Estimating the Effects of Political Pressure on the Fed: A Narrative Approach with New Data*

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December 11, 2023

Abstract

This paper combines new data and a narrative approach to identify shocks to political pressure on the Federal Reserve. From archival records, I build a data set of personal interactions between U.S. Presidents and Fed officials between 1933 and 2016. Since personal interactions do not necessarily reflect political interference and can arise endogenously, I develop a narrative identification strategy. To help his re-election, President Nixon pressured Fed Chair Burns to ease monetary policy 1971. I exploit this episode through restrictions on a structural vector autoregression that includes the personal interaction data and standard macro data. I find that political pressure shocks *(i)* increase inflation strongly and persistently, *(ii)* lead to statistically weak negative effects on activity, *(iii)* contributed to other inflationary episodes outside of the Nixon era, and *(iv)* transmit differently from standard expansionary monetary policy shocks, in particular by having a stronger effect on inflation expectations. While the role of central bank independence has previously been studied using cross-country data, my estimates cover one economy through time and are *quantitative*: increasing political pressure by half as much as Nixon, for six months, raises the U.S. price level by more than 8%.

Keywords: Central bank independence, Federal Reserve, Inflation, SVARs, Narrative identification.

JEL Classification: C32, E31, E40, E50, D72.

*I thank Juan Antolin-Diaz, Jonas Arias, Boragan Aruoba, Francesco Bianchi, Allan Drazen, Leland Farmer, Yuriy Gorodnichenko, Hanno Lustig, Fernando Martin, Emi Nakamura, and Jon Steinsson for detailed discussions. Seminar participants at UC Berkeley, Stanford SITE, the Philadelphia Fed, the St. Louis Fed and the University of Maryland provided very useful suggestions. I am grateful to Seho Kim, Ko Miura and Daniel Schwindt for excellent research assistance. Contact: Department of Economics, University of Maryland, Tydings Hall, College Park, MD 20742, USA; drechsel@umd.edu. The President-Fed personal interaction time series are available at http://econweb.umd.edu/~drechsel/research.html.

1 Introduction

The political dimension of U.S. monetary policy is attracting renewed attention. President Donald Trump repeatedly and openly criticized the Federal Reserve for keeping monetary conditions too tight, with recent research finding that his pressure impacted market expectations of monetary policy (Bianchi, Gomez-Cram, Kind, and Kung, 2023). The Fed gets politicized also in relation to the recent inflation surge or when it comes to appointments and personnel.[1]

A large literature in economics studies the benefits of politically independent central banks (e.g. Alesina and Summers, 1993, Dincer and Eichengreen, 2014). This literature typically constructs cross-country measures of central bank independence and relates them to inflation developments. A separate literature, going back to Sargent and Wallace (1981), studies models of monetary-fiscal interactions. In these models, the concept of fiscal dominance can be interpreted as a form of political pressure on the central bank to finance deficits through inflation. Such models have been estimated on macro data to study inflation (e.g. Bianchi, 2012, Bianchi and Ilut, 2017). While the first literature relies on cross-country comparisons and the second literature on fully specified structural models, there is little well-identified empirical evidence on how political pressure on the Fed affects the U.S. economy quantitatively. The lack of evidence reflects that it is extremely challenging to measure political pressure and that identifying its economic effects is even more difficult, especially in the U.S. context where threats to central bank independence have been relatively infrequent.

This paper constructs new data and develops a narrative identification strategy to isolate exogenous shocks to political pressure on the Fed and quantifies their macroeconomic effects. The new data is extracted from archival records and captures personal interactions between U.S. Presidents and Fed officials from 1933 to 2016. The identification strategy exploits historical information about President Richard Nixon's pressure on Fed Chairman Arthur Burns in the run-up to the 1972 presidential election. It imposes that the spike in their personal interactions in 1971 is mainly driven by a political pressure shock on the Fed, implemented with the methodology of Antolin-Diaz and Rubio-Ramirez (2018). I find that political pressure shocks strongly and persistently increase inflation, are distinct from typical monetary policy easing shocks and, while clustered in the 1970's, occur in other periods of the 20th and 21st century.

While political pressure on the Fed is difficult to measure, the first contribution of

[1] See e.g. reporting in the *Wall Street Journal* (March 7, 2022): "How Politicized Is the Federal Reserve?"

this paper is to hand-collect new data on personal interactions between U.S. Presidents and Fed officials. Other individuals might exert political pressure, but conversations with the highest-ranking politician – and perhaps most powerful person in the world – are a potentially attractive tool for governments tempted to interfere with the Fed. The source of the data are the historical daily schedules of U.S. Presidents, made available by the Presidential Libraries from Franklin D. Roosevelt in 1933 until Barack Obama in 2016. I find over 800 personal interactions with Fed officials in these records, and I collect detailed information for each of them. The average duration of an interaction is 53 minutes; 36% of the interactions are 1-on-1; 11% are on weekends; 16% in social settings, e.g. over dinner; 92% of the interactions are with the Fed Chair, 8% with other Fed officials. I use this new data set to construct new time series of "President-Fed interactions." There is a large variation in these personal interactions over time. For example, President Nixon interacted with Fed officials 160 times, while only 6 interactions took place during the Clinton administration.

President-Fed interactions arise endogenously in response to economic conditions, so the second contribution of this paper is to overcome this identification challenge using a narrative approach. Personal interactions by themselves are at best a noisy measure of political interference with the Fed. For example, in a recession the President might be more likely to contact the Fed chair and ask them about their view on the economy. For identification, I exploit an increase in President-Fed interactions that plausibly took place for purely political reasons – with the purpose of influencing Fed policy – and arguably had an impact on the stance of monetary policy. In his desire to be re-elected in 1972, Richard Nixon pressured Arthur Burns to ease monetary policy in 1971. Burns, a Republican and friend to Nixon, reportedly gave in to Nixon's pressure.

A variety of external evidence corroborates this interpretation of the Nixon-Burns clash. Recordings from the "Nixon Tapes" (Abrams, 2006) and the personal diary of Arthur Burns (Ferrell, 2010) give a dark account of Nixon's conduct towards Burns, and his general state of mind. For example, Burns writes in his diary that "the President will do anything to be reelected", and that Nixon urged him "start expanding the money supply and predicting disaster if this didn't happen." To support the interpretation that Burns eased policy, I show that Romer and Romer (2004) estimate large easing shocks to monetary policy prior to Nixon's re-election, which contrast with a large systematic tightening that took place after the election. I also present supporting evidence from the voting behavior of the FOMC (Thornton and Wheelock, 2014). Prior to Nixon's re-election more than 90% of all dissenting members voted for tighter policy, while

afterwards more than 70% of dissenters desired easier policy. Burns notes in November 1971 that the "President at this meeting again expressed his concern about the money supply. I reminded him that I was looking after that properly."

I exploit the narrative around Nixon's pressure in a structural vector autoregression (SVAR). My idea is to develop an approach to estimate political pressure shocks just as the literature has estimated monetary policy or fiscal policy shocks. This is a challenging task as one would not expect such shocks to be a key driver of U.S. business cycles. My SVAR is quarterly, covers the 1933-2016 period, and includes the number of President-Fed interactions as well as standard macro data. I identify a shock to political pressure on the Fed based on traditional sign restrictions and narrative sign restrictions (Antolin-Diaz and Rubio-Ramirez, 2018) that impose a strong contribution of the shock in the Nixon re-election drive. Specifically, I define a political pressure shock as an increase in President-Fed interactions that eases policy in an inflationary way, and constitutes the main contributor to the spike in President-Fed interactions in late 1971. These interactions are still allowed to be partly driven by other macroeconomic shocks, but are imposed to increase *mainly* due to political pressure. I then construct impulse response functions and historical variance decompositions to study the effects of the shock.

My analysis yields four findings. First, a transitory political pressure shock strongly and persistently raises inflation. I normalize the shock to increase the number of President-Fed interactions by 10 in one quarter. 10 more interactions represent a large increase compared to the typical President (the mean number of interactions is 3 and the standard deviation is 2.7), but not in comparison to Nixon, who met with Burns 17 times in 1971:Q3 and again 17 times in 1971:Q4. The shock is transitory but displays persistence, with the IRF of the interaction variable reversing to close to 0 after around 2 years. It leads to a 100 basis points lower interest rate. The price level response to the shock builds up gradually and goes to a 5% higher price level after 4 years. My estimates imply that exerting political pressure 50% as much as Nixon did, over a period of six months, ends up increasing the U.S. price level by over 8% after a decade.

Second, the effects of political pressure on real activity are statistically difficult to detect. One reason could be that President-Fed interactions become infrequent after the early 1980's, reducing statistical power across the full sample. When stopping the sample before Greenspan becomes Fed Chair in 1987, I find a mild reduction in real GDP. The fact that the effect on activity is, if anything, negative suggests that political pressure is not successful from the point of view of a President who pressures the Fed to create stimulus in real activity. A shock that raises inflation but not real activity

can be loosely be conceptualized in a Barro and Gordon (1983) framework where the monetary authority acts under discretion. If political pressure entices it to put a higher weight on the output gap or aim for a higher output gap target, an "inflation bias" arises in equilibrium. Of course, pressuring the Fed might have benefits to the President unrelated to higher aggregate activity, such as reduced real deficits. In the pre-Greenspan sample, I find weak evidence of a reduction in the deficit-to-GDP ratio.

Third, political pressure shocks contribute to other inflationary episodes outside of the Nixon years. Constructing a historical variance decomposition reveals the contribution of the shock to each variable included in the SVAR over the whole sample. This also showcases the advantage of implementing my narrative using an SVAR, relative to a simple event study approach which would remain silent about other periods. I find that political pressure shocks mostly occurred in the 1970's, with the strongest evidence for the administrations of Nixon, Ford and Carter. There is tentative evidence of political pressure shocks during other Presidencies.

Fourth, political pressure shocks trigger macroeconomic dynamics different from those following expansionary monetary policy shocks. I distinguish these two shock types using formal derivations based on my SVAR. My formal analysis makes clear that with existing data and identification strategies, for example using the Romer and Romer (2004) approach, political pressure shocks are estimated as a subset of monetary policy shocks. By incorporating my new data into the SVAR and using my identification approach, however, they are a distinct type of shock that is allowed transmit differently. In particular, when President-Fed interactions are publicly observable, a fact for which I present evidence, then private agents might change their behavior differently from how they react to a standard monetary policy shock. Indeed, in my SVAR political pressure shocks are much more inflationary over the medium term than monetary easing shocks. In the pre-Greenspan sample, the negative sign of the real activity response is the opposite from the monetary shock. Furthermore, political pressure shocks have a much stronger impact on inflation expectations and their dispersion, in line with the idea that private agents react to observed political pressure on the Fed.

I discuss and address objections to different aspects of my identification strategy. One issue is that other macroeconomic events took place in 1971, such as the suspension of the Bretton Woods exchange rate arrangement. To address this concern, I estimate an alternative SVAR *without* the President-Fed interaction data. I apply narrative sign restrictions to identify a generic "1971 inflationary shock" as the main contributor to inflation. This shock implies only a short-lived inflation increase and an insignificant

impact on inflation expectations, in stark contrast to the political pressure shock identified using the President-Fed interaction data and narrative restrictions on it. Another issue is that imposing narrative sign restrictions during only one Presidency has drawbacks. I therefore impose an additional narrative restriction based on Lyndon B. Johnson's political pressure on the Fed in the 1960's. When two historical episodes are exploited, I find similarly strong inflationary effects of political pressure, which are now more precisely estimated. Finally, political pressure might not only occur through President-Fed interactions, but through other channels, such as public pressure in the media. I argue that personal interactions with the President can, in specific periods, constitute an important channel through which political pressure occurs. My premise is not that interactions with the President are a necessary condition for political pressure, but that they reflect one possible channel of political pressure which I am able to measure consistently over time and exploit for identification.[2]

Taken together, my findings do not only underscore existing insights from cross-country studies on the benefits of central bank independence. They also constitute novel evidence that is quantitative in nature and from within the U.S. economy over a long sample, which to the best of my knowledge has not previously been obtained.

Related literature. First, my work contributes to a large literature on the benefits of and threats to central bank independence. Empirical approaches traditionally use cross-country setups (Alesina and Summers, 1993), with some highlighting different time trends across countries (Dincer and Eichengreen, 2014).[3] My data and methodology enable me to estimate the quantitative effects of political pressure on the Fed using variation through time. In closely related work, Bianchi, Gomez-Cram, Kind, and Kung (2023) also exploit a new data source, in their case tweets by Donald Trump, to identify political pressure on the Fed over time.[4] They focus on one President and use a high-frequency approach. I instead use new historical data that captures variation over almost a century, covering 13 different U.S. administrations.

Second, the literature on fiscal-monetary interactions is related in the sense that one can interpret the concept of fiscal dominance as a form of political pressure on the

[2]During the Nixon years political pressure *also* occurred through the media and through Nixon's advisors pressuring Burns (Ferrell, 2010). Accordingly, I find strong effects on inflation expectations.

[3]Alesina and Summers (1993) use measures based on researchers' judgment, following Parkin and Bade (1978). There is also survey-based evidence, e.g. central bank surveys (Fry et al., 2000; Cecchetti and Krause, 2002). Dincer and Eichengreen (2014) provide further references. These studies fall within a broader literature that studies the quality of government institutions, see e.g. La Porta et al. (1999).

[4]Witheridge (2023) studies political pressure on central banks in emerging economies through time.

Fed, enticing it to finance deficits through inflation. Leeper and Leith (2016) provide a comprehensive survey.[5] I focus my comparison here on empirically oriented work on the U.S., an economy for which threats to central bank independence are rare relative to many other countries and thus especially challenging to study empirically.[6] Bianchi (2012) and Bianchi and Ilut (2017) provide empirical evidence by estimating regime switching DSGE models. More directly related to my approach, some studies use SVARs. They exploit alternative orderings depending on the policy regime (Canzoneri, Cumby, and Diba, 2001), explicit regime switching specifications (Bianchi and Melosi, 2017) and traditional sign restrictions (Bianchi, Faccini, and Melosi, 2022).[7] All these papers use standard macroeconomic time series only. My paper is the first to use narrative sign restrictions and the first to exploit personal interactions between politicians and the Fed as a novel source of data in a VAR.

Third, my approach is in the tradition of narrative strategies for identification in macroeconomics. Using historical and institutional knowledge in research on monetary policy was pioneered by Friedman and Schwartz (1963). Influential examples for narrative identification approaches for monetary and fiscal policy include Romer and Romer (1989), Romer and Romer (2010), and Ramey and Shapiro (1998). Further references are provided by Ramey (2016). I exploit new data and institutional knowledge to identify a new type of structural shock using the technique of (Antolin-Diaz and Rubio-Ramirez, 2018). Using the proximity to an election for identification connects to the literature on political business cycles (Nordhaus, 1975; Drazen, 2000).

Finally, other work discusses the role of Nixon's political pressure in generating the 1970's inflation. Sims (2011) investigates uncertainty about future fiscal policy in the 1970's. Abrams (2006) provides evidence from the Nixon tapes on conversations with and about Arthur Burns. Meltzer (2009b)'s view is also that President Nixon strongly interfered with the Fed.[8] I use these historical insights formally in an econometric identification strategy. The methodology allows me to use the Nixon episode to draw inference also about other periods. To the best of my knowledge, Martin (2015) is the only study in economics that also uses information from the daily schedules of U.S. Presidents, but refers to it only for motivation and not for identification.[9]

[5] See Leeper (1991), Sims (1994), Woodford (1995) and Cochrane (1999) for classic contributions.

[6] Empirical work also exists for other countries, see e.g. Loyo (1999) for the case of Brazil. Gürkaynak et al. (2023) examine at Turkey's recent experience through the lens of a model.

[7] In their appendix, Bianchi, Faccini, and Melosi (2022) identify an "unfunded fiscal shock" in an SVAR. See also Chung and Leeper (2007) for another VAR approach.

[8] There are accounts that interpret Arthur Burns' policy decisions as not being the result of Nixon's pressure, see for example Hetzel (1998), which I discuss in the main text.

[9] Martin (2015) plots meetings between Presidents and Fed Chairs annually from 1953 to 2000 in a

2 New data on President-Fed interactions

This section describes the data collection from the historical daily schedules of U.S. Presidents. It presents summary statistics and constructs time series of personal interactions between U.S. Presidents and Fed officials over almost a century.

2.1 Data construction from Presidents' daily schedules

The historical daily schedules of U.S. Presidents are made available to the public by each President's *Presidential Library*.[10] The schedules begin with Franklin D. Roosevelt in 1933 and end with Barack Obama in 2016.[11] For most Presidents, the schedules are provided in digital form online, though with varying degree of quality. In some cases, the schedules are directly searchable as a data base or are provided as searchable pdf files. In other cases, they are of poor typewriter quality and needed to be manually read. For President George H.W. Bush, they are only available as hard copies in the Presidential Library in College Station, TX, so these schedules were accessed physically on site by a research assistant. I provide an overview with links to the Presidential Library websites and further information in the Online Appendix.

The daily schedule of the U.S. President contains a detailed itemized list of meetings and events with time, place, duration, type (e.g. in person or phone call), and who the President interacted with. It is often visible whether other people were present. Figure 1 provides an example for President Jimmy Carter on July 19, 1980 to illustrate the structure and level of detail of a typical schedule. On a daily basis, Presidents meet with a wide range of people. In this instance, the schedule reveals an interaction with Fed Chair Paul Volcker at 10:15am which lasts for 20 minutes.

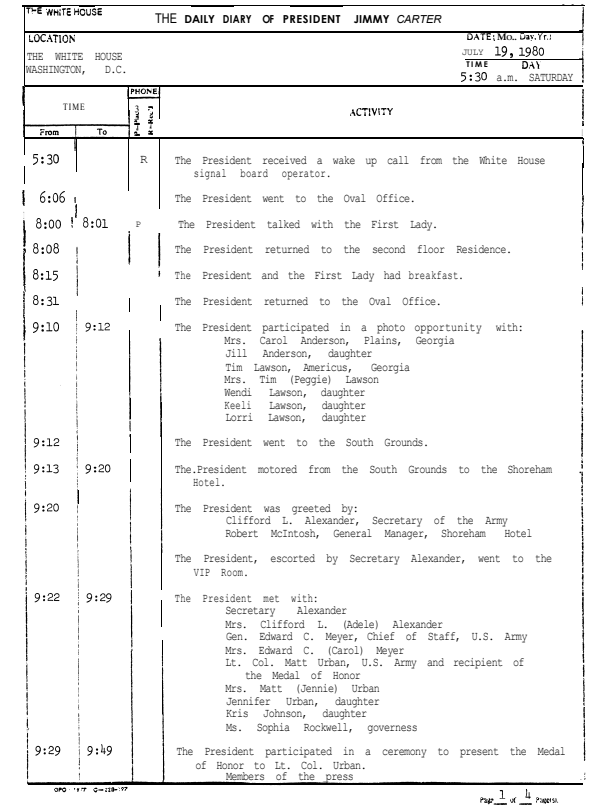
I hand-collect information on all interactions that occur between the Presidents and officials from the Federal Reserve. To this end, the schedules are searched for "Fed", "Federal Reserve", "FRB", "FOMC", "Reserve Bank" as well the names of the Fed

purely descriptive figure. In addition to being the first to formally exploit the data for identification, I extend it to backwards and forwards to the 1933-2016 sample, up to daily frequency; I include the George HW Bush schedules that are only available physically on site and therefore omitted by Martin (2015); I do not limit myself to interactions with the Fed Chair but also other Fed officials; and I collect more details, such as length, day of week, and other information.

[10]The creation of the schedules and provision to the public is governed by the National Archives and Records Service (NARA) under the Freedom of Information Act (FOIA). There is a so-called *Presidential Diarist*, a National Archives employee detailed to the White House. The Diarist is responsible for creating the daily schedules as a minute-by-minute log, based on information across different White House units.

[11]The daily schedules are not yet publicly available for Presidents Trump and Biden. The Trump Presidential Library launched a website with limited resources, but the library itself has not been created.

Figure 1: Example of the data source – President Jimmy Carter's schedule from July 19, 1980



THE WHITE HOUSE

THE DAILY DIARY OF PRESIDENT JIMMY CARTER

LOCATION: THE WHITE HOUSE, WASHINGTON, D.C.

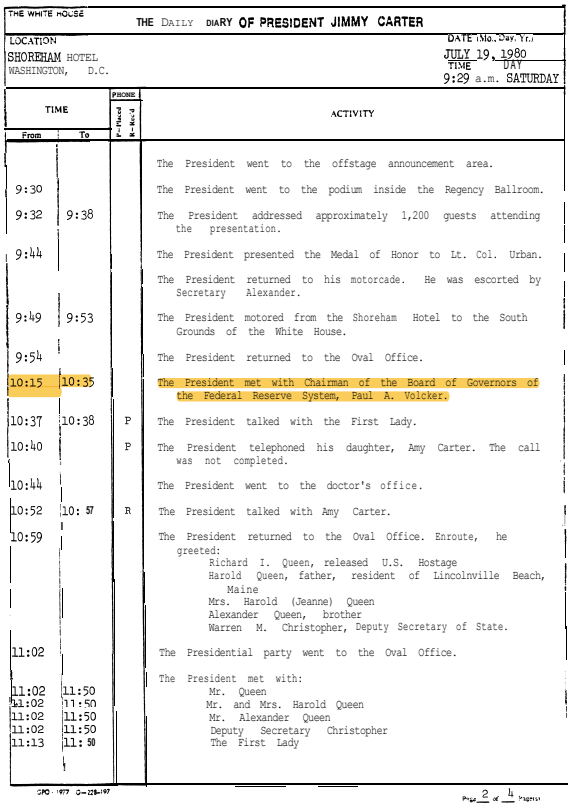
DATE (Mo., Day, Yr.): JULY 19, 1980

TIME / DAY: 5:30 a.m. SATURDAY

TIME From	TIME To	PHONE (P-Placed, R-Rec'd)	ACTIVITY
5:30		R	The President received a wake up call from the White House signal board operator.
6:06			The President went to the Oval Office.
8:00	8:01	P	The President talked with the First Lady.
8:08			The President returned to the second floor Residence.
8:15			The President and the First Lady had breakfast.
8:31			The President returned to the Oval Office.
9:10	9:12		The President participated in a photo opportunity with: Mrs. Carol Anderson, Plains, Georgia Jill Anderson, daughter Tim Lawson, Americus, Georgia Mrs. Tim (Peggie) Lawson Wendi Lawson, daughter Keeli Lawson, daughter Lorri Lawson, daughter
9:12			The President went to the South Grounds.
9:13	9:20		The President motored from the South Grounds to the Shoreham Hotel.
9:20			The President was greeted by: Clifford L. Alexander, Secretary of the Army Robert McIntosh, General Manager, Shoreham Hotel The President, escorted by Secretary Alexander, went to the VIP Room.
9:22	9:29		The President met with: Secretary Alexander Mrs. Clifford L. (Adele) Alexander Gen. Edward C. Meyer, Chief of Staff, U.S. Army Mrs. Edward C. (Carol) Meyer Lt. Col. Matt Urban, U.S. Army and recipient of the Medal of Honor Mrs. Matt (Jennie) Urban Jennifer Urban, daughter Kris Johnson, daughter Ms. Sophia Rockwell, governess
9:29	9:49		The President participated in a ceremony to present the Medal of Honor to Lt. Col. Urban. Members of the press

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THE WHITE HOUSE

THE DAILY DIARY OF PRESIDENT JIMMY CARTER

LOCATION: SHOREHAM HOTEL, WASHINGTON, D.C.

