The Partisanship of Financial Regulators*

Joseph Engelberg

Matthew Henriksson

Asaf Manela

Jared Williams‡

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Abstract: We analyze the partisanship of Securities and Exchange Commissioners (SEC) and members of the Federal Reserve Board of Governors (Fed) using the language-based approach of Gentzkow, Shapiro, and Taddy (Econometrica, 2019). The level of partisanship among these regulators is greater than that of Congress, but this is driven by a handful of speakers who repeat polarizing phrases across several speeches. When we quantify how much Republican (Democrat) regulators sound like Republicans (Democrats) in Congress we find no discernible pattern among Fed governors but a recent spike among SEC commissioners.

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‡ Contact: Joseph Engelberg, University of California – San Diego, Rady School of Management, (Email) jengelberg@ucsd.edu (Tel) 858-822-7912; Matthew Henriksson, University of South Florida, Muma College of Business, (Email) mhenriksson@mail.usf.edu; Asaf Manela, Washington University St. Louis, Olin Business School, (Email) amanela@wustl.edu; and Jared Williams, University of South Florida, Muma College of Business, (Email) jwilliams25@usf.edu.

"*Had anyone sat through every meeting while I was on the Commission, that person could never have told which of the Commissioners were Republicans and which were Democrats.*"

—A. A. Sommer Jr., SEC Commissioner from 1973-1976, in a 1996 speech

I. Introduction

Most believe that the Securities and Exchange Commission (SEC) and the Federal Reserve (Fed) should be politically independent, and for good reason. A politically-motivated central bank or securities regulator can lose credibility and maximize short-term political objectives to the detriment of long-term stability.[1]

For this reason, both government agencies have structures in place that are meant to immunize them from politics. At the Fed, Governors cannot be discharged for policy reasons; bank presidents are not appointed by politicians and have 14-year terms; elected officials may not serve on the Board; and funding is not dependent upon Congress. According to the Fed, this structure is meant "to ensure that its monetary policy decisions…do not become subject to political pressures that could lead to undesirable outcomes."[2] At the SEC, the agency does not report to the White House; existing Commissioners cannot be removed without cause; and no more than three of its five Commissioners may belong to the same political party. According to the SEC, this is "to ensure that the Commission remains non-partisan."[3]

Although the Fed and the SEC have institutional features that are designed to protect them from partisanship, the world around them has become increasingly partisan. Moskowitz, Rogowski, and Snyder (2017) find increasing polarization in Congressional voting, while Gentzkow, Shapiro, and Taddy (2019) – hereafter GST – find increasing polarization in Congressional speech. The general public has also become significantly more politically polarized

[1] See https://www.federalreserve.gov/newsevents/testimony/kohn20090709a.htm, https://www.federalreserve.gov/faqs/why-is-it-important-to-separate-federal-reserve-monetary-policy-decisions-from-political-influence.htm and https://www.americanbar.org/publications/blt/2016/12/09_karmel.html.
[2] See https://www.federalreserve.gov/faqs/about_12799.htm.
[3] See https://www.sec.gov/Article/about-commissioners.html.

in recent years. A couple decades ago, there was significant ideological overlap between the two major political parties. In 1994, the median Democrat (when ranked by ideology) was more liberal than just 64% of Republicans, and the median Republican was more conservative than just 70% of Democrats. Since then, the political parties have become more ideologically divided: by 2014, the median Democrat was more liberal than 92% of Republicans, and the median Republican was more conservative than 94% of Democrats. People's views towards the opposing party have also become more negative: in 1994, only 16% of Democrats and 17% of Republicans had "very unfavorable" views towards the other political party. By 2014, those percentages had risen to 38% and 43%, respectively.[4]

Given the independence of the SEC and the Fed and the increasing partisanship which surrounds them, we ask two questions: (1) do we find any systematic evidence of political polarization among SEC Commissioners and Fed Governors and (2) if so, is their partisanship increasing over time?

To address these questions, we analyze the speech of SEC Commissioners and Fed Governors from 1930 to 2016. As GST observe, Democrats and Republicans essentially speak different languages. Whereas Democrats use terms like "estate tax" and "tax break," Republicans use terms like "death tax" and "tax reform" to describe the same phenomena. We follow GST and measure partisanship as the ease with which someone can guess the speaker's party based solely on the speaker's word choice. This approach will identify high levels of polarization when SEC Commissioners and Fed Governors of one party consistently use language that is rarely used by the other party.

