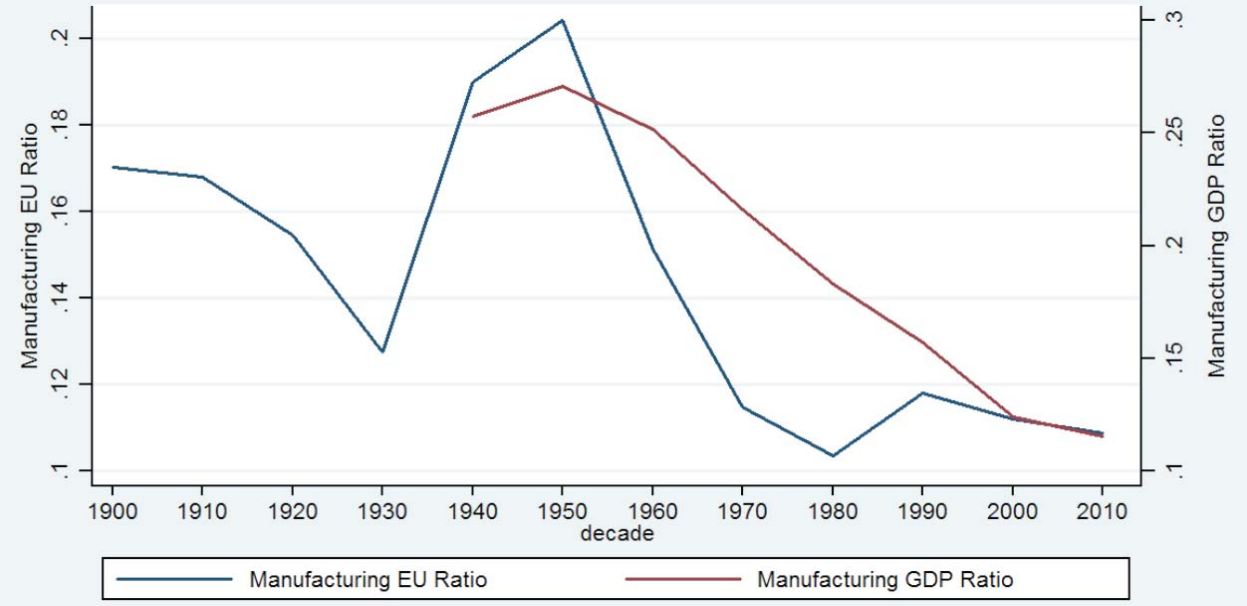
The EPU index displayed in Figure 1 could be affected by exogenous changes over time in the mix of newspaper articles. Suppose, for example, that newspapers devote a secularly rising share of articles to economic matters because readership gradually shifts towards people with greater appetite for business and financial news. As another example, suppose that newspapers gradually shift toward hard news, economics included, because other media (television) increasingly supply a greater share of high-quality entertainment for public consumption. In these examples, a gradual increase in the fraction of newspaper articles devoted to economic matters leads, for our purposes, to a spurious secular rise in the EPU index. To address this concern, we scale the monthly frequency count of EPU articles by the count of articles that contain one of the "economy" terms rather than scaling by the count of all articles.

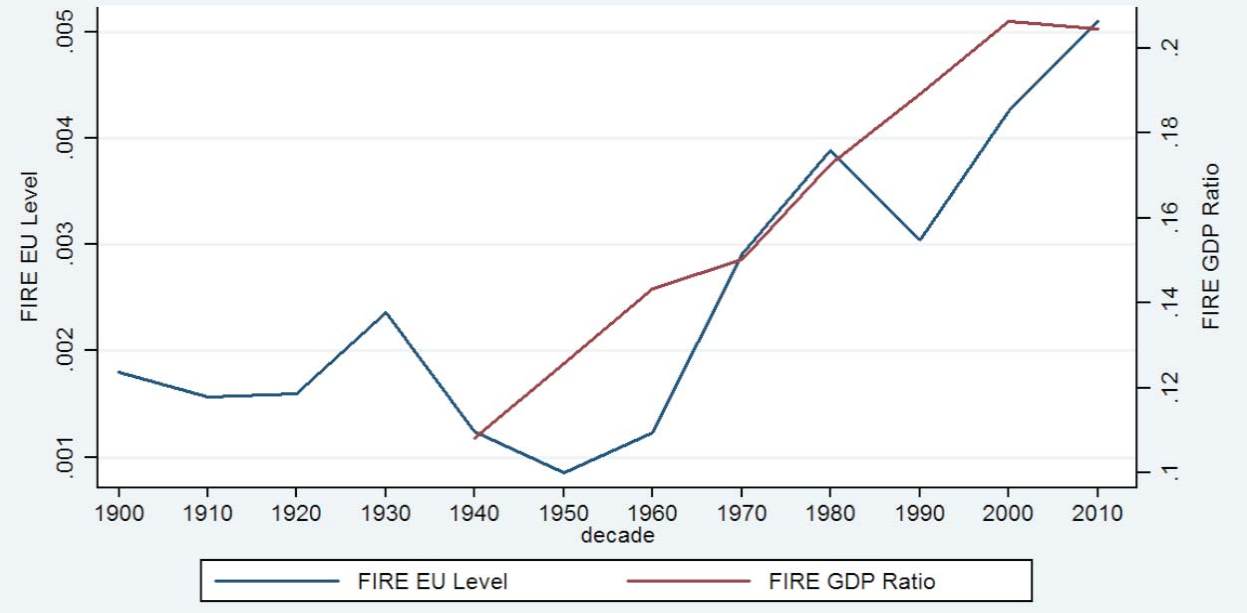
Figure A.2 shows that this rescaled EPU index also increased sharply over the past half century. Thus, while we cannot rule out the possibility that gradual shifts in newspaper coverage imparted a spurious upward trend in our main EPU index, our newspaper-based evidence of a secular increase in policy-related economic uncertainty is robust to this concern.