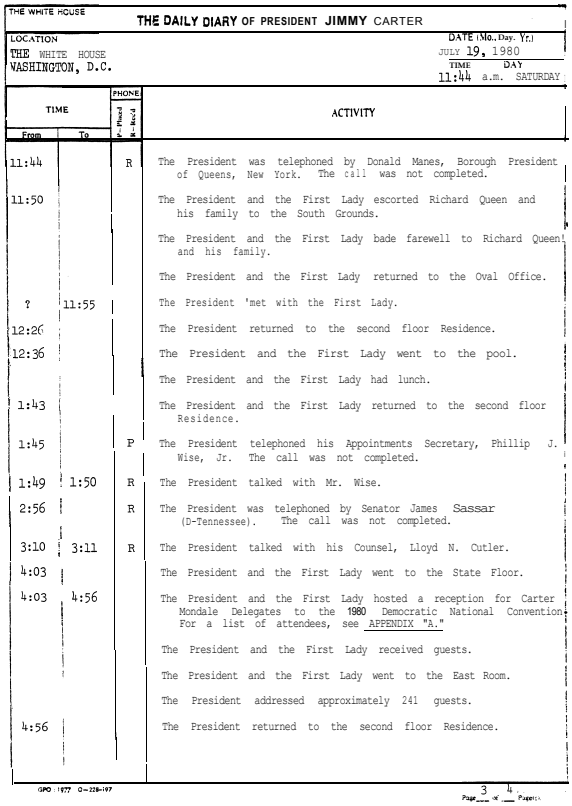
DATE (Mo., Day, Yr.): JULY 19, 1980

TIME / DAY: 9:29 a.m. SATURDAY

TIME From	TIME To	PHONE (P-Placed, R-Rec'd)	ACTIVITY
			The President went to the offstage announcement area.
9:30			The President went to the podium inside the Regency Ballroom.
9:32	9:38		The President addressed approximately 1,200 guests attending the presentation.
9:44			The President presented the Medal of Honor to Lt. Col. Urban.
			The President returned to his motorcade. He was escorted by Secretary Alexander.
9:49	9:53		The President motored from the Shoreham Hotel to the South Grounds of the White House.
9:54			The President returned to the Oval Office.
10:15	10:35		The President met with Chairman of the Board of Governors of the Federal Reserve System, Paul A. Volcker.
10:37	10:38	P	The President talked with the First Lady.
10:40		P	The President telephoned his daughter, Amy Carter. The call was not completed.
10:44			The President went to the doctor's office.
10:52	10:57	R	The President talked with Amy Carter.
10:59			The President returned to the Oval Office. Enroute, he greeted: Richard I. Queen, released U.S. Hostage Harold Queen, father, resident of Lincolnville Beach, Maine Mrs. Harold (Jeanne) Queen Alexander Queen, brother Warren M. Christopher, Deputy Secretary of State.
11:02			The Presidential party went to the Oval Office.
11:02	11:50		The President met with: Mr. Queen Mr. and Mrs. Harold Queen Mr. Alexander Queen Deputy Secretary Christopher The First Lady
11:02	11:50		
11:02	11:50		
11:02	11:50		
11:13	11:30		

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THE WHITE HOUSE

THE DAILY DIARY OF PRESIDENT JIMMY CARTER

LOCATION: THE WHITE HOUSE, WASHINGTON, D.C.

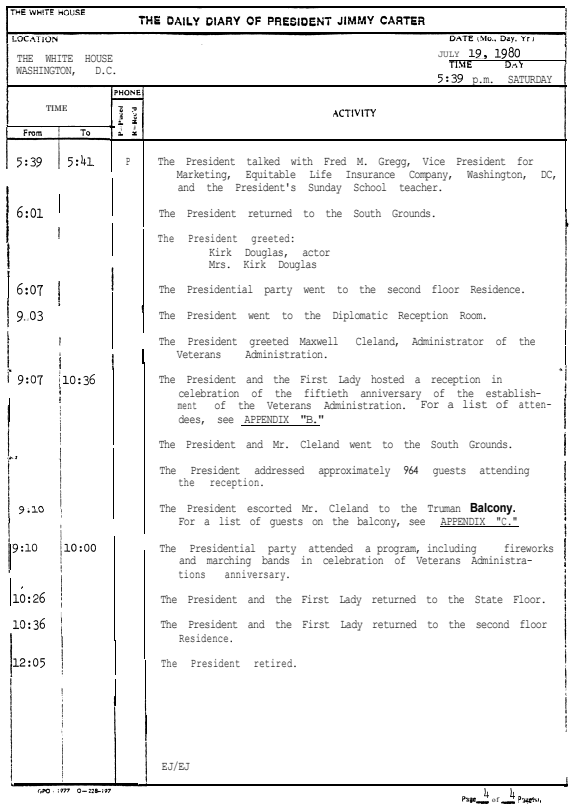
DATE (Mo., Day, Yr.): JULY 19, 1980

TIME / DAY: 11:44 a.m. SATURDAY

TIME From	TIME To	PHONE (P-Placed, R-Rec'd)	ACTIVITY
11:44		R	The President was telephoned by Donald Manes, Borough President of Queens, New York. The call was not completed.
11:50			The President and the First Lady escorted Richard Queen and his family to the South Grounds.
			The President and the First Lady bade farewell to Richard Queen and his family.
			The President and the First Lady returned to the Oval Office.
?	11:55		The President met with the First Lady.
12:20			The President returned to the second floor Residence.
12:36			The President and the First Lady went to the pool.
			The President and the First Lady had lunch.
1:43			The President and the First Lady returned to the second floor Residence.
1:45		P	The President telephoned his Appointments Secretary, Phillip J. Wise, Jr. The call was not completed.
1:49	1:50	R	The President talked with Mr. Wise.
2:56		R	The President was telephoned by Senator James Sassar (D-Tennessee). The call was not completed.
3:10	3:11	R	The President talked with his Counsel, Lloyd N. Cutler.
4:03			The President and the First Lady went to the State Floor.
4:03	4:56		The President and the First Lady hosted a reception for Carter Mondale Delegates to the 1980 Democratic National Convention For a list of attendees, see APPENDIX "A."
			The President and the First Lady received guests.
			The President and the First Lady went to the East Room.
			The President addressed approximately 241 guests.
4:56			The President returned to the second floor Residence.

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THE WHITE HOUSE

THE DAILY DIARY OF PRESIDENT JIMMY CARTER

LOCATION: THE WHITE HOUSE, WASHINGTON, D.C.

DATE (Mo., Day, Yr.): JULY 19, 1980

TIME / DAY: 5:39 p.m. SATURDAY

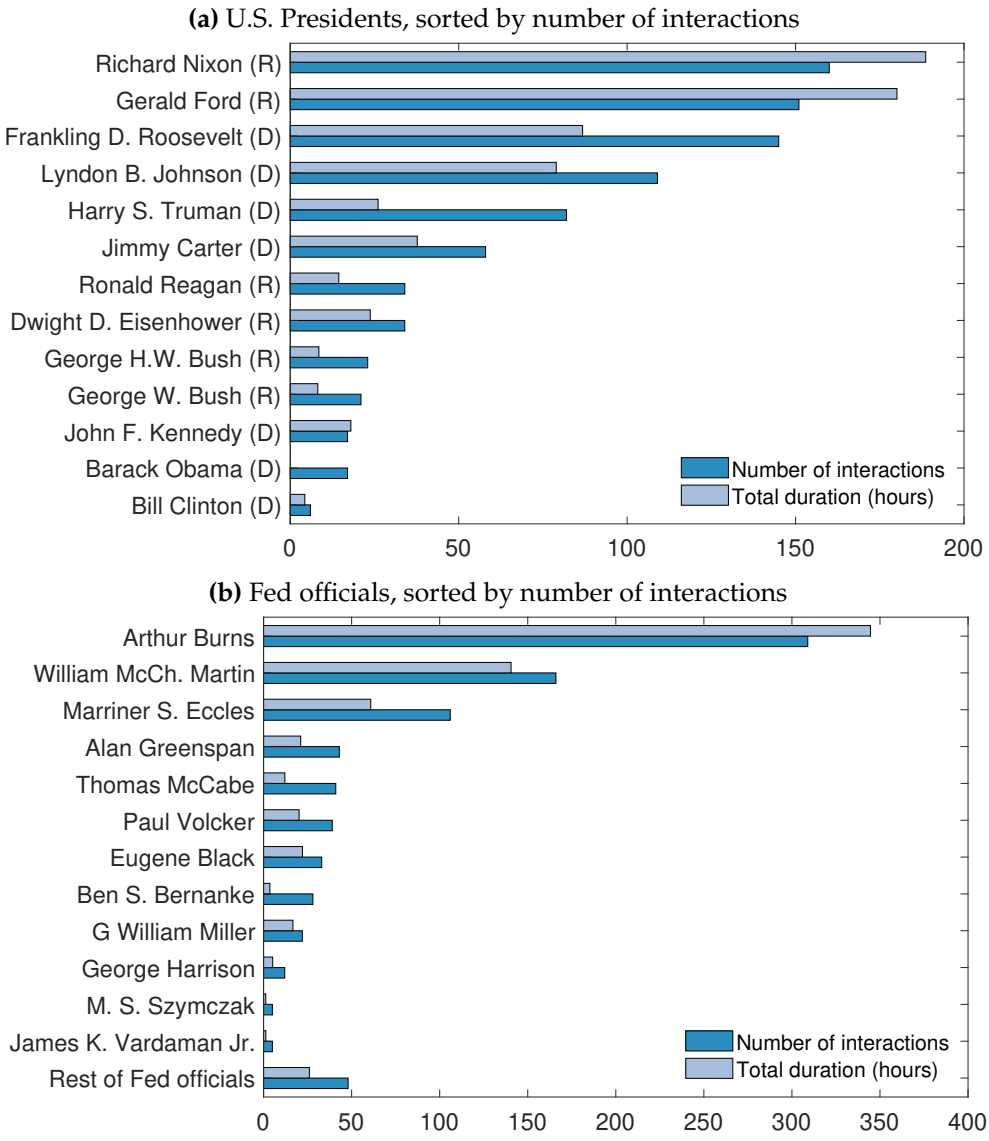
TIME From	TIME To	PHONE (P-Placed, R-Rec'd)	ACTIVITY
5:39	5:41	P	The President talked with Fred M. Gregg, Vice President for Marketing, Equitable Life Insurance Company, Washington, DC, and the President's Sunday School teacher.
6:01			The President returned to the South Grounds.
			The President greeted: Kirk Douglas, actor Mrs. Kirk Douglas
6:07			The Presidential party went to the second floor Residence.
9.03			The President went to the Diplomatic Reception Room.
			The President greeted Maxwell Cleland, Administrator of the Veterans Administration.
9:07	10:36		The President and the First Lady hosted a reception in celebration of the fiftieth anniversary of the establishment of the Veterans Administration. For a list of attendees, see APPENDIX "B."
			The President and Mr. Cleland went to the South Grounds.
			The President addressed approximately 964 guests attending the reception.
9.10			The President escorted Mr. Cleland to the Truman Balcony. For a list of guests on the balcony, see APPENDIX "C."
9:10	10:00		The Presidential party attended a program, including fireworks and marching bands in celebration of Veterans Administrations anniversary.
10:26			The President and the First Lady returned to the State Floor.
10:36			The President and the First Lady returned to the second floor Residence.
12:05			The President retired.
			EJ/EJ

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Note: The schedule for this day is 4 pages long (see the bottom right corner on each page for a page count). This is a typical length. The interaction with Fed Chairman Paul Volcker at 10:15am, highlighted in yellow, is collected in the data base.

Figure 2: U.S. PRESIDENTS AND FED OFFICIALS PARTICIPATING IN INTERACTIONS



Chairs, Governors, Reserve Bank Presidents, and other key Fed staff members during each administration. For each interaction, I record the identity of the President and the Fed official, the date, weekday, length of the interaction, and any further information if available. I cross-check the data with historical daily calendars of Fed Chairs, which are available for a subset of the sample via FRASER through the St. Louis Fed.[12]

Figure 2 presents information about the individuals involved in the President-Fed interactions, in descending order of the number of interactions. I plot the number as well as the total duration of the interactions in hours. Panel (a) reveals large variation

[12] Morse and Vissing-Jorgensen (2021) analyze Fed governor calendars to study how information flows from the Fed to stock prices.

Figure 3: CHARACTERISTICS OF INTERACTIONS BETWEEN U.S. PRESIDENTS AND FED OFFICIALS



Notes. Panel (c) excludes simple face to face meetings. There are 545 of those with a total duration of 428 hours. 'Other social' includes for example parties or church visits.

across Presidents. While President Nixon met with Fed officials 160 times, only 6 President-Fed interactions happened during the Clinton administration. Presidents George W. Bush and Obama also interacted little with Federal Reserve officials. A comparison of the two bars (count vs. length) shows that the average length of personal interactions with Fed personnel is also quite different across Presidents. For example, Nixon and Ford ran meetings that were on average longer than one hour, while Roosevelt and Truman tended to have shorter interactions with Fed officials.

Panel (b) focuses on the Fed officials. 92% of the interactions are with the Chair of the Federal Reserve, and 8% with other Fed officials. Over the whole sample there are 22 interactions with regional Federal Reserve Bank Presidents, 16 of which are with the New York Fed President. 32 interactions are with members of the Board of Governors that are not the Chair. Arthur Burns stands out as having by far the most interactions with the White House. Alan Greenspan had few interactions with U.S. Presidents considering his almost two decades long lead of the Fed.

Figure 3 presents additional information about the interactions. Panel (a) shows a histogram over their duration. Many encounters are quicker than 15 minutes, typically

phone calls. Some interactions can be as long as 5 or 6 hours, typically official ceremonies or banquets. The average duration of an interaction is 53 minutes. Panel (b) provides a histogram over weekdays, both for the count of interactions and for the total duration in hours. 11% of the interactions are on weekends, otherwise they are fairly evenly distributed over the work week. Panel (c) examines the nature of interactions. Most are simple meetings (569 with a total duration of 431 hours). I exclude them from the histogram and consider different contexts. Many of those are meals (breakfasts, lunches, or dinners). It is visible that these tend to have a longer duration. 'Other social' includes for example parties or church visits. Overall, there is rich variation in the characteristics of President-Fed interactions.

2.2 Time series of President-Fed interactions

Based on the data retrieved from the daily schedules, I construct time series of personal interactions between U.S. Presidents and Fed officials. For short, I am going to refer to these as "President-Fed interactions." Figure 4 presents the number of personal interactions. For the purpose of plotting this series, I aggregate it to annual frequency. In my SVAR analysis below, I will include it at quarterly frequency. The figure indicates the tenures of different Presidents through the vertical lines. It is visible that there is enormous variation over time. Interestingly, there seems to not be a clear pattern across party lines (Democrat/Republican). Instead, there are clusters of low or high interactions across eras of U.S. history. For example, President-Fed interactions are common in the 1960's and 1970's, but less frequent in the 1990's and 2000's.[13]

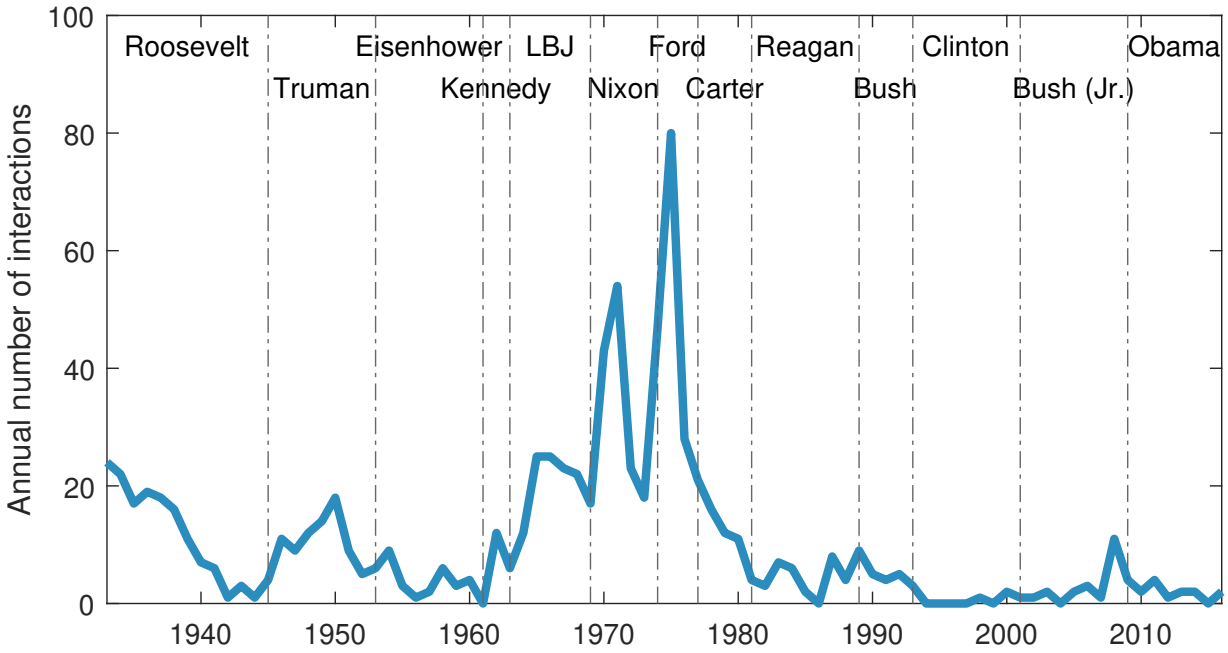
From these data alone, it is not clear whether political pressure took place during the President-Fed interactions. In the next section, I therefore combine the data with a narrative identification strategy, which I implement in an SVAR framework.

3 Identification and estimation strategy

This section presents my narrative identification strategy. It explains the historical context, the restrictions I impose on the data and the implementation through narrative sign restrictions in a SVAR. Explaining my identification and estimation strategy also clarifies how exactly a "political pressure shock" is defined.

[13]In addition to the total number of interactions, the Online Appendix presents their total duration through time. It also contains time series for different *types* of interactions through time. There is not only significant variation in the amount and duration of personal interactions between U.S. Presidents and Fed officials, but also meaningful variation in the nature of these interactions.

Figure 4: ANNUAL NUMBER OF PRESIDENT-FED INTERACTIONS THROUGH TIME



3.1 Narrative approach exploiting Nixon's pressure on the Fed

Personal interactions between Presidents and Fed officials do not necessarily capture political pressure. They likely arise endogenously in response to economic conditions. The President might simply consult with the Fed chair in the event of a recession, or in a period when inflation is a concern. For studying the economic consequences of political pressure on the Fed, this poses an identification challenge. To overcome this challenge, I exploit an increase in the number of President-Fed interactions that satisfies two criteria. First, the President-Fed interactions arise mainly for reasons that are political, with the purpose of influencing monetary policy, and are therefore plausibly unrelated to economic conditions at the time. Second, monetary policy changes, and least to some degree, because of the political pressure by the U.S. President.

My central identifying assumption is that such an episode occurred in late 1971. In his desire to be re-elected in 1972, President Richard Nixon pressured Fed Chair Arthur Burns to ease monetary policy in the fall of 1971. Arthur Burns, a Republican and friend to Nixon, reportedly gave in to Nixon's persuasion and eased monetary policy. I argue that the two criteria explained above are satisfied for the increase in President-Fed interactions that occurred in late 1971.[14] This spike is clearly visible in Figure 4.

[14]While I argue that both criteria are satisfied in late 1971, it may not be necessary for the identification of a political pressure shock that the second criterion holds. It could be, for example, that political

In what follows, I provide a variety of evidence that corroborates my identifying assumption. The first set of evidence supports the view that Richard Nixon exerted extreme political pressure on the Fed to ease monetary policy. This includes evidence from conversations recorded in the Nixon Tapes (Abrams, 2006), as well as detailed accounts by Burns in his personal diary (Ferrell, 2010). The second set of evidence supports the view that Burns actually eased policy in response to the pressure. This includes estimated monetary policy shocks during the period (Romer and Romer, 2004), and voting patterns in the FOMC before and after the Nixon re-election (using data from Thornton and Wheelock, 2014).

While this section focuses on Richard Nixon's pressure on Arthur Burns, I also exploit the political pressure exerted by President Lyndon B. Johnson on Fed Chair William McChesney Martin as an additional narrative episode. I provide the historical background to that episode in a separate section further below.

3.1.1 Nixon's appointment of Arthur Burns

Richard Nixon and Arthur Burns knew each other long before Nixon became President, at least since 1960 (Nixon, 1962; Abrams, 2006; Ferrell, 2010). After Nixon became President in 1969, Arthur Burns first served as a close economic advisor in the White House. In his diary, he describes in February of 1969: "I have seen the President nearly every day." Nixon subsequently appointed Burns as Fed Chair. Jokingly, Nixon said during the swearing-in ceremony in January 1970: "I respect his independence. However I hope that – *independently* – he will conclude that my views are the ones that should be followed." After Burns started as Fed Chair, frequent meetings between the two continued. Various sources reveal that by 1971, Nixon very explicitly tried to influence Burns' monetary policy decisions.