In achieving this goal of a language-based polarization measure for financial regulators, we take two approaches. The first approach relies on the leave-out estimator of GST *based only*

[4] Source: Pew Research Center poll. See, e.g., http://www.people-press.org/2016/06/22/1-feelings-about-partisans-and-the-parties/ , http://www.people-press.org/2017/10/05/the-partisan-divide-on-political-values-grows-even-wider/ , and http://www.people-press.org/2014/06/12/section-1-growing-ideological-consistency/#interactive.

on the speech of financial regulators. We refer to this as our "*internal*" measure of regulator partisanship. This approach identifies to what extent Republican regulators and Democratic regulators sound different. For example, if Republican SEC Commissioners in the 1990s used the term "burdensome regulation" more than Democratic SEC Commissioners, then this would contribute to a higher value for our internal partisanship measure in this decade.

The second approach estimates the model of GST *based on the speech of members of Congress* and then applies the model to the speech of regulators. We call this our "*Congress-based*" measure of regulator partisanship. This approach identifies the similarity of financial regulators' speech to the Congressional politicians of their own party (vis-à-vis Congressional politicians of the opposing party).

We conduct our analysis separately for each decade for two reasons. First, the issues that divide Republicans and Democrats change over time, and the political parties realign whenever one party alters its policies and attracts a constituency that used to reliably vote for the other party. More importantly, by conducting our analysis separately each decade we can detect any trends in language-based partisanship. For example, consider our measure of Congress-based partisanship. If Congressional Democrats in the 2010s used the term "climate change" much more than Congressional Republicans, and we saw Democratic SEC Commissioners also use this term disproportionately in the 2010s, then this would contribute to a higher value for our Congress-based partisanship measure in this decade.

For both of our measures of partisanship, we find that our methodology classifies certain phrases as being affiliated with a particular political party in ways that we expected a priori. For example, in the 2010's, Republican SEC commissioners seemed more concerned about the unintended consequences of regulation than Democratic commissioners; Per 100,000 phrases, Republicans spoke about unintended consequences 107 times, while Democratic commissioners only mentioned it 11 times. In contrast, for every 100,000 phrases, Democratic commissioners talked about a "lack of diversity" or "lacking diversity" 116 times, and they mentioned "board

diversity" 99 times; Republican commissioners never mentioned any of these phrases in their speeches. These examples suggest that Republican and Democratic commissioners might differ systematically in the phrases that they use and the issues that they choose to discuss in their speeches.

In fact, when we consider our internal measure of partisanship, we find that SEC Commissioners and Fed Governors are even more partisan with their language than members of Congress. The measure of partisanship represents the average probability that an observer with a neutral (50/50) prior can correctly predict the speaker's party after hearing a single phrase. For example, GST find, and we confirm, that members of Congress have an average partisanship of 50.7% which rises to 53.0% in the most recent decade. We find that SEC Commissioners and Fed Governors exhibit average partisanship of 54.9% and 57.3% respectively during our period and 55.2% and 57.2% in the final decade. This means that for members of Congress, we could correctly predict the party affiliation of the speaker 53.0% of the time based on a single phrase during the last decade, but for the regulatory agencies, we could correctly predict a speaker's partisan affiliation 54.9% of the time in the SEC and 57.3% of the time in the Fed.

Further analysis suggests this higher level of partisanship among regulators is driven by a handful of individuals who consistently use polarizing phrases across several speeches. Specifically, when we construct the leave-out estimator at the *speaker* level, rather than the speech level, we find little evidence of partisanship among SEC Commissioners or Fed Governors. This is understandable given the relatively small number of Commissioners and Governors; individual regulators who speak often can have substantial effects on our internal measure. In addition, given the SEC's rules prohibiting more than three commissioners of the same party serving at the same time, our speaker-level leave-out estimator can only detect partisanship if at least 2/3 of Republicans or Democrats serving on the commission speak like partisans; if at least half of the commissioners from each political party speak in a non-partisan fashion, then our speaker-level leave-out estimator would not be able to detect *any* degree of partisanship.

When we turn to our Congress-based measure, we find levels of partisanship which are smaller than members of Congress. In other words, when we use Congressional text to define partisan language, Republican and Democrat regulators use these partisan words less frequently than Republicans and Democrats in Congress.