The next three charts are crude versions of Figure A.1. They can be stacked onto a single page. Let's plot them from 1940 to 2010.

The last chart is a crude version of Figure A.2. For consistency with Figure 1, let's average the monthly values to the annual level.


Agriculture EU Ratio
.05
.1
.15
.2
.25
Agriculture GDP Ratio
0
.02
.04
.06
.08
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
decade
Agriculture EU Ratio
Agriculture GDP Ratio


Manufacturing EU Ratio
.1
.12
.14
.16
.18
.2
Manufacturing GDP Ratio
.1
.15
.2
.25
.3
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
decade
Manufacturing EU Ratio
Manufacturing GDP Ratio


FIRE EU Level
.001
.002
.003
.004
.005
FIRE GDP Ratio
.1
.12
.14
.16
.18
.2
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
decade
FIRE EU Level
FIRE GDP Ratio

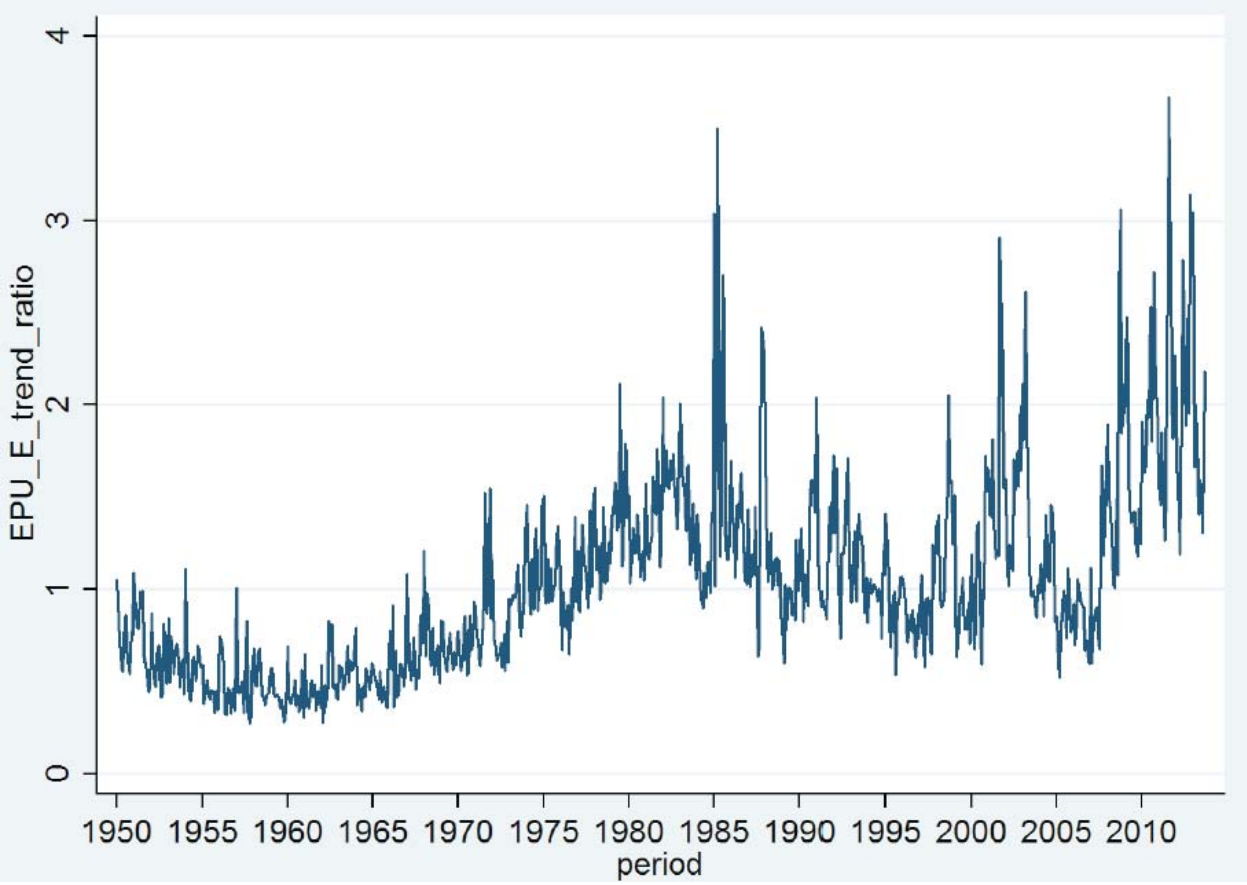
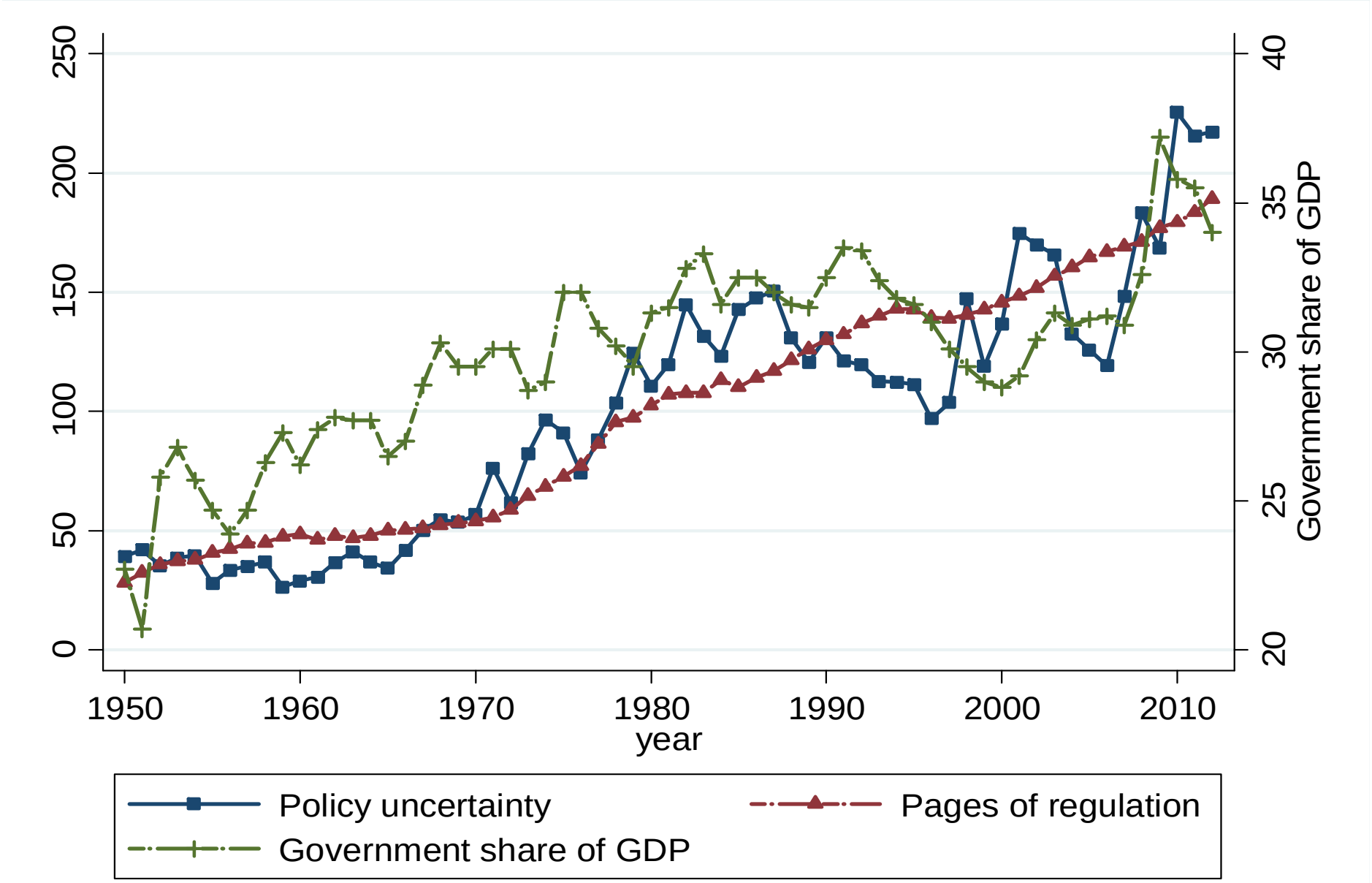
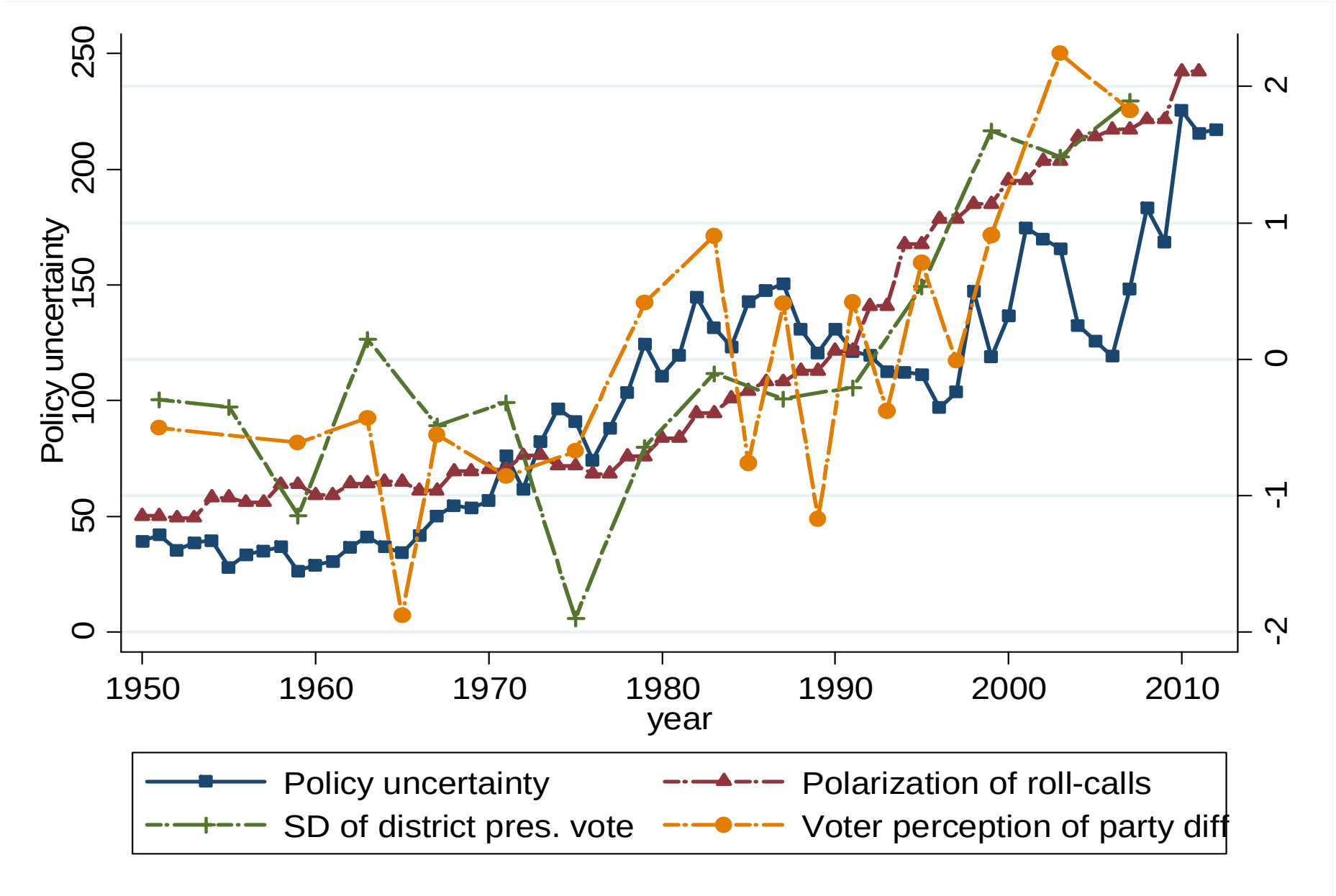

EPU_E_trend_ratio
0
1
2
3
4
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
period

Figure 1: US Economic Policy Uncertainty and Government Activity



Notes: U.S. Economic Policy Uncertainty Index from Baker et al. (2013); total government spending (federal, state and local) as a percent of GDP from BEA; *Code of Federal Regulations* page count from Dawson and Seater (2013), spliced to data from Crews (2013, Figure 12) for 2006 to 2012. The EPU and CFR data are scaled to 100 from 1949 to 2012.

Figure 2: US Economic Policy Uncertainty and Political Polarization



Notes: U.S. Economic Policy Uncertainty Index from Baker et al. (2013). Polarization of roll-calls from NOMINATE. SD of district presidential vote government
All variables except policy uncertainty normalized to a mean (0), standard-deviation (1) scale for scaling purposes.