3.1.2 Nixon's motivation for pressuring the Fed

A President might have different reasons to influence the Fed, such as stimulating aggregate activity, reducing the government's real fiscal burden, or stimulating particular types of activity, such as mortgage origination. When I present my findings below, I provide a more detailed discussion of potential motives and what my results can say about the "success" of political pressure in light of these motives. In the specific case of Nixon, his past presidential election loss provides an important background to

pressure is publicly observed and only changes expectations of future policy without impacting actual policy. In my SVAR, I also consider settings in the interest rate response to the shock is unrestricted.

his behavior. When Nixon first ran for President in 1960 and lost against Kennedy, he was Eisenhower's Vice President. The economy was weak at that time and both fiscal and monetary conditions were tight. It was Nixon's view that Eisenhower's failure to stimulate the economy jeopardized Nixon's presidential campaign. Nixon's view on his 1960 campaign and its economic background is discussed in detail in the economic history literature (May, 1990) as well as in his own 1962 book (Nixon, 1962). When Nixon was President and began preparing for re-election in 1971, he was eager to avoid past mistakes.

3.1.3 Evidence of political pressure on the Fed in the Nixon Tapes

For several years, President Richard Nixon secretly recorded conversations in the White House. The Nixon Tapes led to enormous political controversy and are interesting from several angles. Abrams (2006) provides a systematic account of those conversations that were related to monetary policy. I summarize a small selection of quotes that support the view that Nixon exerted immense pressure on Burns.

December 24, 1971. Phone conversation between Nixon and George Shultz, Nixon's economic advisor. Nixon: "Do you feel, as far as Arthur and the money supply, we got that about as far as we can turn it right now, have we? I mean as far as my influence on him, that's what I'm really asking." Shultz: "Yeah. Well, you know he said that he, that they voted to increase it [the money supply]." According to Abrams (2006), this conversation indicates that Nixon and his advisors obtained a commitment from Burns to increase the growth of the money supply, i.e. to ease monetary policy.

February 14, 1972. Shultz tells Nixon that Burns is optimistic about the economy. Nixon: "Another defense he's building up for not raising the money supply. I'd rather he weren't so optimistic. [...] War is going to be declared if he doesn't come around some." Nixon complains that Burns is "talking to the Jewish press."

February 14, 1972 (later in the day) Nixon speaks to Burns. Abrams (2006) documents that Nixon, aware of the "long and variable lags" in the transmission of monetary policy, tells Burns that after April 1972 (the election is in November 1972) Burns can go back to his desired monetary policy. Nixon: "You know the problem with it; you've always spoken of that time lag. [...] I really don't care what you do in April, but between now and April ... [garbled] that can hurt us ... [garbled] in November."

3.1.4 Evidence of political pressure on the Fed in Arthur Burns' personal diary

Between 1969 and 1974, Arthur Burns wrote a personal diary. Interestingly, the diary begins with the Nixon inauguration and ends with Nixon's resignation. The diary was private and only became available to the public in 2008. It is now published as a book with contextual commentary by historian Robert H. Ferrell (Ferrell, 2010). I provide a summary of important periods and a selection of quotes that are informative about Nixon's political pressure and also his generally dark state of mind.

November 1970. Pressures begin to mount. In the beginning, Burns ascribes them mostly to Nixon's advisors. "(The) sycophants around the White House, whose numbers have been multiplying, keep talking about the money supply and the excessive caution of the Fed." Burns also complains that "the White House children ought to stop the dangerous game of feeding gossip and fabrication to the Press."

March 1971. Burns becomes more conscious about the pressure coming directly from Nixon. The diary includes statements such as "I am convinced that the President will do anything to be reelected", "The President looked wild", "There were moments during this meeting when I felt that the President was going mad" and "Meetings during the past several months have finally convinced me that the ignoramuses around the White House, led by the fanatical Shultz, have just about convinced the President that monetary policy is not what it should be". Later in March, tensions appear to ease temporarily, after Burns directly confronts Nixon: "RN seemed pleased by my reassurances to him, indicated that he never had any doubts, that he would put an end promptly to the sniping about the Fed that had been going on at the White House."

July 1971. Relations turn worse again. Burns writes: "I watched his (Nixon's) face, as he spoke, with a feeling of dismay; for his features became twisted and what I saw was uncontrolled cruelty.", "While my heart was filled with sadness for him, I was seized suddenly with fear for the safety of our country which depended so heavily on this insecure man" and "RN's entire manner was imperial; it was enough that he had reached a decision (...) he was still the emperor, and I should therefore toe the mark."

In July 1971, it also becomes evident that the White House (Nixon personally as it turned out later) had initiated a smear campaign against Burns in the media. For example, Nixon floated the incorrect rumor that Burns had asked for a salary increase.

August 1971. Nixon invites Burns, and several cabinet members and advisors to Camp David for a full weekend. Burns notes "there was little room for any doubt (...) that he was governed mainly, if not entirely, by a political motive; (...) that the kind of changes we were discussing (...) were essential for the campaign of 1972."

September and October 1971. The pressure continues to be strong. In this period, meetings are often on short notice. Burns describes that "President called and asked me to come over within an hour. Hastily rearranged my schedule and spent an hour and a quarter with him." Burns is worried about the White House damaging both the Federal Reserve's and his own reputation publicly. "The White House staff has formulated a plan to blame the Fed" There are several explicit requests from the President to ease monetary policy. "I got a stern letter from the President urging me start expanding the money supply and predicting disaster if this didn't happen."

3.1.5 Evidence about Arthur Burns' policy decisions in his personal diary

Did the pressure exerted by President Nixon ultimately affect Burns' decisions about U.S. monetary policy? While the descriptions in Burns' diary are not unambiguously clear on this question, there are some quotes that can be interpreted in this way.

November 1971. Burns notes about a conversation with Nixon that "I told him that (...) we of course would not permit the money supply to decline next year." and "President at this meeting again expressed his concern about the money supply. I reminded him that I was looking after that properly."

February 1972. "I reassured him on the money supply (...) and that he need not be concerned about the possibility that the Fed would starve the economy."

Especially during the fall of 1971, it becomes clear from the diary that Nixon and Burns disagreed on various dimensions of economic policy. There was a general "negotiation" going on between the two, where Burns and Nixon tried to convince each other about decisions on different policy questions, such as the design of the international monetary system after Bretton Woods. It is conceivable that Burns gave in to Nixon's pressures regarding monetary policy, at least to some degree, in order to keep Nixon's ear on other issues about which the diary shows Burns cared strongly

about. What is explicit in the diary is that repeatedly reassured Nixon to not worry about the money supply, but often confronts Nixon more head-on about other issues.

While there is no "smoking gun" in the Burns' diary that he changed monetary policy in direct response to pressure, the perhaps most compelling evidence is based on directly analyzing monetary policy decisions during the period, which follows below.

3.1.6 Evidence on Fed policy changes before and after Nixon's re-election

Figure 5 presents evidence that before President Richard Nixon's re-election, Fed Chair Arthur Burns kept monetary policy easy in an unsystematic manner, not explainable by economic conditions. The figure compares the stance of U.S. monetary policy under Arthur Burns' command, before and following Nixon's re-election in November 1972.[15] It shows that the Federal Funds Rate was lowered by the Fed prior to Nixon's re-election (dark blue bars). Of course, this monetary easing could simply occur in response to changes in the economy and not due to Nixon's pressure. However during the same period Romer and Romer (2004) estimate large easing shocks to monetary policy (light blue bars).[16] In 1971:Q4 alone, there was an easing shock that amounts to more than 150 basis points. In other words, monetary policy was *exogenously* easier, not because economic conditions warranted it. My narrative attributes to Nixon's influence on Burns. In fact in their original study Romer and Romer (2004) refer to politics as one of the fundamental drivers of monetary policy shocks.

The patterns of exogenously easy policy before Nixon's re-election contrast with a large monetary policy tightening that took place after the re-election, in 1973 and 1974. According to Romer and Romer (2004), this was largely systematic, responding to the surge in inflation that had taken off strongly during those years. Thus, one can argue that Nixon caused an unsystematic monetary policy easing in 1971 and the FOMC endogenously tried to "correct" its inflationary consequences later on.

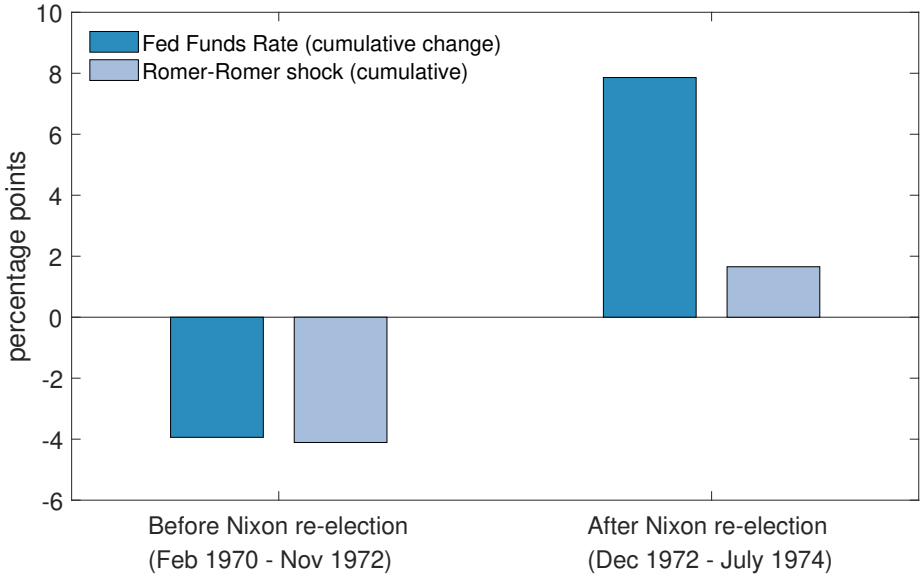
3.1.7 Evidence on FOMC voting patterns before and after Nixon's re-election

Figure 6 shows that before Nixon's re-election, Fed Chair Arthur Burns kept monetary policy easy in a manner that contradicted other FOMC members' views. The figure reports dissenting votes in the FOMC before and after the 1972 election.

[15] I use the implied Federal Funds Rate target determined by Romer and Romer (2004).

[16] The Romer and Romer (2004) monetary policy shocks are a suitable reference here, as they go back to the 1970's and earlier. This is different for alternative methodologies in the literature, such as high-frequency identified monetary shocks which usually start in the 1990's. See Aruoba and Drechsel (2022) for a recent paper refinement of the Romer and Romer (2004) approach.

Figure 5: MONETARY POLICY BEFORE AND AFTER NIXON'S RE-ELECTION

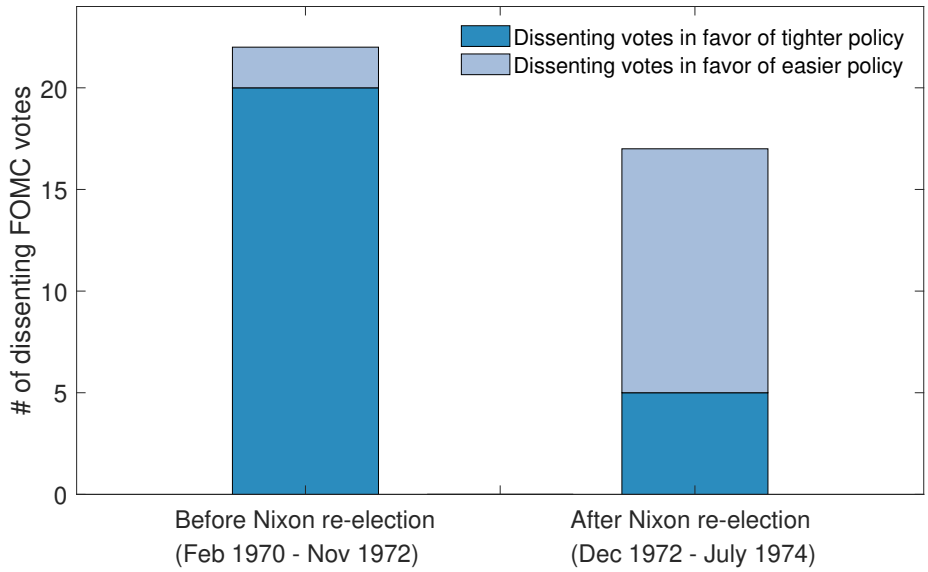


Notes. The implied Fed Funds Rate changes as well as the estimated monetary policy shocks are taken directly from Romer and Romer (2004). The figure splits the time period from Arthur Burns' appointment until Nixon's resignation into the period before and after the November 1972 election.

Dissenting votes are those votes that differ from the final decision of the FOMC and thus oppose the Fed Chair's suggested action. No Fed Chair in history ever "lost" a vote, because the Chair typically tries to build informal consensus ahead of FOMC meetings. The variation in the dissenting votes over time can therefore be informative about the degree to which the other FOMC members *openly* disagreed with the Chair's proposition. The total number of dissents is broadly similar in the time periods before and after Nixon's re-election, adding up to 22 before and 17 after. Importantly, before Nixon's re-election 20 votes, i.e. more than 90% of all dissents, voted for tighter policy than what was finally decided, while after the re-election 12, i.e. more than 70% of all dissents, voted for easier policy. This suggests that prior to the election, Burns faced open objections from the FOMC in terms of his proposed course of policy as being seen as too easy. This might be explained by the fact that Burns indeed did a favor to President Nixon in easing policy, and several FOMC members objected to this. Again, a possible interpretation for what happened afterwards is that Burns tried to aggressively "correct" the easy policy from before Nixon's re-election.[17]

[17] A related piece of evidence in connection to the FOMC is that Burns and Nixon openly discussed plans for Nixon to "rid" Burns of certain FOMC members. In January 1972, Burns writes in his diary that "The President indicated he would do what he could to rid me of Brimmer." (Andrew Brimmer was a member of Federal Reserve Board). One month later, Burns notes "We talked about personnel problems at Fed. President knew that Rogers would not have Brimmer for U.N. We talked about an ambassadorship; President thought that Sweden – preferably Austria – would be possibilities."

Figure 6: FOMC VOTING PATTERNS BEFORE AND AFTER NIXON'S RE-ELECTION



Notes. Source: Thornton and Wheelock (2014). The figure splits the time period from Arthur Burns' appointment until Nixon's resignation into the period before and after the November 1972 election.

3.1.8 Varying views on Burns' policy decisions in the existing literature

The evidence is clear on the fact that Nixon exerted political pressure on the Fed, and gives indications that Nixon's behavior did have an influence on Arthur Burns' policy decisions. Several other scholars have reached similar conclusions. Meltzer (2009b) and Taylor (2011) emphasize the lack of central bank independence in the Nixon years. Bianchi (2012), Bianchi and Ilut (2017), Bianchi and Melosi (2022) provide additional narrative evidence about Nixon and Burns, as well as DSGE based estimates that support an effect on policy. For example, according to Bianchi (2012) "It is commonly accepted that he (Burns) had to succumb to the requests of the White House."

Some historical accounts of Arthur Burns present different views. Hetzel (1998) acknowledges the pressure by Nixon, but argues that monetary policy under Burns was less expansionary than many mainstream economists desired and that Burns had a "nonmonetary view of inflation" by which the root of inflation was not monetary policy, but for example union power. See also DeLong (1997) for a discussion of economic policy views during the time. These accounts do not contain any discussion of the fact that Romer and Romer (2004) estimate a non-systematic policy easing under Burns, nor do they address the fact that there was clear dissent in the FOMC.[18] Moreover, these

[18]One subtle, but important caveat to considering the Romer-Romer shocks is that they may mask underlying parameter change. For example Fernández-Villaverde et al. (2010) estimate a time-varying parameter model over different Fed Chair eras and interpret their results, somewhat similar to Hetzel (1998), as Burns being "rather skeptical about the Fed's ability to successfully disinflate".

historical perspectives precede the publication of Arthur Burns' diary (Ferrell, 2010).

Given the varying historical perspectives on Burns' reaction to the pressure, my econometric strategy will also accommodate a situation where Burns did not give in to the pressure. Specifically, in my SVAR I also consider settings in which the interest rate response to the political pressure shock is left unrestricted. In these settings, it is not required for the identification of political pressure shocks that these shocks actually affect Fed policy, but they can work purely through private agents' expectations.

3.2 Implementation of narrative identification in SVAR

I exploit the Nixon-Burns narrative in a formal econometric setting. My approach estimates political pressure shocks just as the previous literature has estimated monetary policy or fiscal policy shocks, using SVAR techniques. I identify a shock to political pressure on the Fed based on a combination of traditional sign restrictions and narrative sign restrictions. Narrative sign restrictions, introduced as a methodology by Antolin-Diaz and Rubio-Ramirez (2018), impose a strong contribution of a shock in a particular episode during the sample. I retrieve a structural shock that is imposed to be the main contributor to the spike in my new President-Fed interaction time series in 1971:Q3 and 1971:Q4, the height of Nixon's political pressure on Burns.

3.2.1 Data included in the SVAR

The SVAR is quarterly and covers 1933 to 2016 period. It includes the number of President-Fed interactions aggregated to quarterly frequency, the log GDP deflator, the 3-month Tbill rate, log government expenditures, log real GDP, as well as the nominal deficit scaled by nominal GDP. Apart from my new data series, the data are taken directly from Ramey and Zubairy (2018). In robustness exercises, I alter the President-Fed interaction data to reflect only 1-on-1 meetings and I include additional times series in the SVAR, such as oil prices.

Two arguments motivate my choice of variable. First, I want to capture monetary policy variation, with measures of interest rates, output and inflation in the system. In parts of the sample, the Fed targeted monetary aggregates rather than interest rates. Using one policy instrument over time provides consistency and is common in the SVAR literature. In a systematic assessment of alternative single instrument choices in a long sample, Bernanke and Mihov (1998) found that a VAR with interest rates is

the preferred choice, so I focus on the Tbill instead monetary aggregates.[19] Second, I include important fiscal variables, which are of particular interest when it comes to political pressure, given the related literature on fiscal-monetary interactions.

3.2.2 Definition of political pressure shock and identifying restrictions

I define a *political pressure shock* as a shock that raises the interactions between the U.S. President and Fed Officials, leads to an increase in inflation through a monetary easing, and is the main contributor to the spike in President-Fed interactions in 1971:Q3-Q4. I explain the logic behind this combination of sign and narrative sign restrictions, summarized in Table 1, in a step-by-step argument.

Sign restrictions. Through a first restriction, I impose that the shock raises the President-Fed interaction measure. The shock induces that the President exerts political pressure by engaging in more personal interactions with Fed Officials. How could interference with Fed policy benefit the President? I assume that, for one reason or another, the President wants the Fed to let inflation run higher. This is imposed as a second sign restriction on inflation.[20] I impose this restriction on impact but study robustness checks in which the sign is imposed after 1 year. Higher inflation could be desired by President for different reasons. It might boost economic activity, reduce an existing real deficit or allow for a higher real deficit and thus a fiscal expansion going forward. As these scenarios imply a different direction for activity and fiscal variables, I leave real GDP, government spending and the deficit unrestricted. If the President's pressure on the Fed makes an impact on policy, then higher inflation could occur because of a cut in rates or the absence of a hike or even through a hike that is smaller than justified. I impose a third sign restriction that lowers the interest rate. Alternatively, I allow for an unrestricted interest rate response. This alternative accommodates the possibility that political pressure might affect the economy even when the Fed withstands the pressure and keeps interest rates unchanged.

Narrative sign restrictions. I also impose a *narrative* sign restriction, which captures that the personal interactions between the President and the Fed in 1971:Q3 and 1971:Q4 increased mostly because of Nixon's pressure and less because of other macroeconomic shocks. The spike in interactions in these quarters can still partly be driven by other

[19] During the zero lower bound period I instead use the shadow interest rate from Wu and Xia (2016).

[20] It could be that a President pressures the Fed to bring inflation down rather than up. As I explain in the conceptual discussion below, this would not fall under my definition of a political pressure shock.

Table 1: SVAR DATA AND IDENTIFYING RESTRICTIONS

Variable	Traditional sign restrictions	Narrative restrictions
President-Fed interactions	+	1971:Q3, 1971:Q4
Log GDP deflator	+	
3-month Tbill rate	(–)	
Log real GDP		
Nom. Deficit / Nom. GDP		
Log government expenditures		

Notes. President-Fed interactions are included as the quarterly number of interactions, i.e. the quarterly version of Figure 4. The remaining data are taken from Ramey and Zubairy (2018).

shocks, but gets restricted to move *mainly* due to political pressure.[21] This restriction relies on the narrative account I present in detail in the previous section. The third and fourth quarter of 1971 saw the largest spike in interactions prior to Nixon's re-election and coincide with the strongest monetary easing shocks estimated by Romer and Romer (2004) in the Burns years. These quarters were the ones in which Nixon turned strong attention to his re-election. In his personal diary, Burns writes about "a definite and decisive turning point in the President's state of mind."

3.2.3 Further SVAR settings and estimation

The SVAR is specified with 8 lags. I use priors identical to Antolin-Diaz and Rubio-Ramirez (2018). I draw posterior densities over the model's parameters and impulse response functions (IRFs) using their Bayesian algorithm. See Arias, Rubio-Ramirez, and Waggoner (2018) for more details on the estimation algorithm.[22]

3.3 Conceptual discussion

Several conceptual points are worth clarifying. First, since I identify an entirely new type of shock in a SVAR setting, it is helpful to distinguish it from a monetary policy shock as a closely related concept. Second, I distinguish my political pressure shock concept from other ways to think about political pressure on the Fed. Third, since political pressure is often studied as a regime change, I comment on how my approach relates to regime-switching methodologies.

[21] Antolin-Diaz and Rubio-Ramirez (2018) propose different types of narrative restrictions. I choose the "overwhelming" type, which imposes that the shock is more important than all other shocks combined for President-Fed interactions in 1971:Q3-Q4. I consider the "most important" type for robustness.