For Fed Governors, we find no meaningful evidence of Congress-based partisanship throughout our 90-year sample. In other words, Republican (Democrat) Fed Governors do not sound like Republican (Democrat) members of Congress. For SEC Commissioners, however, we do find evidence of Congress-based partisanship. Moreover, this partisanship is increasing and peaks in the most recent decade. In other words, Republican (Democrat) SEC Commissioners do sound like Republican (Democrat) members of Congress and more so in the current decade. For example, SEC Commissioners exhibit partisanship of 51% since 2010. This means a single utterance increases the probability of choosing the speaker's correct party affiliation from 50 to 51 percent.

II. Data and Methodology

A. Speech Data

We analyze text from three US governing bodies: The Securities and Exchange Commission (SEC), the Federal Reserve System (Fed), and Congress.

[Insert Table 1 Here]

The first body of text we analyze are speeches from SEC Commissioners. We collect all historical SEC speeches that are publicly available, spanning a 90-year period from 1930 to 2016.[5] Prior to cleaning the text, all speeches are first converted into text files. Because many speeches are only available as pdfs, we convert the pdfs to text files using optical character recognition

[5] See http://sec.gov/news/speeches.

(OCR) software. Once speeches are all in text format, we apply a similar cleaning process to GST's procedure. First, we remove stopwords, punctuation, and numbers using Python's NLTK package. Second, we reduce the remaining words to their stems.[6] Third, we group the remaining stems into two-word phrases, also referred to as "bigrams." Fourth, to reduce sparsity and unnecessary computational challenges, we limit the analysis to those phrases that occur at least 30 times across all speeches and spoken by at least two unique speakers.[7] Fifth, we manually remove phrases that are likely to be procedural, names of Commissioners, and U.S. locations that may simply represent the speech location. Sixth, we use only those speeches that are spoken by Commissioners who belong exclusively to one of the two major U.S. political parties, Republicans and Democrats. SEC Commissioner political affiliations are publicly available on the SEC's website.[8] After this cleaning procedure, the SEC sample contains 8,184 unique phrases spoken a total of 660,643 times. Because speech, policies, and partisan ideologies can change over time, we aggregate the text at the decade level. The sample has 119 unique decade-speakers and 2,583 unique speeches. Panel A of Table 1 shows how these totals are distributed across time for the SEC.

Our second body of text includes statements and speeches from members of the Board of Governors at the Fed.[9] After employing the same cleaning process as we did with the SEC text and restricting to the same sample period, the Fed text sample contains 18,495 unique phrases spoken a total of 1.5 million times. The sample has 127 unique decade-speakers and 4,352 unique speeches. Panel B of Table 1 shows how the Fed counts vary by decade. Because Fed speakers' political party affiliations are not all publicly available, we use the political party of the appointing president when the speaker's political affiliation cannot be observed from public information

[6] More information available at http://snowballstem.org/.
[7] This restriction is similar in nature to that applied by GST but adjusted for the smaller number of speakers and volume of text in the SEC.
[8] See http://sec.gov/about/sechistoricalsummary.htm.
[9] See https://fraser.stlouisfed.org/series/3763.

sources.[10] We provide more detail concerning the party assignments of SEC Commissioners and Fed Governors in the Appendix.

The congressional text comes from the *United States Congressional Record* beginning with the 43rd Congress and continuing through the 114th Congress and is the same data used by GST.[11] The data are originally obtained from HeinOnline and are also pre-processed into bigrams, after stemming and removing noise (such as stopwords, procedural phrases, and punctuation).[12] Additionally, we apply the same frequency restrictions to the congressional text as GST. That is, across the time period we analyze (1930-2016), the phrase must have occurred: (1) at least 10 times in at least one congressional session, (2) in at least 10 unique speaker-sessions, and (3) at least 100 times across all sessions. The remaining congressional sample contains 443,591 unique phrases spoken a total of 228 million times. The sample has 7,990 unique decade-speakers and 23,108 unique speaker-sessions. Panel C of Table 1 shows how the congressional sample varies across decades.

[Insert Figure 1 Here]

We analyze these three bodies separately at first. We also focus on those phrases that are common among financial regulators and Congress. To illustrate, Figure 1 shows a Venn diagram of the unique phrase counts in the various intersections of the three bodies we study. Regions A, B, and C represent the number of unique phrases only spoken in the SEC, the Fed, and Congress, respectively. Region D represents the number of unique phrases that occur in the SEC and Fed, but not Congress. Region E represents the number of unique phrases that occur in the SEC and

[10] Of the 19 speakers in our sample for whom we can identify the party affiliation from public information sources, 17 match the political party of the president who appointed them. Thus, the appointing president's party affiliation appears to be a strong proxy for the Fed Governors' party affiliation.
[11] GST make the entire congressional text data publicly available with documentation at https://data.stanford.edu/congress_text.
[12] For a more detail description of the congressional data source, see section 2 of GST.