[22] For robustness, I explore alternative prior settings. I also separately carry out an estimation exercise to investigate whether my results are driven by unwillingly imposing prior IRFs, a concern discussed in the Bayesian SVAR literature. See further discussions below.

3.3.1 Formal distinction: political pressure shocks vs. monetary policy shocks

My definition of a political pressure shock implies that it leads to an unsystematic easing of monetary policy. Therefore one might interpret it as a *specific kind* of monetary policy shock. Indeed, as I show above, Romer and Romer (2004) estimate expansionary monetary policy shocks in the period when Nixon's exerted pressure. Nevertheless, the political pressure shock I identify can have a *different macroeconomic transmission* from a monetary policy shock. This can be shown formally.

Consider a system of equations for economic activity (y), inflation (π), interest rates (i) and President-Fed interactions (x). For illustration, there is only one period, and there are two structural shocks. First, a shock ε^i that exogenously changes interest rates, "narrowly" interpreted as a monetary policy shock. Second, a shock ε^x that exogenously changes President-Fed interactions. This shock has a proper economic interpretation when further restrictions are added.

$$
\begin{aligned}
y &= \phi_{y\pi}\pi + \phi_{yi}i + \phi_{yx}x && (1)\\
\pi &= \phi_{\pi y}y + \phi_{\pi i}i + \phi_{\pi x}x && (2)\\
i &= \phi_{iy}y + \phi_{i\pi}\pi + \phi_{ix}x + \varepsilon^i && (3)\\
x &= \phi_{xy}y + \phi_{x\pi}\pi + \phi_{xi}i + \varepsilon^x. && (4)
\end{aligned}
$$

Suppose that a researcher does not use data on x but employs an identification scheme that appropriately controls for systematic reaction of monetary policy to changes in y and π. This is the aim of, for example, Romer and Romer (2004). To see what this researcher will capture, let us combine equations (3) and (4) and solve for i:

$$
i = \frac{\phi_{iy} + \phi_{ix}\phi_{xy}}{1 - \phi_{ix}\phi_{xi}}y + \frac{\phi_{i\pi} + \phi_{ix}\phi_{x\pi}}{1 - \phi_{ix}\phi_{xi}}\pi + \frac{\phi_{ix}\varepsilon^x + \varepsilon^i}{1 - \phi_{ix}\phi_{xi}}. \tag{5}
$$

If the researcher regresses i on y and π, she will retrieve the residual

$$
\xi^m = \frac{\phi_{ix}\varepsilon^x + \varepsilon^i}{1 - \phi_{ix}\phi_{xi}} \tag{6}
$$

and label it a monetary policy shock. In a world where President-Fed interactions have no effect on monetary policy, $\phi_{ix} = 0$ and $\xi^m = \varepsilon^i$ so that the estimated monetary policy shock corresponds to the monetary policy shock narrowly defined. However, if President-Fed interactions do influence interest rates, then the researcher will estimate a combination of monetary policy shocks ε^i and the shock ε^x. In that sense, ε^x can be

interpreted as a specific kind of the estimated monetary policy shock.

A researcher who instead uses data on all four variables (y, π, i, x) as well as appropriate identifying restrictions, will be able to separately estimate ε^i and ε^x. Importantly, ε^x can have a different transmission mechanism from ε^i, in particular because ϕ_{yx} and $\phi_{\pi x}$ might be different from zero in equations (1) and (2). In other words, the shock to x can affect the economy in addition to its effect on interest rates. For example, a monetary easing that arises in response to President-Fed meetings might also have a different effect on expectations. If the President-Fed interactions are publicly observable, and least to some degree, then private agents might react to a political pressure shock differently than to a monetary policy shock. If, on the other hand, the President-Fed interactions were entirely unobservable, agents might not react differently. In that case, an interest rate decision induced by political pressure should manifest itself in the same way as any unanticipated change in monetary policy, that is, in the same way as the narrow monetary policy shock.

To sharpen the identification of ε^x, I further restrict the system (1) to (4) such that the shock ε^x lowers i, raises π, and is the main contributor of x in the Nixon re-election phase (see Table 1). These restrictions give it the interpretation of a political pressure shock, based on my arguments above.

My formalization makes clear how political pressure shocks might be estimated as a subset of monetary policy shocks in a setting with only standard macro data and existing identification schemes. Using the new President-Fed interaction data and narrative identification, I separately identify political pressure shocks, which exhibit a different transmission mechanism from monetary policy shocks. Further below, I examine the responses to the two shock types in the data. As one of the differences between the two shocks might lie in how expectations of private agents change, I present evidence that Nixon's pressure was observed by the public, and I study how inflation expectations respond differently to the each of the two types of shock.

3.3.2 Other types and other goals of political pressure

The political pressure shock is an episode where a President exerts pressure through personal interactions in to let inflation run higher than the Fed would otherwise allow. This is not the only *channel* and not the only *purpose* of political pressure.

Political pressure might occur through other channels, such as pressure in the media or through political advisors. Personal interactions with the President can serve as one vehicle for political pressure that I argue is possible to measure and interesting to study.

Other forms of political pressure might not be picked up by my methodology, so there might be episodes of political pressure that I miss. Interestingly, it appears that during the Nixon years political pressure *also* occurred through the media and through Nixon's advisors pressuring Burns, which I further discuss below.

It might also happen that a President pressures the Fed to *lower* inflation rather than allow more of it. This situation is not captured by my identification scheme, as in the mechanics of my SVAR this is a separate shock which I leave unidentified. In other words, my definition of "political pressure" simply does not encompass this situation. Anecdotally, it is rare that politicians pressure the central bank for tighter policy.

3.3.3 Shocks approach vs. regime-switching approaches

My SVAR has constant parameters and political pressure materializes as a structural shock. This is different from a regime-switching approach as in e.g. Bianchi and Melosi (2017) or other time-varying parameter techniques. I view these as complementary methodological approaches, with value added generated by using an additional econometric approach to tackle an important economic question.

A regime switching approach can capture for example changes in the reaction function of the Fed that are induced by the political pressure, including changes in the reaction function that occur as discrete jumps. This allows for a rich and potential nonlinear transmission mechanism of political pressure. Given that political pressure on the central bank is a fairly infrequent phenomenon in the U.S. and constant parameter estimates of underlying time-variation likely reflect a "non-pressure regime" on average, I speculate that my constant parameter SVAR imposes some extra discipline that might in fact work against finding evidence of political pressure shocks. A further advantage of my approach is that it allows for a direct comparability to monetary policy shocks, which are often estimated in constant parameter frameworks. Finally, SVARs have in general been shown to be fairly robust to misspecification in the form of neglected parameter variation (Canova et al., 2015).

An avenue for future research would be a combination of the two approaches, that is, identification of political pressure shocks using narrative sign restrictions in a time-varying parameter framework. In particular the inclusion of stochastic volatility would also guard against some potential misspecification of the decomposition into different structural shocks. At this stage, however, there is no readily available estimation algorithm that can incorporate narrative sign restrictions and time-varying parameters, so I view this combination of technical approaches as beyond the scope of this paper.

4 Results

This section presents my findings on the macroeconomic consequences of shocks to political pressure on the Federal Reserve. It contains further conceptual discussions and various exercises to unpack the mechanisms behind the results.

4.1 The macroeconomic effects of political pressure shocks

To construct IRFs, I normalize the political pressure shock to raise the number of personal President-Fed interactions by 10 in one quarter. The average number of quarterly interactions is 3, with a standard deviation of 2.7, so this is a large shock relative to what happens during a typical Presidency. It is a small shock in light of Nixon's behavior, who met with Burns 17 times in both 1971:Q3 and 1971:Q4. The shock is transitory, but unrestricted in terms of its endogenous persistence.

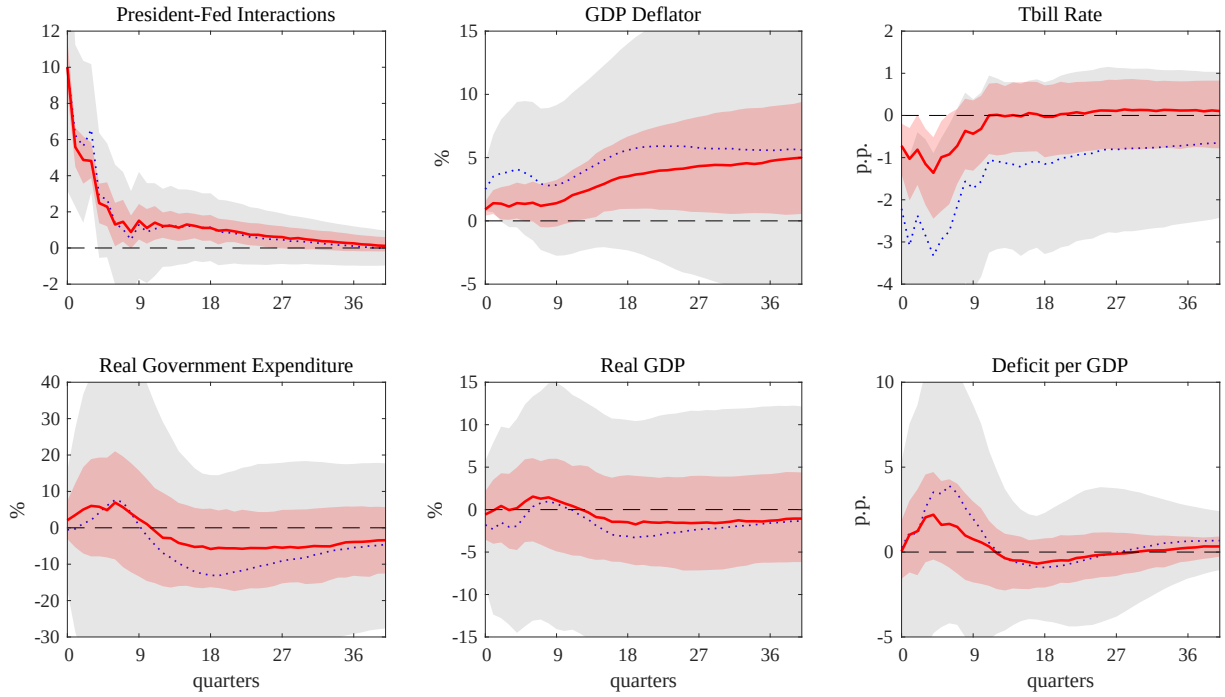
Figure 7 presents IRFs over the full 1933-2016 sample. Each variable in the SVAR is plotted in a separate panel. The IRFs to the political pressure shock are shown as a solid red line, with red shaded areas representing a 68% posterior credible interval (pointwise), following Antolin-Diaz and Rubio-Ramirez (2018). For comparison, I also show as dotted blue lines with gray shaded areas the IRFs to a shock identified from only imposing the standard sign restrictions, that is, *not* using the narrative restriction that draws on Richard Nixon's behavior in 1971:Q3-Q4. This comparison makes clear to what degree my narrative approach enables precise inference about the macroeconomic effects of political pressure.

The number of President-Fed interactions displays persistence after the political pressure shock hits, with the IRF reversing to closes 0 after around 2 years. The shock induces a monetary easing, with a roughly 100 basis points lower interest rate after a few quarters. The price level response to the shock builds up gradually and persistently, and goes to a 5% higher price level after 4 years. These estimates imply that exerting political pressure 50% as much as Nixon did, over a period of six months, permanently increases the U.S. price level by more than 8%.[23]

The responses of real GDP and fiscal variables are not distinguishable from zero. This finding indicates that political pressure primarily induces a price level effect. Further below, I show that it is possible to detect a significant response of real activity in

[23]Over 6 months, Nixon had 34 interactions with Burns. Half of that is 17 interactions, which is 1.7 more than the 10-interaction normalization shown in the figure. The implied GDP deflator response would therefore be $1.7 * 5\% = 8.5\%$.

Figure 7: IRFS TO A POLITICAL PRESSURE SHOCK OVER THE FULL SAMPLE



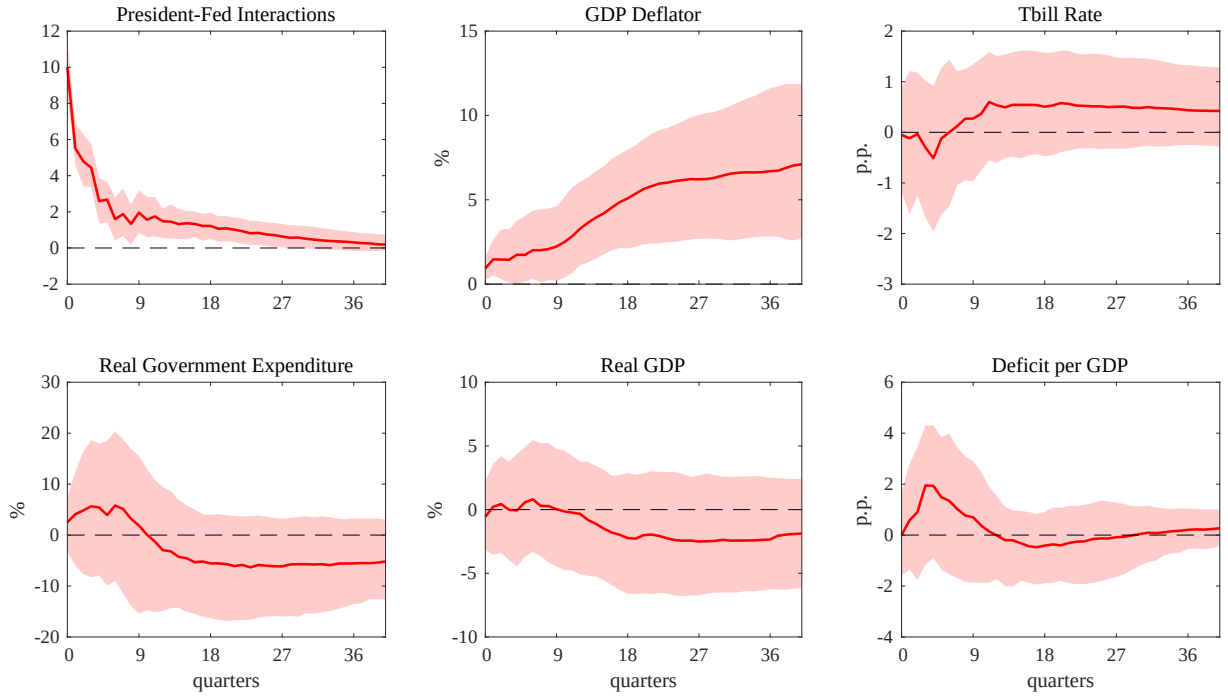
Notes. The red solid lines and red shaded areas represent the median IRFs and 68% credible intervals to a political pressure shock, defined by the restrictions in Table 1. The blue dotted lines and gray shaded areas correspond to a shock identified with traditional sign restrictions but *without* the narrative sign restrictions. The sample is 1933:Q1-2016:Q4.

specific subsamples. Together with this subsample analysis, I discuss my finding that inflation responds strongly but real activity does not, also from a theory standpoint.

Considering the superimposed IRFs that do not use the narrative restrictions (blue lines, gray shaded areas), it is visible that these are much less precisely estimated. There is a significant inflation response on impact, but it becomes indistinguishable from zero after three quarters. All other responses also display wide posterior intervals. This underscores that my narrative identification approach is critical to uncover the consequences of political pressure on the economy.

Figure 8 shows the same set of IRFs but for the alternative identification scheme with 'lighter' restrictions, which do not impose a negative response of the Tbill rate (see Table 1 and discussion in the previous section). In this case, the inflation response is even stronger, reaching a 7% higher price level after 4 years.

Figure 8: IRFS TO A POLITICAL PRESSURE SHOCK OVER THE FULL SAMPLE WITH LIGHTER RESTRICTIONS



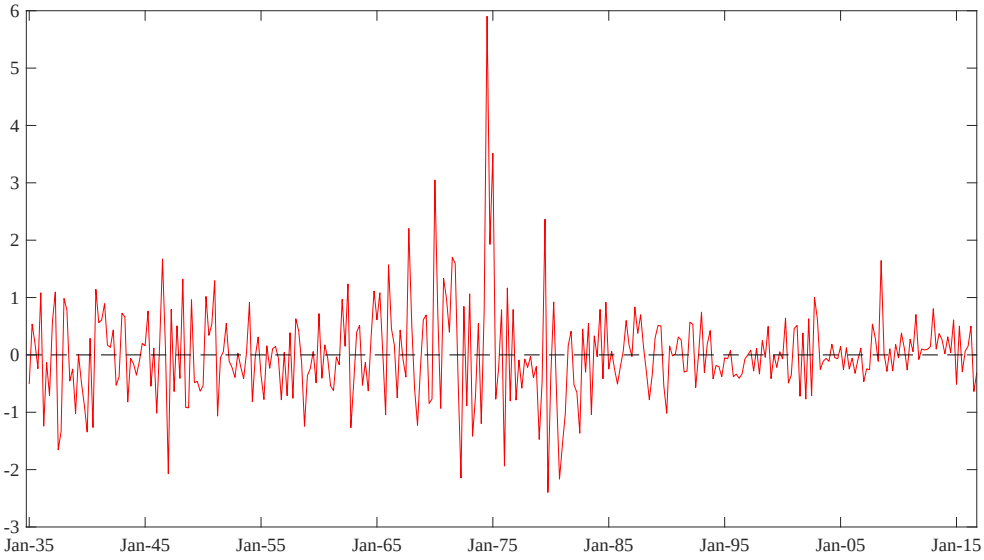
Notes. The red solid lines and red shaded areas represent the median IRFs and 68% credible intervals to a political pressure shock, defined by the restrictions in Table 1, but without imposing any restriction on the Tbill rate. The sample is 1933:Q1-2016:Q4.

4.2 Estimated shocks and their historical contribution

Figure 9 plots the time series of estimated political pressure shocks. It is visible that the shocks generally display a lower variance after the early 1980's. Also, the 1970's stand out with large political pressure shocks. The broad contours of this time series look similar to the raw number of President-Fed interactions (Figure 4). However, it is different in important ways, as the endogenous movements in President-Fed interactions have been removed.

Figure 10 presents historical variance decompositions of the data. These decomposition highlights a key advantage of implementing my narrative identification approach using the methodology of Antolin-Diaz and Rubio-Ramirez (2018). A simple event study approach around the Nixon re-election, for example, could not be used to draw inference about the role political pressure in other periods. The black line in Panel (a) represents the President-Fed interaction data, that is, the quarterly version of Figure 4. The blue bars show the exogenous component of President-Fed interactions, those explained by political pressure shocks and not because the interactions arise in

Figure 9: ESTIMATED POLITICAL PRESSURE SHOCKS



Notes. Time series of political pressure shocks estimated by the SVAR, as defined by the restrictions in Table 1. The sample is 1933:Q1-2016:Q4.

response to economic developments. The panel reveals that variation comes partly from endogenous personal interactions, but a meaningful portion of the variation can be attributed to political pressure shocks.

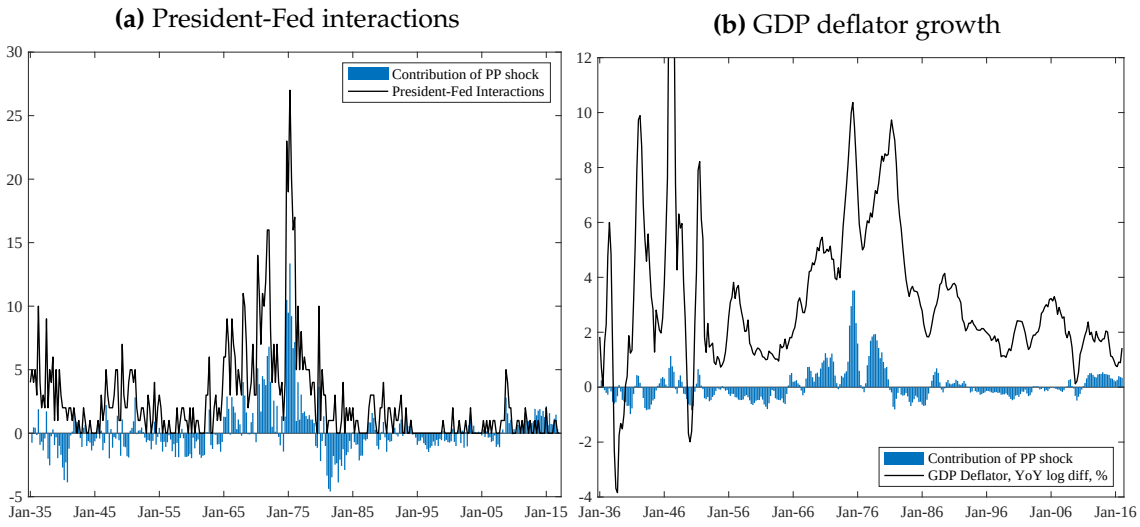
Panel (b) makes clear that political pressure shocks contribute to other inflationary episodes outside of the Nixon years. It is visible that they mostly occurred in the 1970's, also after the Nixon Presidency. The strongest evidence is present the administrations of Presidents Ford and Carter. There are also political pressure shocks in the late 1960's during the Johnson administration. Finally, there is tentative evidence that political pressure shocks occurred in the last part of the sample under President Obama.[24]

Historical variance decompositions in SVARs can be sensitive to the specific way in which they are constructed (Bergholt et al., 2023). Therefore I explore alternative options to construct Figure 10, which are presented in the Online Appendix. While the results indeed differ in some periods, I always found an important contribution of political pressure shocks throughout the 1970's, also outside of the Nixon years.[25]

[24]During that period, nonstandard monetary policy measures took place. My SVAR – correctly or incorrectly – interprets these measures as consequences of political pressure shocks. All my other results are robust to excluding this period from the sample.

[25]The specific alternative to construct Figure 10 I tried is based on the "dummy initial observation prior" introduced by Sims (1993). This is suggested by Bergholt et al. (2023). In the Online Appendix, I show that the decomposition in this case also implies some meaningful political pressure shocks prior to the Treasury-Fed accord, which formally established Fed independence.

Figure 10: HISTORICAL VARIANCE DECOMPOSITIONS



Notes. Historical variance decomposition for the President-Fed interaction time series (Panel (a), the unit is quarterly meetings) and the GDP deflator (Panel (b), the unit is year-on-year log differences*100).

4.3 Subsample analysis, real effects and theoretical discussion

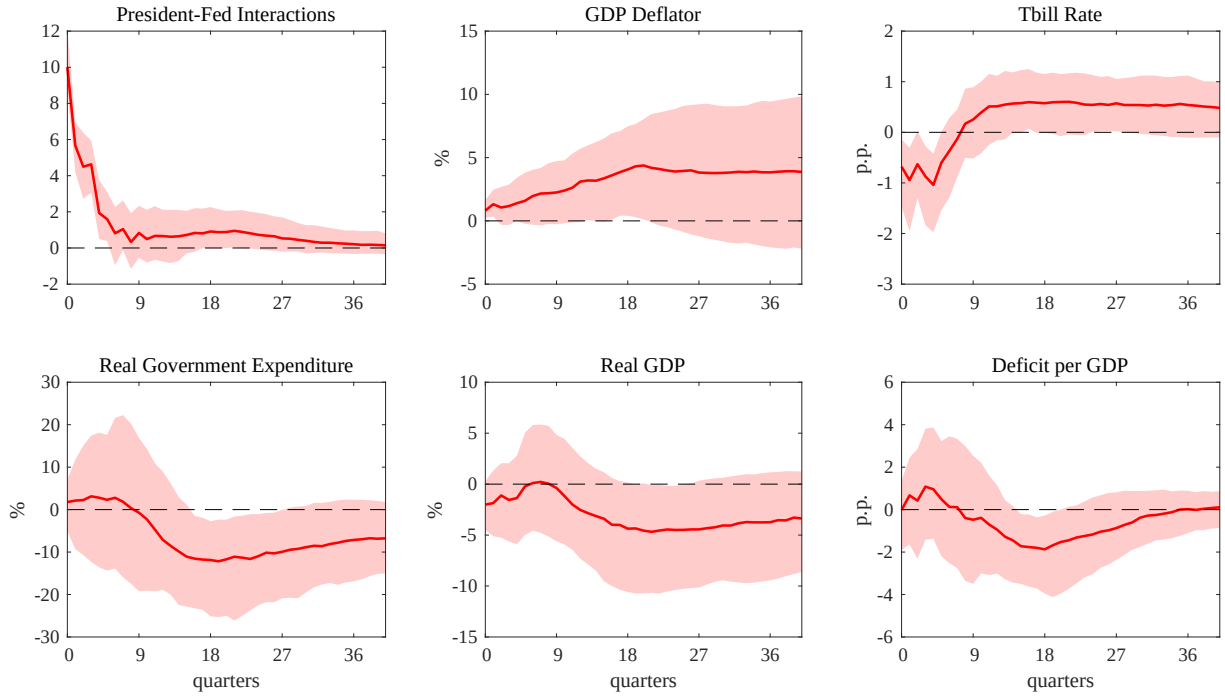
Figure 11 repeats the analysis of Figure 7, but restricts the sample to end before Alan Greenspan becomes Fed Chair in 1987. This sample restriction is motivated by the fact that the variation in President-Fed interactions becomes much smaller after the early 1980's, reducing statistical power. In the pre-Greenspan sample, a statistically significant negative effect of the political pressure shock on economic activity becomes visible, while the price response is relatively similar to the main 1933-2016 sample.

The fact that the effect on economic activity is, if anything, negative suggests that political pressure might not be "successful" from the point of view of a President who exerts political pressure, to the extent that the President desires macroeconomic stimulus. If anything, real activity is estimated to decline in response to the politically induced easing of monetary conditions.

Alternatively, it could be the case that the instead of being concerned with economic activity, the President exerts pressure to reduce the real deficit (or real debt burden). There is some tentative evidence that this goal is achieved, given that the deficit-to-GDP response is negative after around three years in Figure 11. This connects, at least loosely, to the insights of the fiscal-monetary interaction literature.

Theoretical explanations of strong inflation and weak output effects. My finding that the strong inflationary consequences of political pressure occur alongside an

Figure 11: IRFS TO A POLITICAL PRESSURE SHOCK OVER THE PRE-GREENSPAN SAMPLE



Notes. The red lines and red shaded areas represent the median IRFs and 68% credible intervals to a political pressure shock, defined by the restrictions in Table 1. The sample is 1933:Q1-1987:Q2, ending before Alan Greenspan becomes Fed Chair.

insignificant, and in some cases weakly negative, response of real economic activity deserves further discussion. Theoretically speaking, this result might loosely be related to an "inflation bias", see e.g. Barro and Gordon (1983) and Rogoff (1985). In a setting in which the monetary authority acts under discretion and political pressure entices it to either put a higher weight on the output gap or aim for a higher output gap target, or both, an inflation bias arises in equilibrium: private agents understand the changes in the policy maker's objective and the resulting rational expectations equilibrium features the same output gap but a higher rate of inflation.[26] A mechanism along these lines thus provides a useful theoretical background to my results. My findings on the response of inflation expectations, further below, provide additional support for this argument.

[26]Consider a loss function $\mathcal{L} = \frac{1}{2}[\pi^2 + \lambda(\hat{x} - x^*)^2]$ and a simplified New Keynesian Phillips curve $\pi = E(\pi') + \kappa\hat{x}$. The rational expectations equilibrium is $\{\hat{x} = 0, \pi = \frac{\lambda x^*}{\kappa}\}$. A higher weight on the output gap λ and a higher output gap target x^* raise inflation but keep output unchanged. Some authors have modeled political pressure in New Keynesian frameworks more explicitly. Halac and Yared (2021) and Witheridge (2023) focus on an emerging economy context. Debortoli and Lakdawala (2016) use a model to estimate Fed credibility over time.

Economic effects and public opinion. A monetary easing following political pressure might stimulate certain sectors of the economy, or certain types of consumption, that voters are sensitive to. For example, lower interest rates might ease mortgage origination which important groups of voters might see favorably, even if inflation increases or aggregate economic activity declines, as in Figure 11. According to Gallup opinion polls, Nixon's approval rating was relatively flat during 1971, at 50% approval. It increased throughout 1972 after the height of Nixon's pressure on the Fed, to 62% around the election in November. Public approval depends on many dimensions, but it appears that in the short-run Nixon's popularity increased following the pressure. In that sense, we can speculate that Nixon's pressure campaign was successful at avoiding what Nixon saw as Eisenhower's mistake in 1960 (Nixon, 1962; May, 1990). Of course, the bulk of the inflationary impact occurs over a longer horizons, as the IRFs to the political pressure shock show. In 1973, Nixon's approval collapsed to 25%. The Online Appendix presents the evolution of Richard Nixon's public approval in more detail.

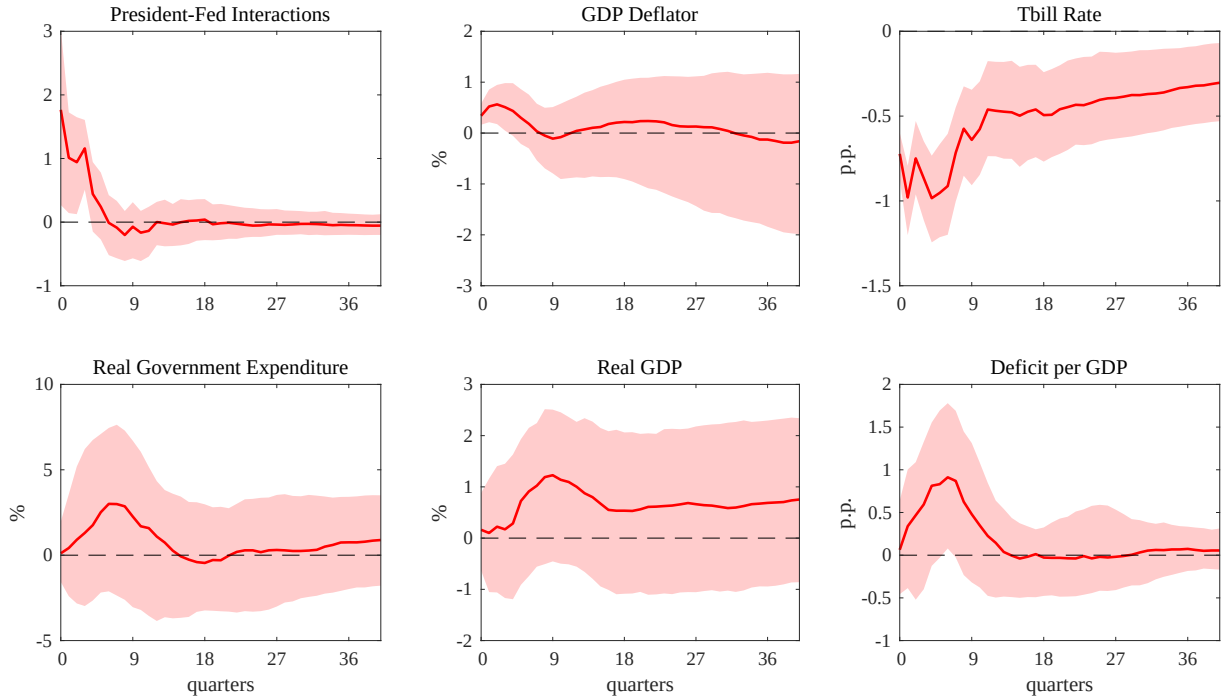
Additional subsamples. I examine other subsamples in the Online Appendix. First, I show that excluding the Great Recession and subsequent recovery does not alter the results. Second, I examine the period after 1952, which is when the Treasury-Fed accord was reached. This accord made the Fed de jure independent. Intriguingly, excluding the pre-1952 period changes the results. In particular, the increase in inflation is not visible. This makes clear that the main results in the text do rely on the variation during the pre-1952 period, when the Fed was formally less independent. As political pressure shocks are generally rare in the U.S., the pre-1952 era appears to deliver useful identifying variation for the SVAR estimates.

4.4 Comparison to the effects of monetary policy shocks

I compare the IRFs to a political pressure shock with those following a monetary policy shock. Section 3.3.1 formalizes how the transmission mechanism of these two shocks can differ. Analyzing their corresponding IRFs in the data is a test of whether the dynamics are actually estimated to differ economically in the data. The monetary policy shock is identified based on traditional sign restrictions (lowers the interest rate, raises inflation, raises activity) and the narrative restrictions that Antolin-Diaz and Rubio-Ramirez (2018) impose in their original study: the monetary policy shock is the main driver of interest rates during the Volcker tightening in 1979:Q4.

The responses to the expansionary monetary policy shock over the full 1933-

Figure 12: IRFS TO A STANDARD MONETARY POLICY SHOCK OVER THE FULL SAMPLE



Notes. The red lines and red shaded areas represent the median IRFs and 68% credible intervals to an expansionary monetary policy shock, identified using sign restrictions and the narrative sign restriction of Antolin-Diaz and Rubio-Ramirez (2018). The IRFs are scaled to the same interest rate reduction on impact as the political pressure shock. The sample is 1933:Q1-2016:Q4.

2016 sample are plotted in Figure 12. I scale the response to give the same interest rate reduction on impact as in Figure 7 (around 72 basis points). The comparison between the figures reveals that political pressure shocks are much more inflationary than traditional monetary policy shocks, especially over the medium term. The expansionary monetary policy shock only triggers a short-lived increase in inflation, with the price level increase reversed to zero after around 2 years. The estimates imply that the price level never rises more than 1%, much smaller than the 5% increase after the easing of monetary conditions that follows from the political pressure shock.

The number of personal interactions between Presidents and the Fed endogenously reacts to a monetary policy shock. This finding links back to the heart of the identification challenge: personal interactions do not necessarily reflect political pressure but respond endogenously to changes in economic conditions, which are driven by other structural shocks. A monetary easing shock causes temporarily higher inflation, which might be the reason why President wants to talk more to the Fed Chair. The effect is relatively small, raising the amount of interactions by less than 2 per quarter

according to the point estimate.[27]

As for the political pressure shock, the real activity response to the monetary policy easing shock is insignificant. In the Online Appendix, I provide the analogous IRFs also for the pre-Greenspan sample, for which it was possible to tease out a significant real activity response to the political pressure shock (see Figure 11). In that sample, the exogenous interest rate reduction increases real activity. This is the opposite of the negative real activity response to the political pressure shock in that subsample. This finding highlights that the transmission mechanisms of political pressure shocks and monetary policy shocks are economically different.

Contrasting the impact of a monetary policy easing shock to that of a political pressure shock confirms the formal distinction between the two shocks that I provided above. The transmission mechanism of these two shocks need not be the same theoretically and my empirical estimates show that they are indeed distinct in the data. Further below I also examine the differential effect of these shocks on inflation expectations, which opens up these differences further.

Do Romer-Romer residuals capture political pressure? My formal analysis in Section 3.3.1 also showed that depending on a researcher's identification strategy and data, political pressure shocks would be estimated as a subset of monetary policy shocks. To confirm this logic, I regress the monetary policy shocks originally constructed by Romer and Romer (2004) on my political pressure shocks. In with my arguments, I find a statistically significant negative coefficient (more political pressure induces monetary easing). The R^2 of the regression is 0.064. In other words, 6% of the variation in the original Romer and Romer (2004) residuals is due to political pressure shocks.

4.5 Do other macroeconomic events in 1971 confound the results?

An objection to my narrative identification strategy based on Nixon's pressure on Burns is that other important macroeconomic events took place in late 1971. These events might obfuscate the clean identification of the effects of political pressure on the Fed. The main concern is the suspension of convertibility between the US dollar and Gold, which effectively ended the Bretton Woods exchange rate arrangement in August 1971. Another example are price and wage controls implemented during this period.

[27] My theoretical conjecture is that interactions rise either when inflation increases or when there is a recession. Thus I would expect meeting rise after positive demand shocks, such as a monetary easing, as well as after negative supply shocks.

To investigate whether such other events confound my results, I carry out several empirical exercises. First, I estimate an alternative SVAR *without* my President-Fed interaction data. In that SVAR, I identify a generic '1971 inflationary shock' as the main contributor to inflation in 1971:Q3 and 1971:Q4. In other words, I identify a shock using the same timing of the narrative and the same sign restrictions, but without information about President-Fed interactions. This shock spans *any* important potential contributor to inflationary developments that has roots in the second half of 1971, but does not unfold through interactions between the President and the Fed.

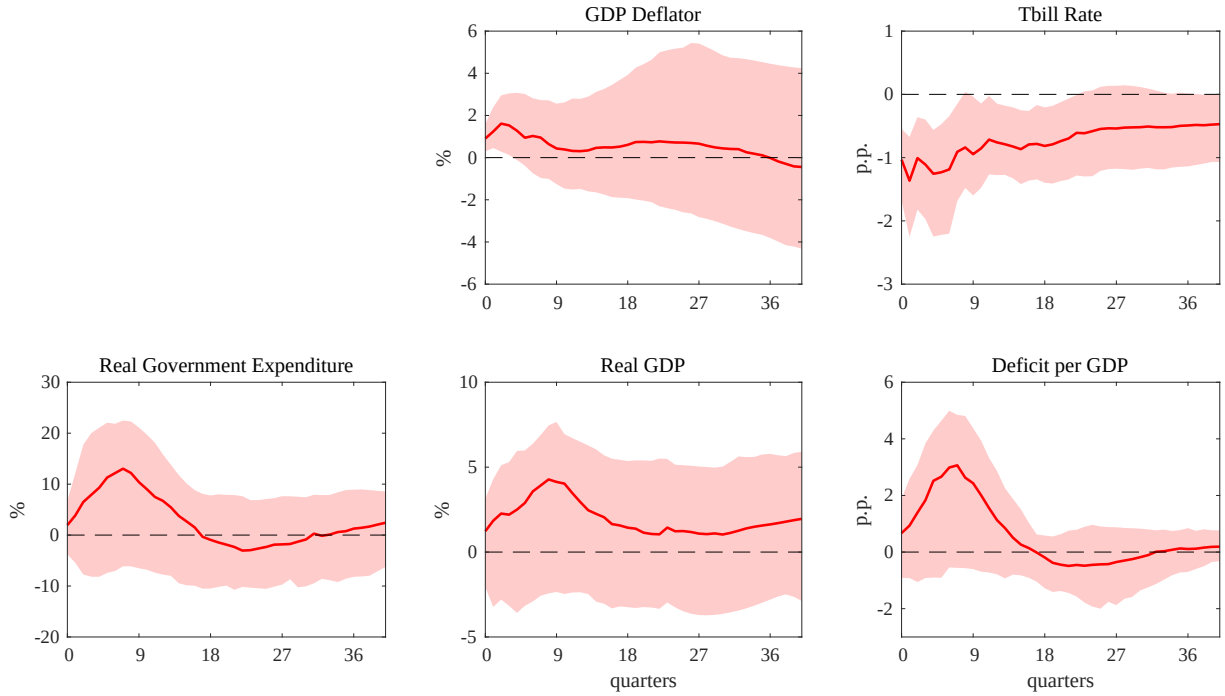
Figure 13 shows the corresponding IRFs. For comparability to the other figures, the first panel is omitted, making clear that the President-Fed interaction data is not used here. I normalize the shock to trigger the same GDP deflator response on impact as the political pressure shock. I find that the IRFs to this shock imply only a short-lived inflation increase, different from the strong and prolonged price level effect of a political pressure shock. This contrast highlights that the personal interaction data, and the information the data reveal about political pressure, are key to my results.

As a second exercise, I use an alternative version of the President-Interaction data. That version excludes those interactions between the President and Fed officials during which other people were present.[28] During the Nixon years, meetings often took place in larger groups, including other members of the cabinet or Nixon advisors besides Arthur Burns. In particular for discussions relating to the Bretton Woods exchange rate arrangement, foreign policy and national security advisors such as Henry Kissinger were often present, given an important international dimension to these discussions. The conjecture behind excluding such interactions and focusing only 1-on-1 interactions between Nixon and Burns is that those are more likely to be about monetary policy and less likely about other issues. I find that using this alternative measure, the GDP deflator increases slightly more rapidly after a political pressure shock, with a peak after 4 years. After 10 years, the median estimate is similar to my baseline results, though the posterior intervals are much wider. The results are presented in the Online Appendix.

As a final exercise, I vary the exact timing of the narrative sign restriction. The suspension of Bretton Woods is commonly dated to August 15, 1971, so in the third quarter of that year. As an alternative to my baseline setting, I therefore restrict the timing of the narrative restriction to only 1971:Q4. Furthermore, use 1972:Q1-Q2 as alternative windows. In both cases, shown in the Online Appendix, the SVAR implies

[28] See Panel (a) of Figure B.2 in the Online Appendix. To construct this, I count only interactions from the Presidents' daily schedules that do not explicitly indicate that other people where present (around 1/3 of meetings).

Figure 13: IRFS TO A GENERIC '1971 INFLATIONARY SHOCK' WITHOUT PRESIDENT-FED INTERACTIONS



Notes. The red solid lines and red shaded areas represent the median IRFs and 68% credible intervals to a shock that is identified without the President-Fed interaction data (for comparability to the other figures, the first panel is left blank), and based on the traditional sign restrictions shown in Table 1 and a narrative restriction that imposes that the shock is the main driver of the GDP deflator in 1971:Q3 and 1971:Q4. The sample is 1933:Q1-2016:Q4.

similarly strong inflationary effects, though the precision is weaker when only using the fourth quarter of 1971.

4.6 The crucial role of inflation expectations

My conceptual discussion of the differences between political pressure shocks and monetary policy shocks argues that private agents' expectations could play a crucial role (see Section 3.3.1). To examine this conjecture, I proceed in two steps. First, I present evidence that President-Fed meetings, and political pressure occurring through them, were observed by the public during the Nixon years. Second, I estimate the IRFs of inflation expectation measures to political pressure and monetary policy shocks.

4.6.1 Is political pressure on the Fed publicly observed?

Several pieces of evidence indicate that Nixon's pressure on Burns was public knowledge. At multiple points, Burns worries in his diary about journalists reporting

on Nixon pressuring him: "The confrontation reported or predicted by the Press did not come off." (November 1970). "(...) the White House children ought to stop the dangerous game of feeding gossip and fabrication to the Press." (November 1970). "Recently, a journalist came to see me and told me that some White House operatives (specifically, Haldeman and Shultz) had their bayonets out for me." (March 1971).