Congress, but not the Fed. Region F represents the number of unique phrases that occur in the Fed and Congress, but not the SEC. Finally, region G represents the number of unique phrases that occur in all three samples. We can observe the samples overlap a fair amount as the majority of the SEC and Fed unique phrases also appear in Congress. When analyzing within the SEC (Fed), we use all phrases in regions A (B), E (F), D, and G. However, when measuring congressional similarity in these financial regulating bodies, we analyze only those phrases that appear in the intersection with Congress. For instance, when measuring congressional similarity in the SEC (Fed), we use those phrases that appear in regions E (F) and G.

B. Measuring Partisanship

Following GST, we define partisanship as the accuracy at which an observer, who has a neutral prior and who understands the speech-generating process modeled by GST, could guess a speaker's party based solely on observing the speaker's choice of a single phrase. More specifically, we adopt the leave-out estimator from GST to address a potential finite sample bias that arises in high-dimensional settings such as ours.[13]

The observed text is represented by phrase counts c_{ijt} for speech i counts of phrase j at time t, where time is measured by decade. The total phrase count for a speech i is denoted by $m_{it} = \sum_j c_{ijt}$. For each political party $P \in \{D, R\}$ and each phrase j (and each decade t), let q_{jt}^P be defined by $q_{jt}^P = \frac{\sum_{i \in P} c_{ijt}}{\sum_{i \in P} m_{it}}$, where we let "$i \in P$" denote the event that speech i was given by someone in political party P. Note that q_{jt}^R represents the proportion of Republicans' speech in decade t that phrase j comprises, and q_{jt}^D represents the analogous statistic for Democrats' use of phrase j in decade t. Let $\boldsymbol{q}_t^P$ (where $\in \{D, R\}$) denote the vector whose elements consists of the values q_{jt}^P

[13] GST also propose a penalized estimator that allows conditioning on additional covariates, but because we do not have additional information about the speakers in our sample, we prefer the simpler leave-out estimator.

for all phrases j. In other words, $\boldsymbol{q}_t^P$ is a vector with J_t elements, where J_t is the total number of distinct phrases spoken in decade t, and the elements of $\boldsymbol{q}_t^P$ sum to one.

If $\boldsymbol{q}_t^D$ and $\boldsymbol{q}_t^R$ are close to one another, Republicans and Democrats speak a similar language whereas if they are far apart, Republicans and Democrats exhibit partisanship in their speech. Hence, in order to measure partisanship, one simply has to determine whether the vectors $\boldsymbol{q}_t^D$ and $\boldsymbol{q}_t^R$ are close together or far apart. We follow GST's methodology to deal with the finite sample biases that can arise in this setting.

Let $q_{-i,j,t}^P$ be the analog of q_{jt}^P, except that speech i is excluded in the calculation. Formally,

$$q_{-i,j,t}^P = \frac{\sum_{k \in P \setminus \{i\}} c_{kjt}}{\sum_{k \in P \setminus \{i\}} m_{kt}} \tag{1}$$

where "$k \in P \setminus \{i\}$" denotes the event that $k \neq i$ is a speech by a member with partisan affiliation P. Let $\rho_{-i,j,t}$ be defined as

$$\rho_{-i,j,t} = \frac{q_{-i,j,t}^R}{q_{-i,j,t}^R + q_{-i,j,t}^D}. \tag{2}$$

As noted by GST, $\rho_{-i,j,t}$ is the posterior belief that an observer with a neutral prior assigns to a speaker being Republican if the speaker chooses phrase j in decade t.[14]

Let $\boldsymbol{\rho}_{-i,t}$ denote the vector whose elements consist of the values $\rho_{-i,j,t}$ for all phrases j. We follow GST in defining partisanship in decade t as

$$\pi_t = \frac{1}{2}\frac{1}{|R_t|}\sum_{i \in R_t} \boldsymbol{q}_{i,t}^R \cdot \boldsymbol{\rho}_{-i,t} + \frac{1}{2}\frac{1}{|D_t|}\sum_{i \in D_t} \boldsymbol{q}_{i,t}^D \cdot \left(1 - \boldsymbol{\rho}_{-i,t}\right), \tag{3}$$

[14] Technically, $\rho_{-i,j,t}$ is the plug-in estimator (excluding speech i) for the posterior belief of such an observer.

where R_t and D_t denote the set of Republican and Democratic regulatory speeches in decade t.