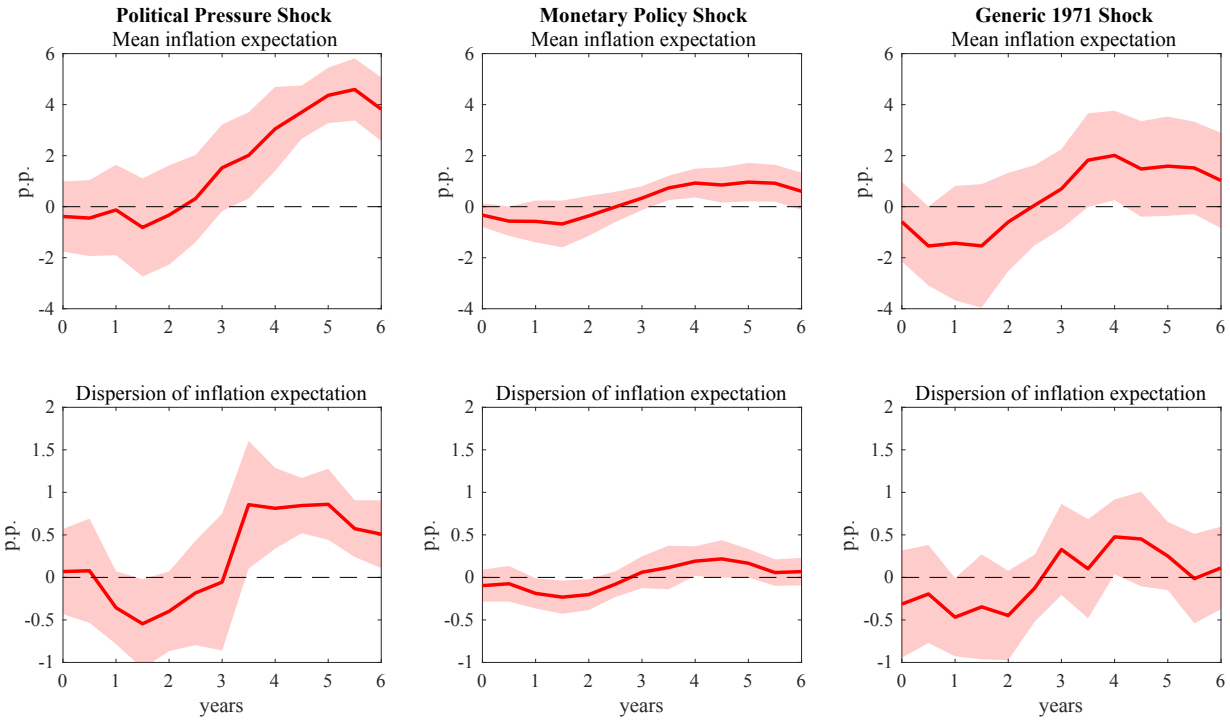
In July 1971, Nixon started a public smear campaign about Burns allegedly wanting a higher salary. Nixon also floated the rumor that the Fed Board was going to be "packed" with additional members, placing it under control of the White House. Nixon talked openly about his views on monetary policy, and his agreements and disagreements with Burns. For example, during a news conference in August 1971, he praises that "(...) you have seen an expansionary monetary policy, and that is one of the reasons we have had an expansionary economy in the first 6 months of this year."[29]

It is also easy to find newspaper articles from the period that report in detail on the political pressure that Nixon exerted on Burns. Below I provide a few example headlines from major U.S. news outlets throughout 1971 that make this clear.[30]

The Washington Post, January 10, 1971. "Modest Recovery Seen for Economy. Nixon Presses Burns For Monetary Expansion."
The Boston Globe, February 26, 1971. "Pressure on Fed Heightens: Nixon Men Push for Money Expansion."
The Los Angeles Times, February 28, 1971. "Wall Street fears Whiplash From Nixon-Burns Collision."
The New York Times, July 29, 1971. "Nixon and Burns Termed At Odds."
The Chicago Tribune, August 2, 1971. "Report of Effort to Alter The Fed Deliberately Leaked."
The Washington Post, August 15, 1971. "The President and the Fed: Cooperation or Conflict?: Frustrations Over the Economy."
The New York Times, October 9, 1971. "Federal Reserve Is Called Upon To Resist Pressure for Monetary Growth."
The Boston Globe, November 23, 1971. "Nixon lines up scapegoats". One excerpt from the body of this article is: "One such prospective scapegoat is Dr. Arthur Burns. (...) Dr Burns is now being described by some Nixon economic operatives as the man who holds the real key to economic recovery by his power over the money supply."

[29]Full text here: https://www.presidency.ucsb.edu/documents/the-presidents-news-conference-137.
[30]I identified these headlines using a search of historical newspapers using ProQuest via the University of Maryland Library. There are many more headlines along these lines that are easy to find.

Figure 14: THE RESPONSE OF INFLATION EXPECTATIONS TO DIFFERENT SHOCKS



Notes. The results are based on local projections, where the dependent variable are 6-month ahead inflation expectations from the Livingston Survey. The dispersion is the difference between the 75th and 25th percentile across the survey respondents. Error bands represent 90% significance. The unit is YoY inflation in annualized percent. The shocks are normalized as in the previous figures.

4.6.2 The response of inflation expectations to different shocks

To investigate the role of private agents' inflation expectations econometrically, I study their dynamic responses to political pressure shocks, monetary policy shocks, and the 1971 inflationary shock. I use the Livingston Survey which collects forecasts of professional economists and goes the furthest back in time, to 1946. Since the survey is biannual, I aggregate the shocks to biannual frequency, and then employ local projections to construct IRFs (Jordà, 2005). I study the mean of the survey as well as the difference between the 75th and the 25th percentile as a measure of dispersion. Both are for the 6-month horizon but results for the 12-month horizon look similar. In the local projection, I include one lag of the left hand side and one lag of the shock on the right hand side. Figure 14 shows the results.

Panel (a) shows that mean inflation expectations rise significantly in response to a political pressure shock. After 5 to 6 years, the expected rate of inflation is about 4 percentage points higher than initially. In response to a monetary policy easing shock

and the generic 1971 inflationary shock a qualitatively similar picture arises. However, the magnitude of the effects is much weaker. After a standard monetary policy easing, normalized to induce the same interest rate reduction as the political pressure shock, inflation expectations increase only by about a percentage point. Panel (b) shows similar results for the dispersion of inflation expectations. After the political pressure shock, the divergence between the 75th and the 25th percentile amounts to almost a full percentage point, whereas the effect is weaker and less significant for the other two shocks.

These findings likely reflect the pessimism about future inflation developments and public uncertainty about the ultimate consequence of the Fed being under pressure. A mechanism that operates through public perception and expectations makes the transmission of the political pressure shock different from the transmission of 'typical' monetary policy shocks. Formally speaking, an inflation expectations channel might be what renders parameters ϕ_{yx} and $\phi_{\pi x}$ different from zero in equations (1) and (2).

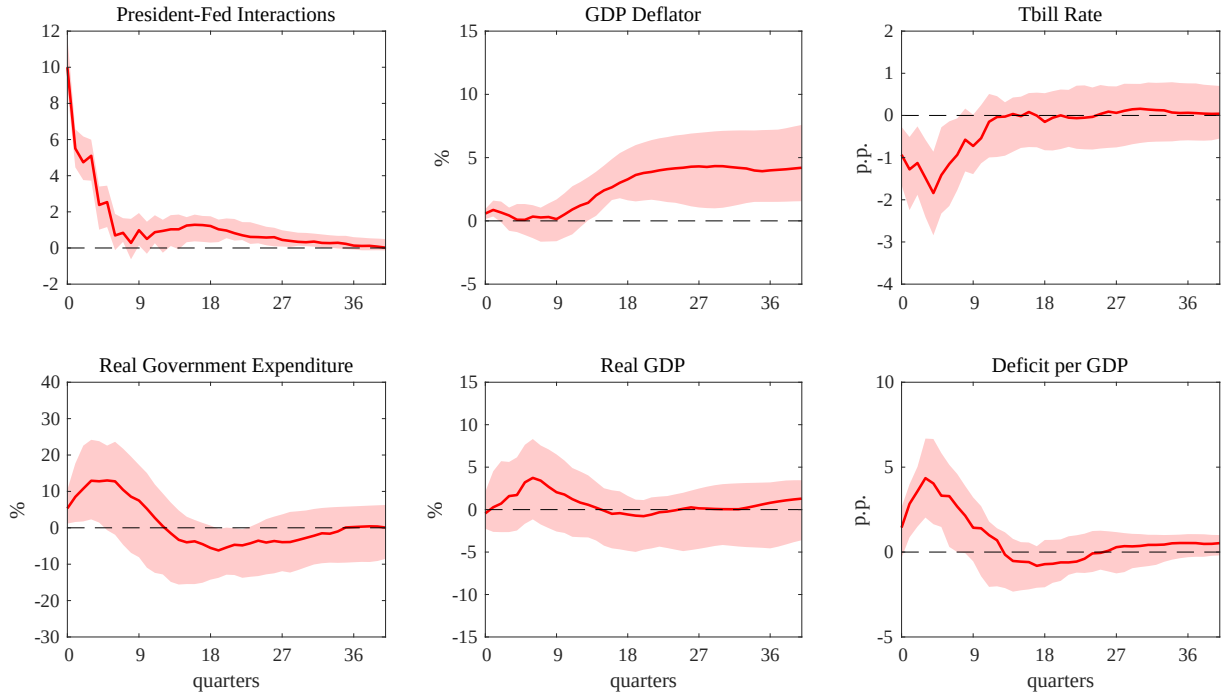
4.7 Using LBJ's pressure as a second narrative sign restriction

While my SVAR is estimated over 13 administrations, only one Presidency provides the narrative sign restriction. To alleviate concerns that this identifying variation is too limited, I use the behavior of Lyndon B. Johnson ("LBJ") as an additional narrative.

Historical background. There are several episodes during LBJ's Presidency in which he is reported to have exerted heavy pressure on Fed Chair William McChesney Martin. The perhaps most well-known is when he allegedly invited Martin to his farm and physically assaulted him over a dispute regarding the course of monetary policy in late 1965. This episode is not as clear-cut for the purpose of identifying a political pressure shock as the Nixon one, because Martin reportedly did not give in to the pressure. See Meltzer (2009a) and Fessenden (2016) for discussions.

Another episode is the Fed's decision to ease in the spring of 1967. Reportedly, Johnson and Martin struck a deal that the Fed would ease monetary conditions and that Johnson would in return shepherd a tax increase through Congress. Hence the episode constitutes an actual monetary policy easing that followed a form of persuasion by the President. Martin openly regretted this decision in his testimony before Congress in 1969 (Fessenden, 2016). Again, my reading is that the evidence is less clear than for Nixon, but to broaden my evidence, I exploit this episode as a narrative sign restriction on the President-Fed interactions in 1967:Q1, in addition to all previous restrictions. In the Online Appendix, I instead use the aforementioned 1965:Q4 episode.

Figure 15: IRFS TO A POLITICAL PRESSURE SHOCK ALSO INFORMED BY LYNDON B. JOHNSONS' PRESSURE



Notes. The red solid lines and red shaded areas represent the median IRFs and 68% credible intervals to a political pressure shock, defined by the restrictions in Table 1 and imposing 1967:Q1 as an additional narrative sign restriction on the President-Fed interaction variable. The sample is 1933:Q1-2016:Q4.

IRFs of political pressure shocks based on Nixon and LBJ narrative. Figure 15 shows that the alternative version of the SVAR that uses variation from two Presidents again yields a strong and persistent effect on inflation. The point estimate for the GDP deflator after 10 years is slightly lower, with an increase in the price level of around 4%. Comparing the posterior intervals to the main results in Figure 7, the effect is also more precisely estimated. Interestingly, when exploiting LBJ's pressure, there is also a strong effect on fiscal variables, with a significant increase in government expenditures and the deficit-to-GDP ratio. This likely results from Johnson's "Great Society" fiscal programs that get a higher weight in this version of the SVAR.

5 Variations in the specification and robustness exercises

In the previous sections, I already investigated alternative priors, different subsamples and differences in the precise timing for the narrative sign restriction, none of which meaningfully altered my results. Beyond these exercises, I study further variations in my identification and estimation approach and additional robustness tests.

First, I impose the traditional sign restriction on the GDP deflator after 4 quarters instead of on impact. The resulting IRFs, shown in the Online Appendix, display a similar magnitude and profile.

Second, instead of the "overwhelming" type of narrative sign restriction, which imposes that the shock's contribution is larger than the sum of all other shocks combined, I use the less restrictive assumption that the shock is the "most important" one, having a contribution larger any other structural shock. See Antolin-Diaz and Rubio-Ramirez (2018) for more details. The Online Appendix shows that the results are similar though the posterior bands are slightly wider.

Third, there is an ongoing discussion in the Bayesian SVAR literature around the role of prior information in the type of estimation algorithm I use in this paper. In brief, the concern raised by some authors is that in set-identified SVARs, a researcher might unwillingly impose prior information about the IRFs of individual variable to structural shocks.[31] To check whether this concern drives my findings in any way, I estimate the IRFs of my six variables by drawing from the prior and imposing the traditional sign restrictions, but not using any information from the data. I retrieve IRFs that are symmetrically centered around zero after the initial period where the sign restrictions mechanically impose a response different from zero. The Online Appendix presents these IRFs. This exercise alleviates the concern that prior knowledge about individual IRFs is imposed in the estimation algorithm, which is not my intention.

Fourth, since the negative response of real GDP is difficult to detect in the full sample, I instead study the unemployment rate. Similar to the GDP response, the effect of the shock is not significantly different from zero, even in the pre-Greenspan sample. I conclude from this that the difficulty of finding real effects is not specific to real GDP as a measure of activity.

Fifth, I add oil prices to the system, given that important oil price shocks followed later in the 1970's. Adding oil prices does not alter my findings, as shown in the Online Appendix. I find that political pressure shock has a positive effect on oil prices.

Sixth, I examine how variation within and across Presidencies and Fed Chair tenures drive the results. In a first stage, I regress the personal interaction time series on either President dummies or Fed Chairs dummies and then use the residuals as the personal interaction variable in the SVAR. I find that in both cases the main results are not recovered. This exercise shows that while my identification is based on using a specific historical episode as an exogenous shifter, it crucially relies on the variation *across*

[31] This concern was originally formulated by Baumeister and Hamilton (2015). Arias et al. (2023) provide a response to Baumeister and Hamilton (2015) with further clarifications.

Presidents and *across* Fed Chairs. This is perhaps not surprising given the importance of President-to-President changes in interactions visible in Figure 4.

6 Conclusion

This paper combines new data and a narrative identification strategy to isolate exogenous shifts in political pressure on the Federal Reserve and estimates their macroeconomic effects. I build a novel data set from archival records, which allows me to measure personal interactions between U.S. Presidents and Fed officials. While the personal interactions data is interesting in its own respect, and might be useful for other researchers in different contexts, it does not only reflect political pressure but interactions that might occur for many reasons. Therefore, I develop an identification strategy based on narrative sign restrictions to isolate a new type of shock, which I dub political pressure shock. I find that political pressure shocks increase inflation strongly and persistently. My procedure can quantify this effect: increasing political pressure 50% as much as Nixon for six months increases the U.S. price level by 8%. While the benefits of central bank independence have largely been highlighted using cross-country data, my results demonstrate them using evidence from within one economy through time. The SVAR estimates could be useful to discipline structural macroeconomic models, for example those with fiscal-monetary interactions.

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ONLINE APPENDIX TO

"Estimating the Effects of Political Pressure on the Fed:
A Narrative Approach with New Data"

by Thomas Drechsel

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A Overview of data sources

The historical daily schedules of U.S. Presidents are made available to the public by each President's *Presidential Library*. The creation of the schedules and provision to the public is governed by the National Archives and Records Service (NARA) under the Freedom of Information Act (FOIA). There is a so-called *Presidential Diarist*, a National Archives employee detailed to the White House. The Diarist is responsible for creating the daily schedules as a minute-by-minute log, based on information across different White House units.

The availability begins with Franklin D. Roosevelt in 1933 and currently ends with Barack Obama in 2016. The daily schedules are not yet publicly available for Presidents Trump and Biden. The Trump Presidential Library launched a website with limited resources, but the library itself has not been created.

Table A.1 provides an overview, with links and information for each library. For most Presidents during this period, the schedules are provided in digital form online and the table provides a web link in each case. For President H.W. Bush, they are only available as hard copies in the Presidential Library in College Station, TX. The table also gives information about how the schedules are organized, in terms of the file structure and readability.

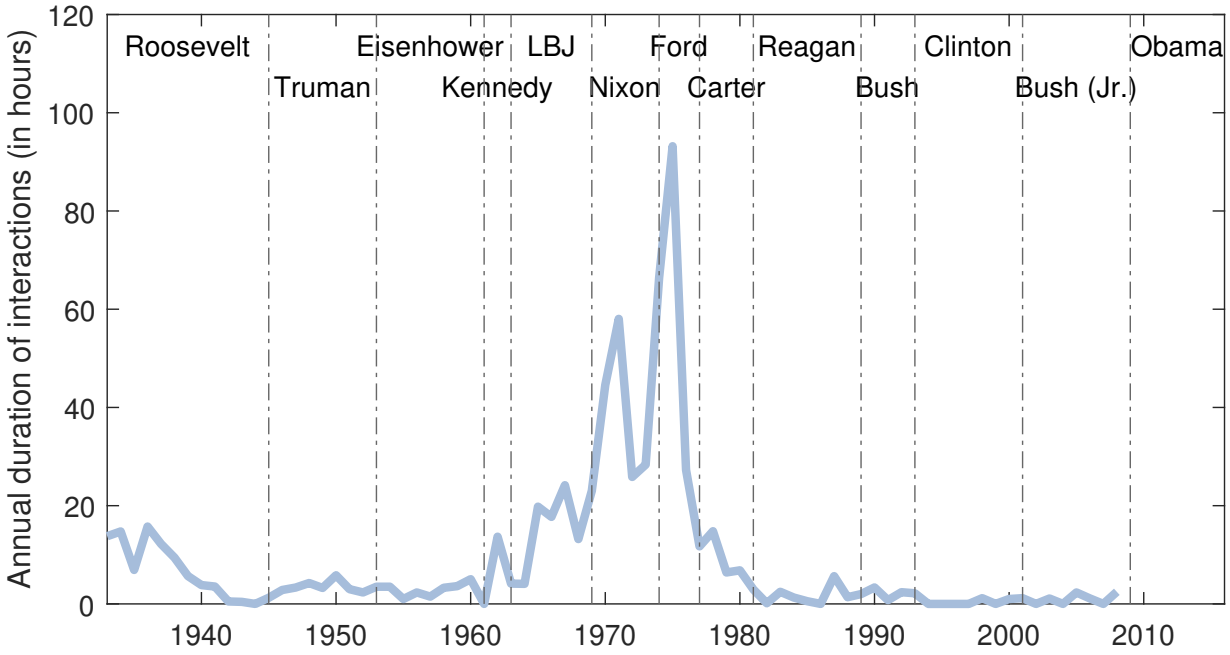
Table A.1: Presidential Daily Diary Sources

Start	End	President	Where available?	Searchable data?	File frequency	Searchable pdfs?
2009	2017	Obama	Link	No	1 per day (in browser)	Yes
2001	2009	Bush Jr.	Link	No	1 per day (with gaps)	Mixed
1993	2001	Clinton	Link	No	1 per month	Mixed
1989	1993	Bush Sr.	College Station, Texas	No	1 per day (paper-based)	No
1981	1989	Reagan	Link	No	1 per month	Yes
1977	1981	Carter	Link	Yes	1 per day	Yes
1974	1977	Ford	Link	No	1 per day	Yes
1969	1974	Nixon	Link	No	1 per two weeks or annual	Yes
1963	1969	Johnson	Link	Yes	1 per day	Yes
1961	1963	Kennedy	Link	No	1 per month	Yes
1953	1961	Eisenhower	Link	No	1 per month	Yes
1945	1953	Truman	Link	Yes	Browser database	NA
1933	1945	Roosevelt	Link	Yes	1 per day	Yes

B Additional descriptive evidence

Figure B.1 corresponds to Figure 4 in the main text, but plots the total duration of President-Fed interactions (in hours), instead of the number of interactions. The overall pattern in the duration over time is similar to the number of interactions, though the 1970's stand out to an even stronger degree.

Figure B.1: TOTAL DURATION OF PRESIDENT-FED INTERACTIONS (IN HOURS PER YEAR) THROUGH TIME



Notes. Duration (in hours) of personal interactions between Presidents and Fed officials, aggregated to annual frequency. The duration of interactions was not visible in the daily schedules available for President Obama, so this time series stops in 2008.

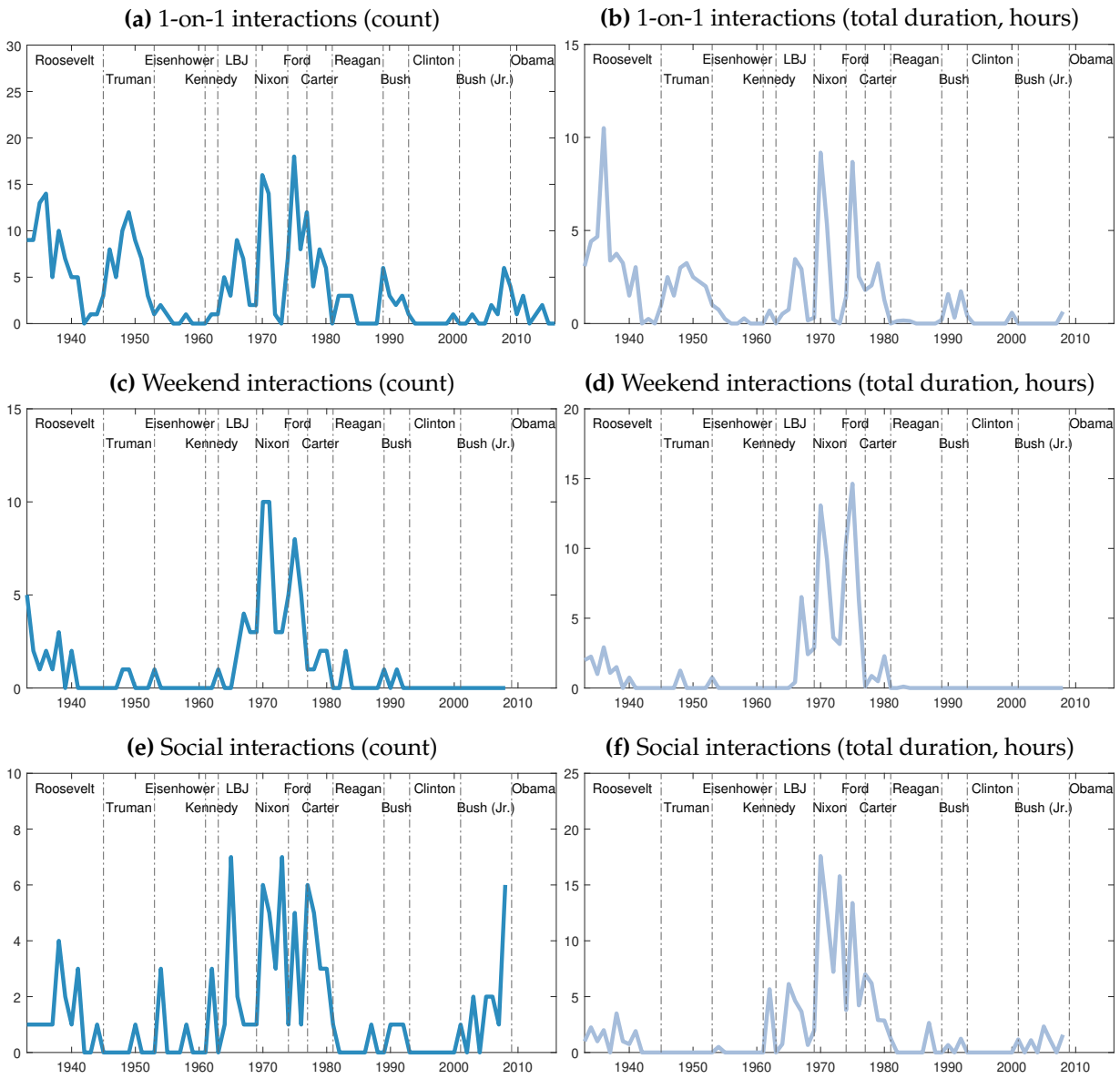
Figure B.2 presents time series for different *types* of President-Fed interactions through time. Panels (a) and (b) plot the number of 1-on-1 interactions, that is, those on which other people were not indicated to be present. These two panels separately show the number of interactions as well as the total duration in hours. In the main text, I use the time series shown in Panel (a) in a robustness exercise to explore whether other macroeconomic events in 1971 confound my findings.