Recall that in the definition above, $\boldsymbol{\rho}_{-i,t}$ is a vector of elements, each element corresponding to a specific phrase; specifically, each element in the vector corresponds to the posterior probability that an observer with a neutral prior would place on a speaker being a Republican given that the speaker chose to use phrase j. Recall further that the vector $\boldsymbol{\rho}_{-i,t}$ is estimated excluding speech i. There are two natural sources of speech to examine when estimating $\boldsymbol{\rho}_{-i,t}$ for any given regulatory speech, i: the other regulatory speeches (from the given regulatory body), and Congressional speech. As such, we estimate two different variants of π_t, one for each source.

When $\boldsymbol{\rho}_{-i,t}$ is estimated based on other regulatory speeches (within the same regulatory body), we call the resulting measure of partisanship an *internal regulator partisanship* measure, which we denote by π_t^{IR}. Note that this internal measure of regulator partisanship is equivalent to the "leave-out estimator" of partisanship developed by GST in their section 4.2, except that we estimate it within the regulatory bodies, whereas GST estimate it within Congress.

When $\boldsymbol{\rho}_{-i,t}$ is estimated based on Congressional speech, we call the resulting measure of partisanship a *Congress-based regulator partisanship* measure, which we denote by π_t^{CB}. For example, consider the SEC. With the Congress-based regulator measure of partisanship, whether a given phrase is considered Republican or Democratic is based on Congressional speech (rather than the speech of the SEC commissioners). Hence, this measure captures the extent that financial regulators sound like Congressional politicians in their own party.

C. Inference and Validation

To gauge how sampling variance affects our inference from each sample, we follow GST and report subsampling-based 90% confidence intervals in all figures. Moreover, we report a

random permutation exercise, where we randomize party affiliations. Together, these measures give a sense of the statistical significance of the plotted series, that is, how much the estimated partisanship differs from the random assignment benchmark.

III. Results

A. Internal Regulator Partisanship

In this section, we analyze the partisanship within each financial regulating body described in Section IIB as internal regulator partisanship, π_t^{IR}.

[Insert Figure 2 Here]

Figure 2 shows the measure for each decade in the SEC (left) and the Fed (right). Recall that the plotted measure of average partisanship is an estimate for the average probability that an observer, who understands the speech tendencies of Republicans and Democrats, would correctly predict a speaker's party affiliation after hearing just a single phrase. In Panel A of Figure 2, we report this measure on the full SEC and Fed samples. Panel B (Panel C) uses just those phrases that also (do not) appear in the congressional sample. Across all three panels the results are nearly identical. At the SEC, we document a significant level of partisanship in all but two decades, the 1940s and the 1950s. The average partisanship across the entire sample is 0.549. The highest level of partisanship occur in the 1930s and 1990s at 0.597 and 0.580, respectively, which is statistically significant well below the 10% level as the confidence intervals are not close to overlapping. This means that an observer who understood the speaking tendencies of Republican and Democratic commissioners in the 1990s could correctly predict a random speaker's political party with 58% accuracy after hearing just a single phrase. Similarly, the Fed is consistent across panels of Figure 2 and actually shows an even more meaningful level of partisanship in every decade with an

average partisanship of 0.573. Together, both financial regulators exceed the levels documented in Congress by GST, which showed a maximum just below 0.540 in the 2010s.

[Insert Table 2 Here]

While Figure 2 plots the average partisanship from a single phrase, not all phrases contribute the same level of polarization. In Table 2 we report the top 10 most partisan phrases for each party by decade using the internal regulator partisanship measure for the SEC (Panel A) and the Fed (Panel B). We also report the predicted number of times each phrase will appear per 100,000 phrases for each party. To generate this list of phrases, we run the internal regulatory partisanship test 8,184 (18,495) times for the SEC (Fed), one time for each unique phrase. Each time we remove the phrase of interest to determine its influence on the overall partisanship measure. The phrases are then rank based on the reduction in partisanship when removing it from the sample, and they are assigned a party based on the relative frequency in each party.

Over recent decades, the list of most partisan phrases suggests that Republicans tend to favor less regulation than Democrats. SEC Republicans call for investor education, cost-benefit analysis, and warn about unintended consequences of regulation, while SEC Democrats emphasize Wall Street reform, board diversity, and consumer protection. Similarly, in the 2010s, Fed Republicans emphasize financial education and business owners, while Fed Democrats emphasize capital requirements.