Panels (c) and (d) show interactions that took place on weekends. Again, the number of interactions as well as the total duration in hours is separately plotted.

Panels (e) and (f) show number and length of only social interactions, such as meals, parties or church visits.

Across these panels it becomes clear that during those times where lots of President-Fed interactions take place overall – in particular in the 1970's – we see these other indicators rise as well. For example, Richard Nixon was the President with most interactions occurring on weekends as well as a President who relied a lot on social interactions with Fed officials.

Figure B.2: ADDITIONAL INDICATORS OF PRESIDENT-FED INTERACTIONS



Notes. The duration and setting of interactions was not visible in the daily schedules available for President Obama.

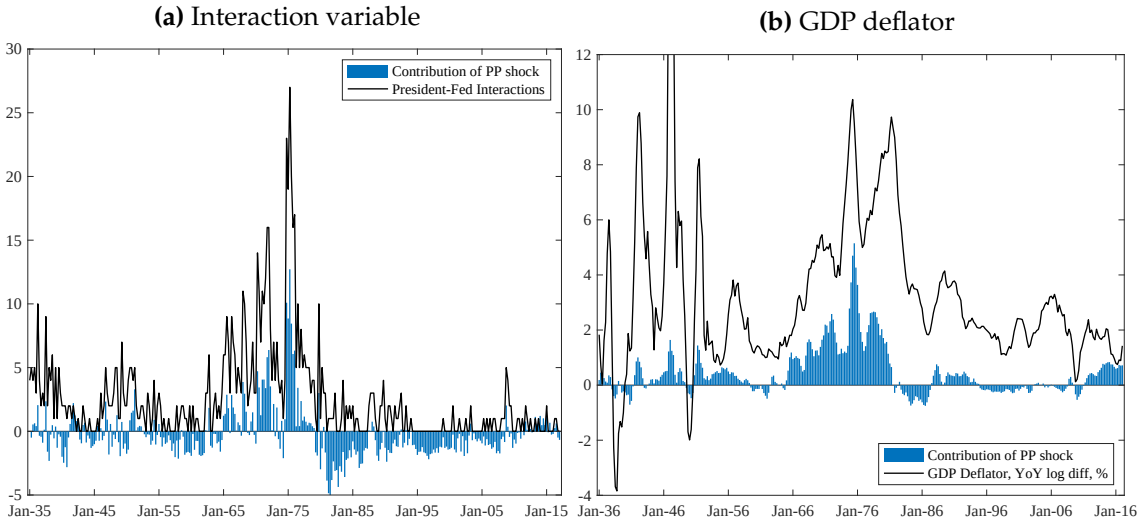
C Additional SVAR results

C.1 Alternative construction of variance decomposition

Following Bergholt et al. (2023) I impose the "dummy initial observations" prior suggested by Sims (1993), as an alternative to using the same priors as Antolin-Diaz and Rubio-Ramirez (2018). This robustness exercise is motivated by the fact that historical variance decompositions in SVARs have been shown to be sensitive to prior choices and the specific way the decompositions are constructed.

Figure C.1 shows the resulting historical variance decompositions. Relative to the results in the main text, the contribution of political pressure shocks to inflation becomes more pronounced. Interestingly, there is a sequence of political pressure shocks prior to the Treasury-Fed accord in 1952, which formalized Fed independence. Note that when considering IRFs with this prior choice (not plotted), the inflationary effect of political pressure shocks is even stronger than in my baseline results, while the impact on activity and fiscal variables are similar.

Figure C.1: HISTORICAL VARIANCE DECOMPOSITIONS WITH ALTERNATIVE PRIOR CHOICE

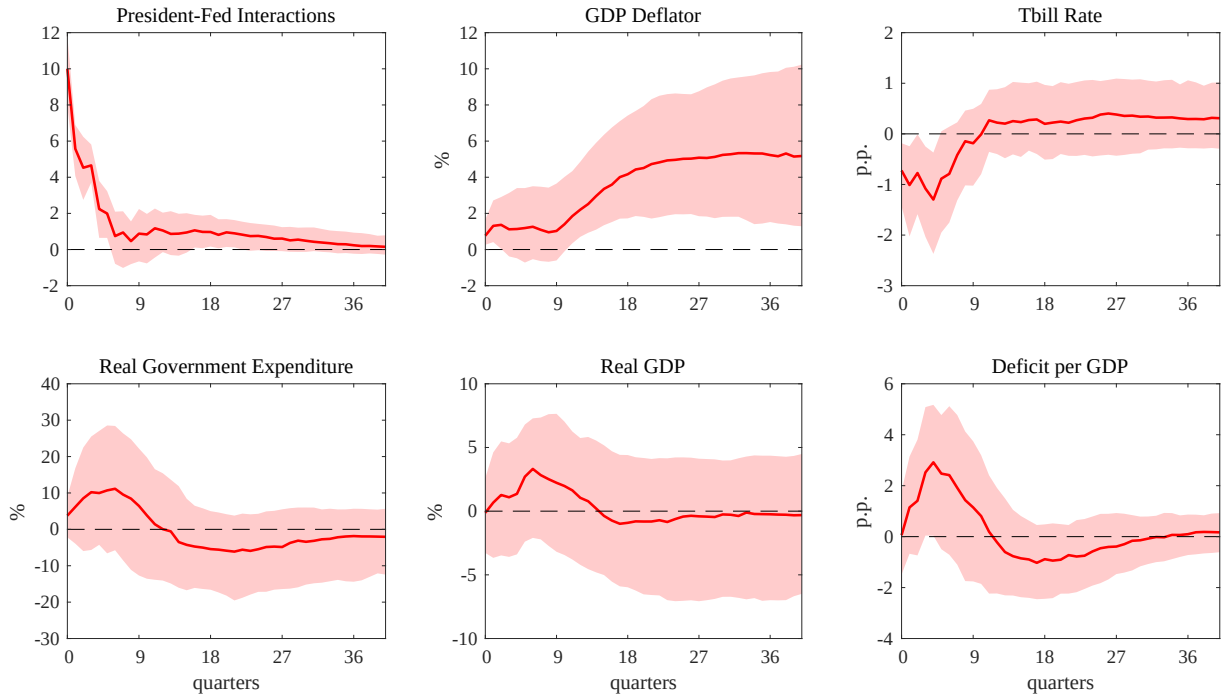


Notes. Historical variance decomposition for the President-Fed interaction time series (Panel (a)) and the GDP deflator, in year-on-year log differences (Panel (b)).

C.2 Additional subsample analysis

Figure C.2 excludes the Global Financial Crisis (GFC) by ending the sample in 2007:Q4. The results are similar to the main results presented in the text. If anything, the response of the GDP deflator is more precisely estimated.

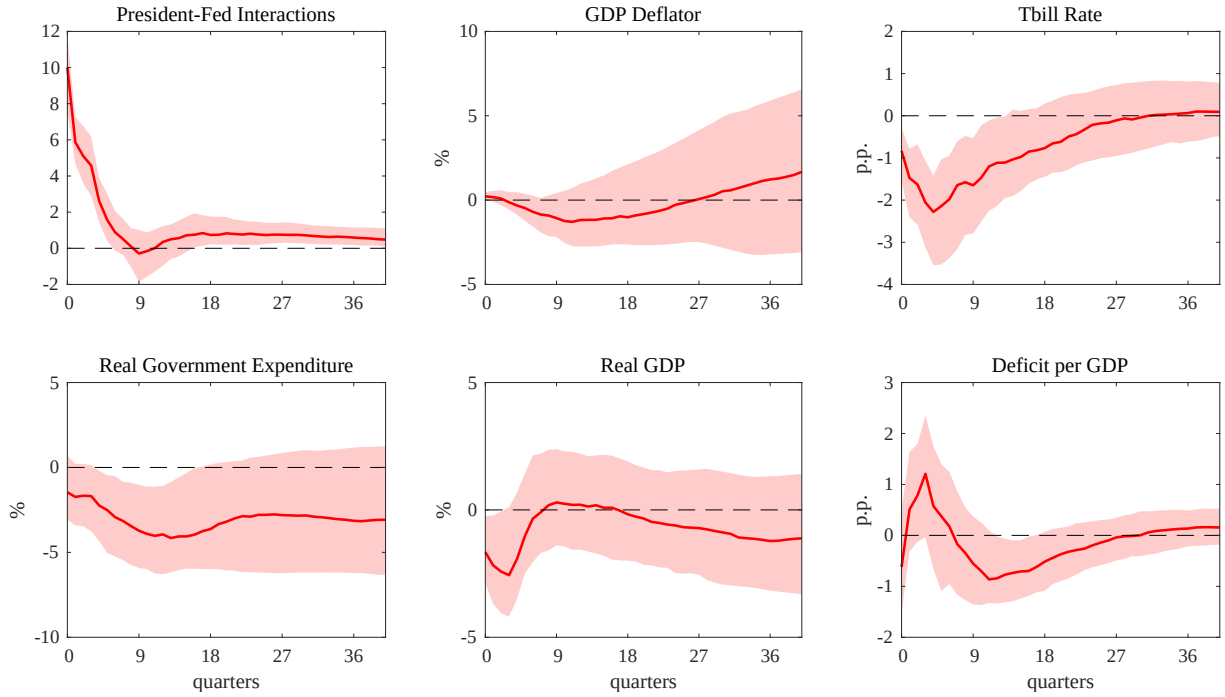
Figure C.2: IRFS TO A POLITICAL PRESSURE SHOCK EXCLUDING THE GFC



Notes. The red solid lines and red shaded areas represent the median IRFs and 68% credible intervals to a political pressure shock, defined by the restrictions in Table 1. The sample is 1933:Q1-2007:Q4.

Figure C.3 limits the sample to start in 1952:Q2, after the Treasury-Fed accord. The results display a markedly different inflation response. This makes clear that the main results in the text do rely on the variation during the pre-1952 period, when the Fed was formally less independent.

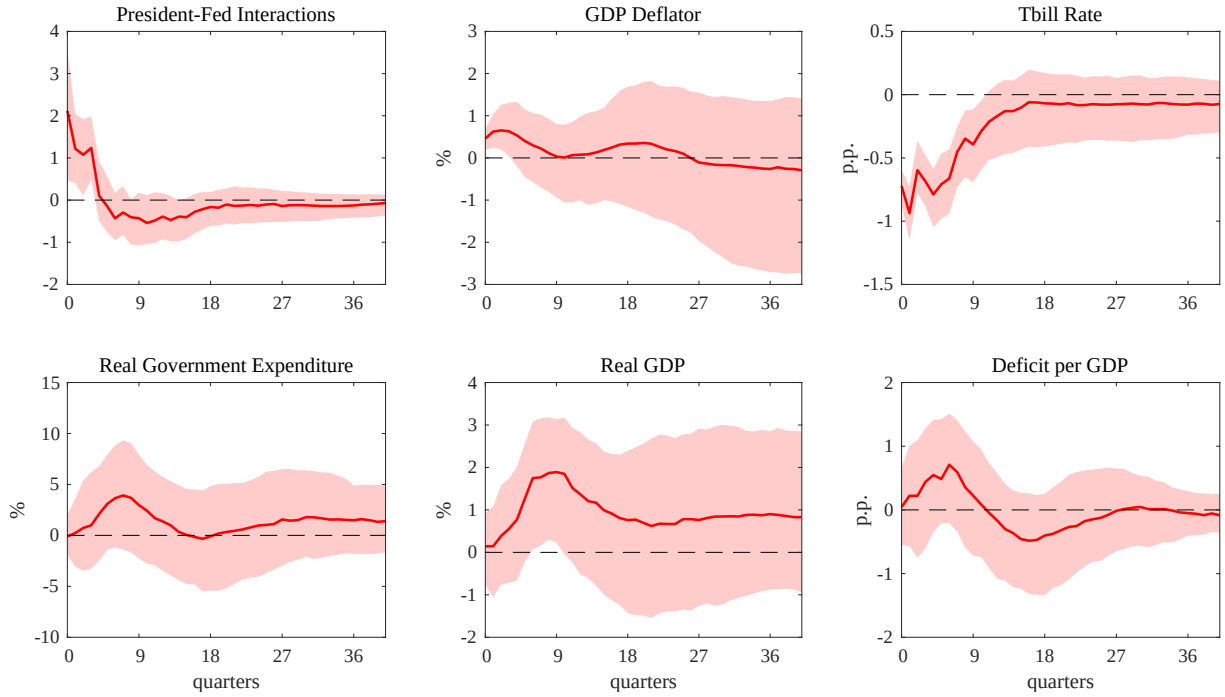
Figure C.3: IRFS TO A POLITICAL PRESSURE SHOCK AFTER TREASURY-FED ACCORD



Notes. The red lines and red shaded areas represent the median IRFs and 68% credible intervals to a political pressure shock, defined by the restrictions in Table 1. The sample is 1952:Q2-2016:Q4.

Figure C.4 shows the IRFs to a standard monetary policy shock (as Figure 12 in the main text) but stops the sample before Greenspan becomes Fed chair. In this sample, a significantly positive response of real GDP is estimated. The main text provides an additional discussion of this finding.

Figure C.4: IRFS TO A STANDARD MONETARY POLICY SHOCK OVER THE PRE-GREENSPAN SAMPLE

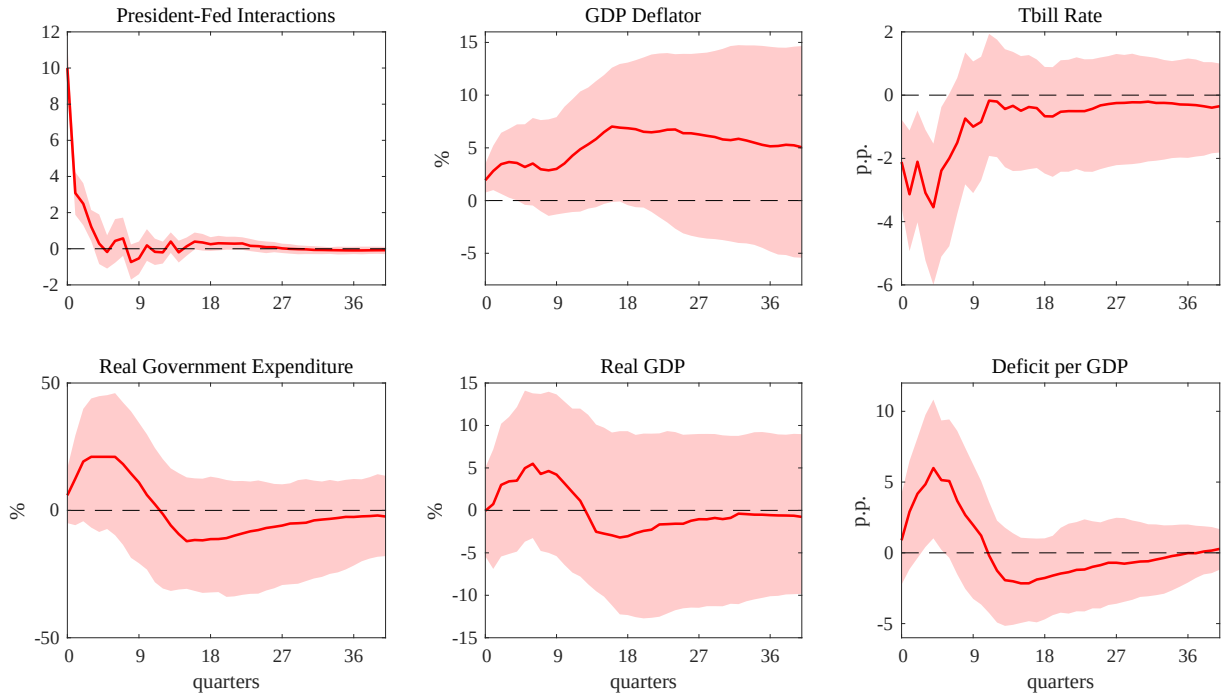


Notes. The red lines and red shaded areas represent the median IRFs and 68% credible intervals to an expansionary monetary policy shock. The sample is 1933:Q1-1987:Q2.

C.3 Using only personal interactions that exclude other people

Figure C.5 shows the IRFs for a version of the SVAR where the President-Fed interaction data excludes meetings in which additional people were present. This corresponds to the time series plotted in Panel (a) of Figure B.2. The idea of using this alternative measure is to exclude meetings in which other economic issues, outside of monetary policy, might be discussed. The IRFs are quite similar to the main results in the text, though less precisely estimated. The dynamic profile of the GDP deflator IRF is slightly hump-shaped, which is different from the results in the main text.

Figure C.5: IRFS TO A POLITICAL PRESSURE SHOCK WITH ALTERNATIVE INTERACTION DATA

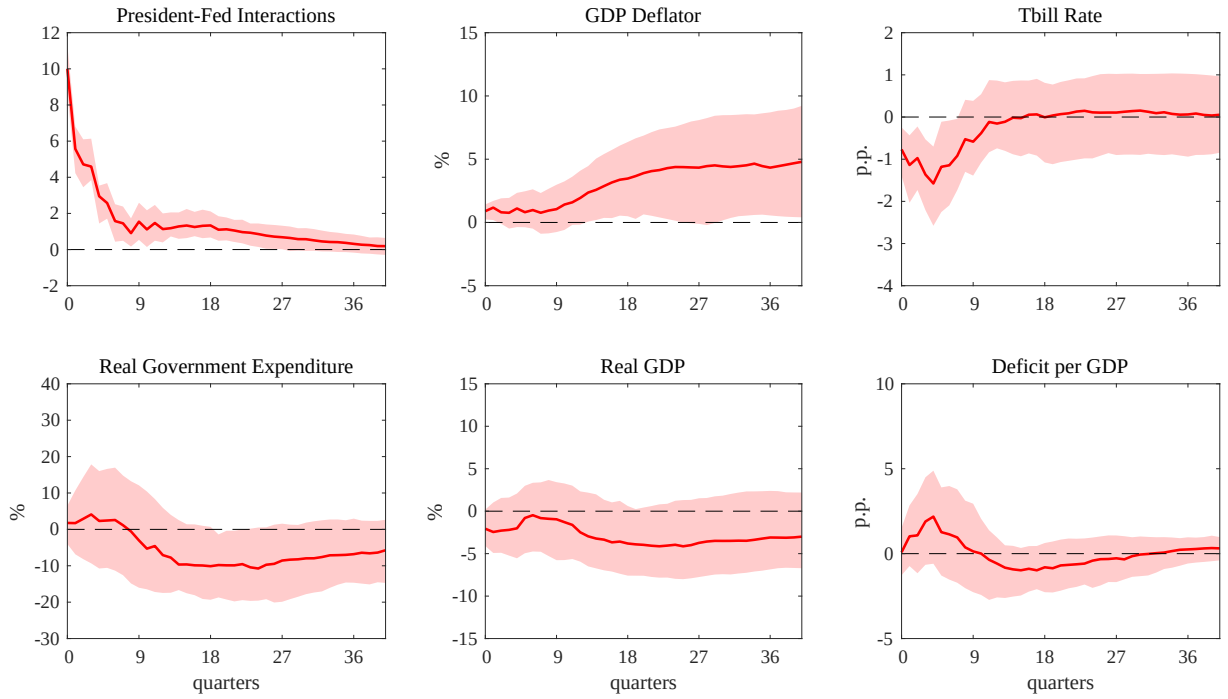


Notes. The red lines and red shaded areas represent the median IRFs and 68% credible intervals to a political pressure shock, using an alternative President-Fed interaction time series that excludes meetings in which we know other meeting participants were present. The sample is 1933:Q1-2016:Q4.

C.4 Alternative Lyndon B. Johnson episode

In the main text, I exploit the behavior of President Lyndon B. Johnson as additional identifying variation. There are different arguments for what is the right timing of the narrative sign restriction during his Presidency. While in the main text I impose a narrative restriction for 1967:Q1, Figure C.6 instead uses 1965:Q4 (in addition to all restrictions previously imposed). This is when LBJ invited Fed Chair Martin to his farm and strongly pressured him, though Martin reportedly resisted the pressure. The inflation impact is weaker and less precisely estimated than in the main text, but I still estimate an important impact on inflation.

Figure C.6: IRFS TO A POLITICAL PRESSURE SHOCK ALSO INFORMED BY LYNDON B. JOHNSONS' PRESSURE

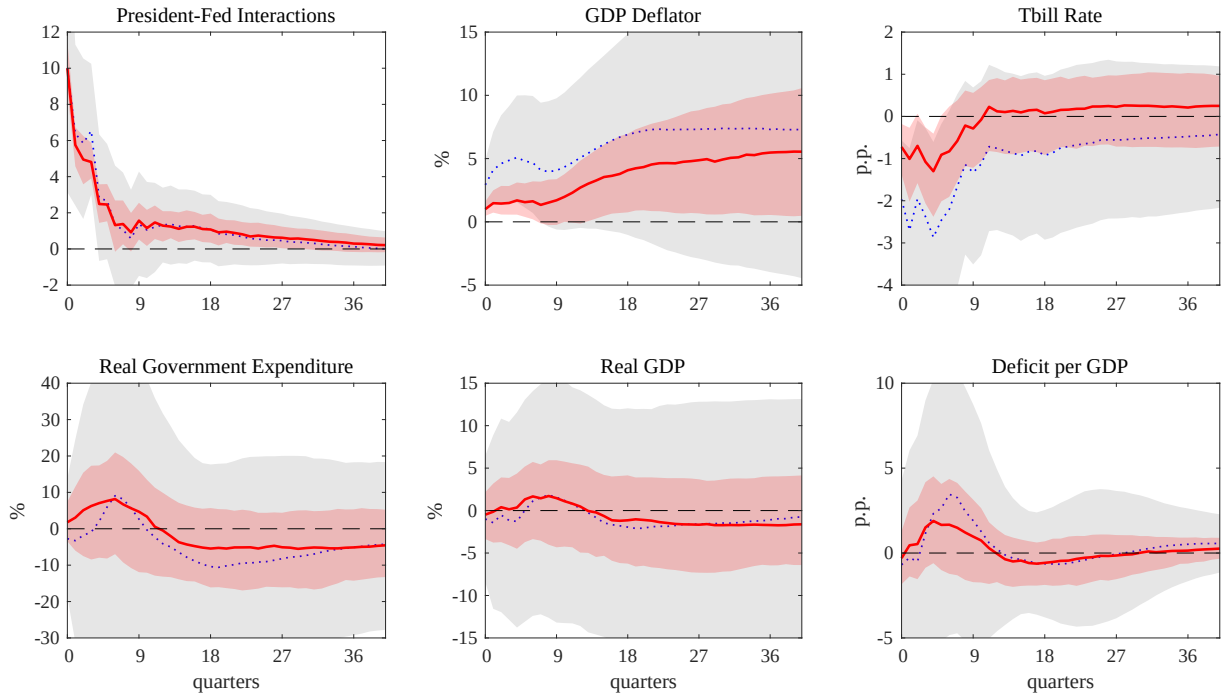


Notes. The red solid lines and red shaded areas represent the median IRFs and 68% credible intervals to a political pressure shock, defined by the restrictions in Table 1 and imposing 1965:Q4 as an additional narrative sign restriction on the President-Fed interaction variable. This is an alternative to my use of LBJ's pressure in the main text, where I use 1967:Q1. The sample is 1933:Q1-2016:Q4.

C.5 Modified identifying restrictions

Timing of traditional sign restrictions. Figure C.7 shows the IRFs of my SVAR when I modify the timing of the traditional sign restriction on inflation. The inflation response here is imposed to be positive after 4 quarters instead of on impact. As for Figure 7 in the main text, I plot IRFs based on traditional sign restrictions only (in blue/gray) and those with the narrative sign restrictions added on top (red). The results are quite similar to the main results in the text.

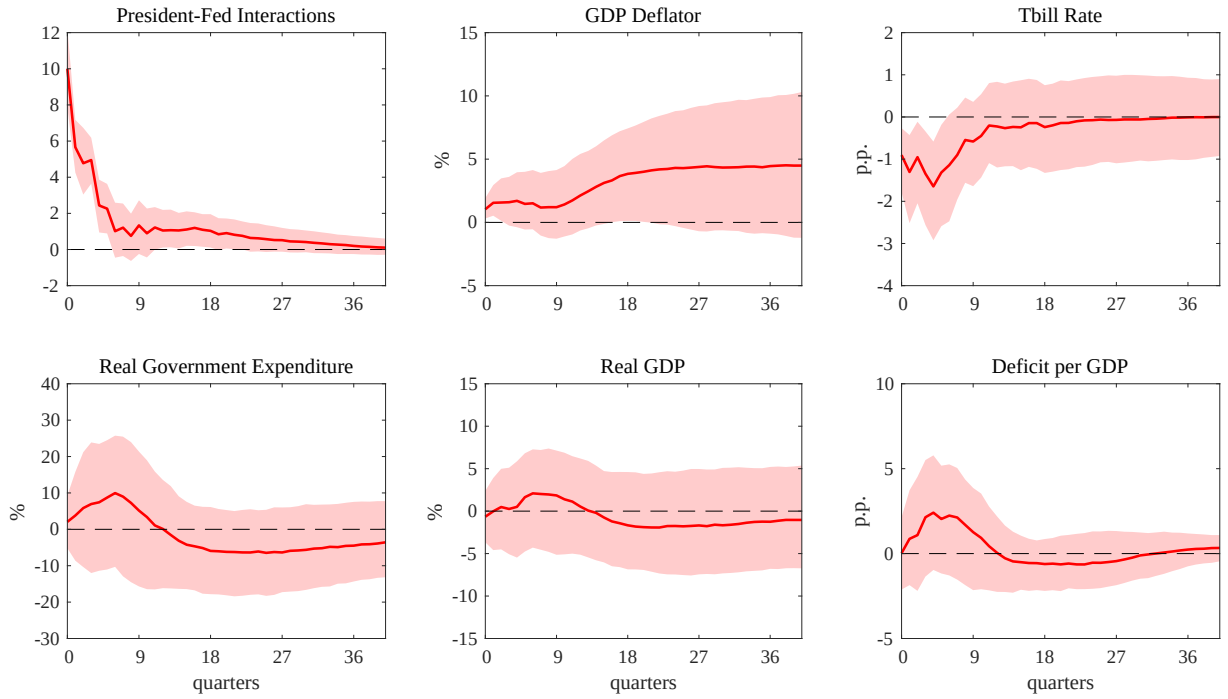
Figure C.7: IRFS TO A POLITICAL PRESSURE SHOCK WITH ALTERNATIVE SIGN RESTRICTION



Notes. The red lines and red shaded areas represent the median IRFs and 68% credible intervals to a political pressure shock, with sign restrictions that are different from the main text: the inflation response is imposed to be positive after 4 quarters instead of on impact. The blue lines and gray shaded areas correspond to a shock identified *without* the narrative sign restrictions. The sample is 1933:Q1-2016:Q4.

Strength of narrative restriction. Figure C.8 shows the IRFs for the alternative narrative sign restriction that is of the "most important" type rather than the "overwhelming" type. Instead of having a more important contribution to President-Fed interactions in 1971:Q3-Q4 than the *sum* of all other shocks, the political pressure shocks is imposed to have a more important contribution that *any* other shock in the same period. See also the more detailed discussion of these different versions of narrative sign restrictions in Antolin-Diaz and Rubio-Ramirez (2018). The results are quite similar to the main results in the text, though with slightly wider posterior bands.

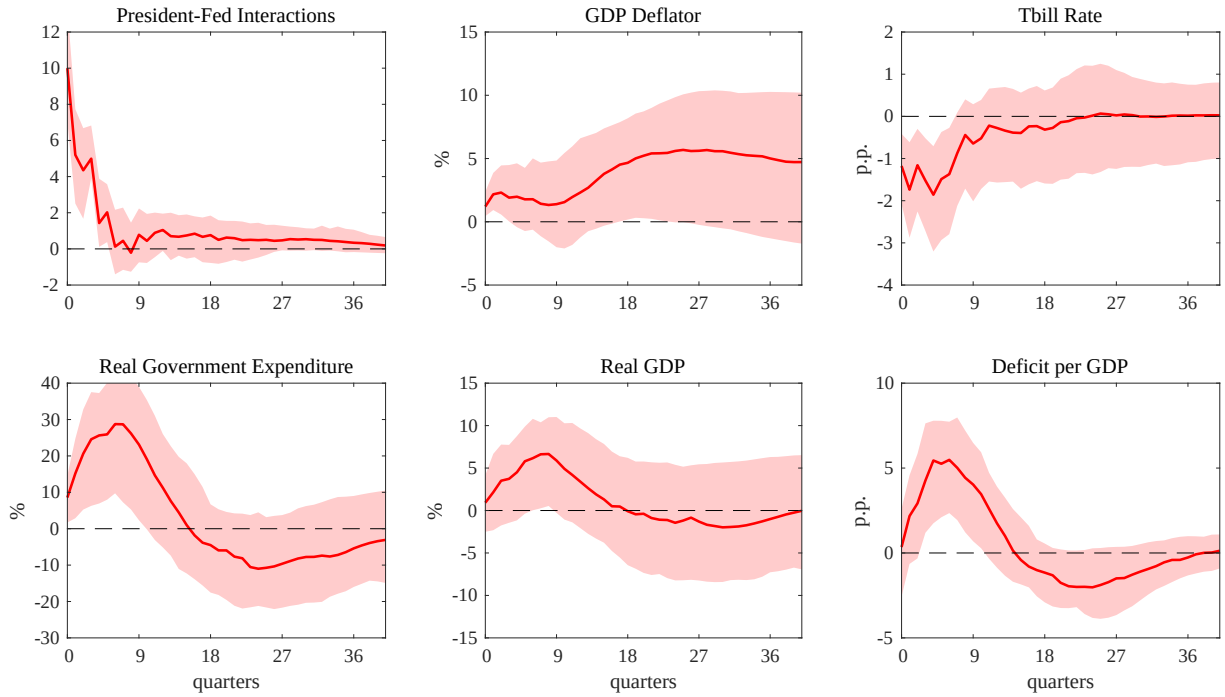
Figure C.8: IRFS TO A POLITICAL PRESSURE SHOCK WITH LESS RESTRICTIVE NARRATIVE ASSUMPTION



Notes. The red lines and red shaded areas represent the median IRFs and 68% credible intervals to a political pressure shock, with a narrative sign restriction that is different from the main text: instead of having a more important contribution to President-Fed interactions in 1971:Q3-Q4 than the *sum* of all other shocks, the political pressure shocks is imposed to have a more important contribution that *any* other shock. The sample is 1933:Q1-2016:Q4.

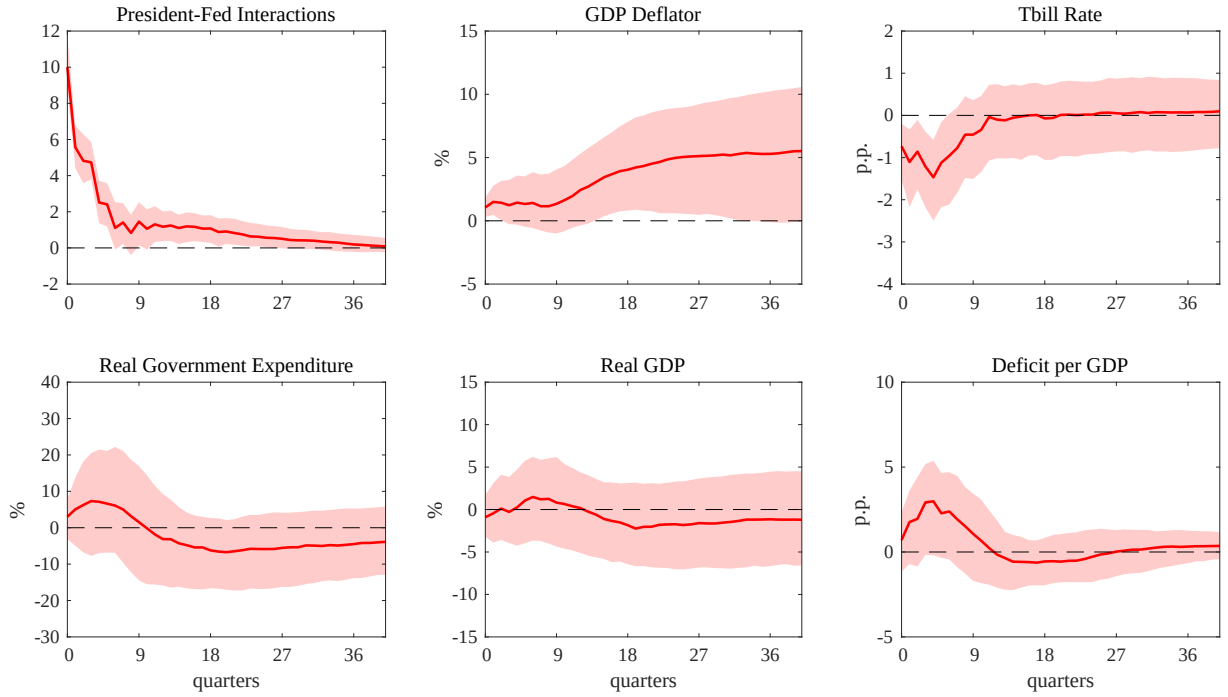
Timing of narrative restriction. Figures C.9 and C.10 vary the timing of the narrative sign restriction on the President-Fed interaction variable. In the main text, I use 1971:Q3 and 1971:Q4. Here is use either only 1971:Q4 or 1972:Q1 and 1972:Q2 as alternatives. The response of inflation in both cases is not very different. One reason that this is reassuring is that the quarters I am using here exclude August 15, 1971 which is when the suspension of Bretton Woods occurred, a potentially important confounding factor.

Figure C.9: IRFS TO A POLITICAL PRESSURE SHOCK WHEN RESTRICTION IS IMPOSED ON 1971:Q4 ONLY



Notes. The red lines and red shaded areas represent the median IRFs and 68% credible intervals to a political pressure shock, with a narrative sign restriction that is different from the main text: instead being the most important driver of President-Fed interactions in 1971:Q3 and in 1971:Q4, the political pressure shocks is imposed to the most important driver only in 1971:Q4. This excludes for in particular August 15, 1971 which is when the suspension of Bretton Woods occurred. The sample is 1933:Q1-2016:Q4.

Figure C.10: IRFS TO A POL. PRESSURE SHOCK WHEN RESTRICTION IS IMPOSED ON 1972:Q1-Q2 INSTEAD

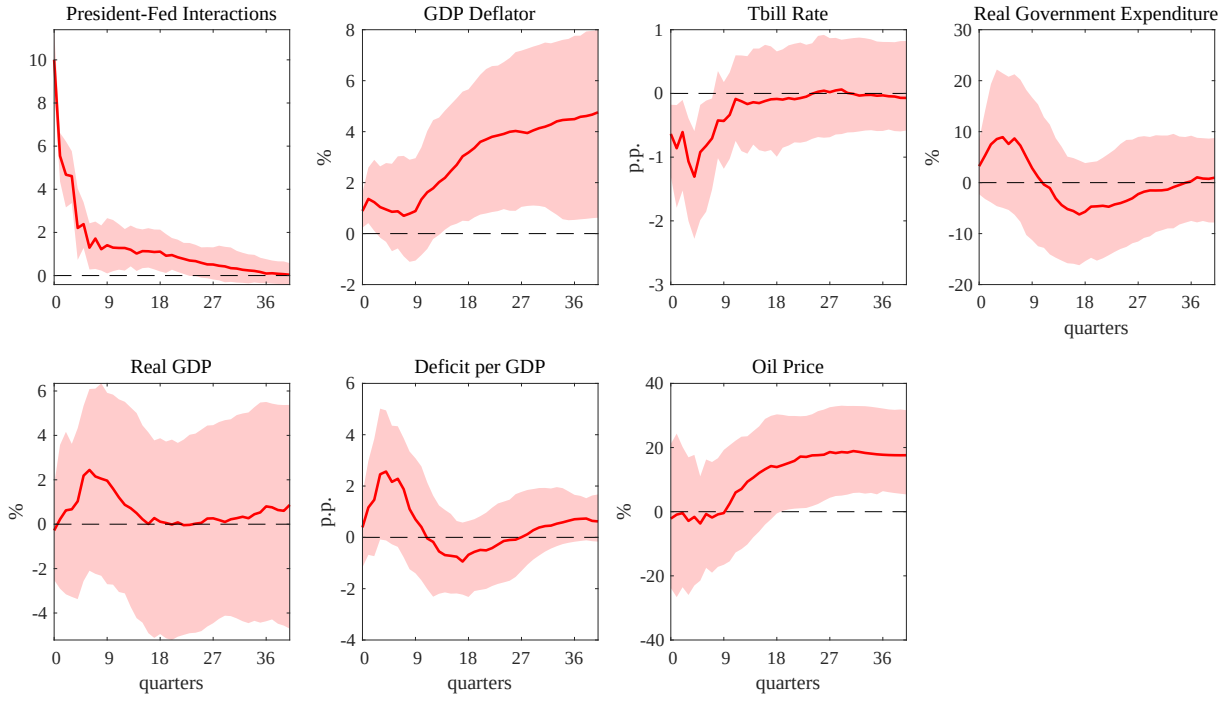


Notes. The red lines and red shaded areas represent the median IRFs and 68% credible intervals to a political pressure shock, with a narrative sign restriction that is different from the main text: instead being the most important driver of President-Fed interactions in 1971:Q3 and 1971:Q4, the political pressure shocks is instead imposed to the most important driver 1972:Q1 and 1972:Q2, so the timing is shifted back by 6 months. The sample is 1933:Q1-2016:Q4.

C.6 Adding oil prices to the system

Figure C.11 corresponds to Figure 7 in the main text, but includes oil prices as an additional unrestricted variable in the SVAR system. The motivation for this exercise is that important oil supply shocks occurred in the 1970's. As these also impact inflation, omitting developments in oil markets in my main analysis based on exploiting variation during the Nixon Presidency might be a concern. The IRFs show that including oil prices does not materially impact my findings. In particular the response of the GDP deflator is similarly strong and persistent as in the results in the main text. The response of real GDP becomes much noisier. Interestingly, oil prices increase a few years after the political pressure shock.

Figure C.11: IRFS TO A POLITICAL PRESSURE SHOCK CONTROLLING FOR OIL PRICES



Notes. The red lines and red shaded areas represent the median IRFs and 68% credible intervals to political pressure shock. An oil price index is added to the system as an unrestricted variable. The sample is 1933:Q1-2016:Q4.

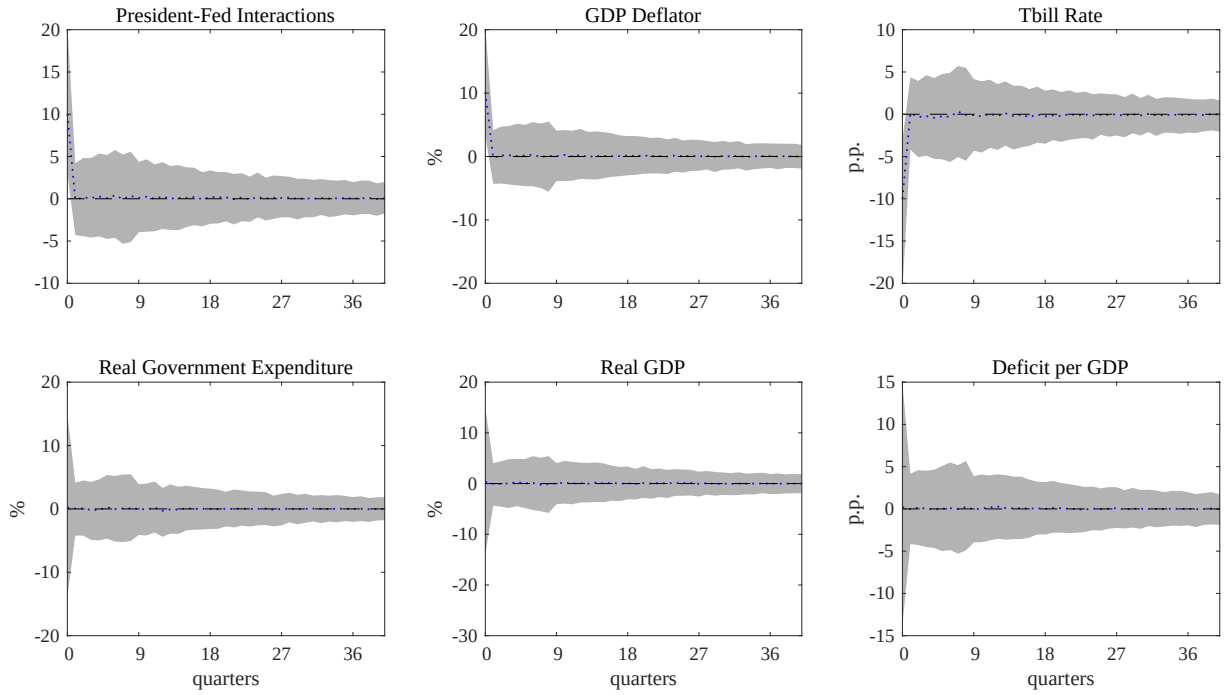
C.7 Examining the role of prior information

To examine the potential effect of prior information on my findings, I generate IRFs by drawing directly from the prior, not using any information from the data. This exercise is intended to alleviate the concern raised by some authors in the Bayesian SVAR literature that a researcher might unwillingly impose prior information on the IRFs of individual variables to a structural shock of interest. This concern was originally raised by Baumeister and Hamilton (2015). Arias et al. (2023) provide a response to Baumeister and Hamilton (2015) with further clarifications.

Specifically, I compute IRFs of the six variables in my SVAR system in the following way. In the sampling algorithm, I generate draws directly from the prior. Recall from the main text that I directly follow Antolin-Diaz and Rubio-Ramirez (2018) in the prior settings. I take these draws by simply skipping the algorithm step in which the likelihood of the data is used to compute the posterior. I then impose the traditional sign restrictions from Table 1 on the IRFs by discarding those draws that do not conform with the sign restrictions. What I obtain are the IRFs "at the prior", that is, IRFs that do not incorporate information from the data. If these IRFs were to look anything like my results, this would mean that my findings rely on imposing specific prior information, which was not my intention.

Figure C.12 shows the 68% inner interval among these draws. It is visible that the President-Fed interaction variable, the GDP deflator and the Tbill rate show an impact response different from zero, which is mechanically imposed by the sign restrictions. However, after the initial period, all IRF draws are symmetrically centered around 0. The important dynamics that I highlight as part of my findings, such as the large and persistent increase of the GDP deflator, are not visible here. Hence, they are evidently not a consequence of (unwillingly) imposing prior information.

Figure C.12: IRFS IMPLIED BY DRAWING FROM THE PRIOR AND IMPOSING SIGN RESTRICTIONS



Notes. The dotted lines and gray shaded areas represent the median and 68% intervals among draws of the IRFs that only use prior information and traditional sign restrictions.

D Public opinion polls during the Nixon Presidency

Figure D.1 presents the public approval rating of Richard Nixon over his Presidency, from January 1969 to August 1974. It plots the percentage of survey participants who respond that they approve of the president in the Gallup opinion poll. Burns' appointment as Fed Chair and the November 1972 election are indicated as vertical lines. The shaded area captures 1971:Q3 and 1971:Q4, the periods in which I impose the narrative sign restriction on the President-Fed meeting variable. (Source of the polling data: UC Santa Barbara, *The American Presidency Project*).

Figure D.1: NIXON'S PUBLIC APPROVAL RATING ACCORDING TO GALLUP POLLS