On their monetary policy stance, Fed Democrats refer more often to the natural (or neutral) rate of interest (or unemployment), while Fed Republicans often mention inflation expectations in recent speeches. The political alignment with different issues changes, however, over this long history. In the 1980s, for example, a time of high inflation, Fed Republicans prefer to discuss the real rate of interest, while Fed Democrats emphasize inflation and its associated reduction in real income. In the 1950s and 1960s, farm credit dominates a large share of Fed

Republicans' speeches, while Fed Democrats' speech tends to mention credit to defense, real-estate, and thrift institutions.[15]

The main advantage of looking internally within a regulator is that some phrases are highly technical and specific to the regulator, so that they are unlikely to be used by Congress. For example, "sb sef" emphasized by SEC Republicans in the 2010s, refers to Security-based Swap Execution Facilities (part of the Dodd-Frank Act), which are meant to shift swap activity to centralized exchanges.[16] In the 1980s, "twotier bid" used frequently by SEC Democrats refers to a Two-tier takeover bid.[17] Overall, the table provides interesting summaries of the historical differential emphasis given by regulators affiliated by the two parties to different issues and attitudes toward regulation and monetary policy.

[Insert Figure 3 Here]

Recall that our internal regulator partisanship measure leaves out the speech i itself when estimating $\boldsymbol{\rho}_{-i,t}$. An alternative, more conservative leave-out estimator would exclude all speeches made by the person who gave speech i when estimating $\boldsymbol{\rho}_{-i,t}$. In Figure 3, we report the results when our internal measure of partisanship is measured in this more conservative manner. To ensure subsampling capabilities, we keep the unit of observation at the speech level, but the $\boldsymbol{\rho}$ vector values for each speech is calculated using only those speeches that are not spoken by the speaker who gave the speech of interest. In essence, this measure relies on the polarization coming from the similarity between someone's speech and the speech of others in his own party (excluding his own other speeches). This adjustment has significant effects on the levels of partisanship documented in Figure 2—the partisanship completely disappears across all time

[15] The Volunteer Credit Restraint Program relied on private creditors to fund defense industries. See https://www.jstor.org/stable/1336738.
[16] See https://www.sec.gov/news/press/2011/2011-35.htm
[17] See https://financial-dictionary.thefreedictionary.com/Two-tier+bid

periods in both samples. With the exception of Fed in the 1990s, all time periods predict the party affiliation no better than a random guess of 50%. Even in the full sample of 1990s speeches at the Fed, the measure drops from 0.572 to 0.515, a significant reduction.

The small sample size of the SEC commissioners likely explains why the estimated levels of partisanship differ so dramatically between the two leave-out estimators. Recall that there are only five commissioners at any point in time, and that there can be no more than three commissioners from the same political party at any time. Suppose that there are three types of commissioners. The first type are politically neutral. Although they are affiliated with a political party (Republican or Democrat), they are apolitical in their speech—they either avoid politically sensitive topics, or when they do address them, they are equally likely to discuss them like Democrats as Republicans. The second type are partisan Democrats who speak about the issues that Democrats care about, and they speak about them in the manner that Democrats generally speak about them. The third type are partisan Republicans.

Consider what would happen if the SEC were composed of one partisan Republican, one partisan Democrat, and three politically neutral commissioners. The partisan portion of the speech of the partisan Republican would be orthogonal to the speech of the other four commissioners. The same would be true of the partisan Democrat. Hence, in scenarios such as these, we would detect partisanship with our first leave-out estimator, but not the more conservative leave-out estimator used to generate Figure 3. In order to detect internal partisanship using the more conservative leave-out estimator, there would have to be *two* partisan commissioners of *the same party* serving at the same time. Since there are at most three commissioners serving in the same party at any time, the leave-out estimator used in Figure 3 is extremely weak and is unlikely to detect internal partisanship even if there are partisan commissioners at the SEC.

B. Congress-based Regulator Partisanship

In the previous section, we demonstrated that the small sample size of the SEC created difficulties for our internal measures of partisanship. In particular, the leave-out estimator computed excluding the speech of interest showed high levels of internal partisanship, but the leave-out estimator that excluded all speeches by the given speaker showed very low levels of internal partisanship. In this section, we estimate $\boldsymbol{\rho}_{-i,t}$ using the speech of members of Congress. These congressional phrase frequencies are described in Section IIB, and we refer to the resulting measure of partisanship as Congress-based regulator partisanship, π_t^{CR}. Recall for this measure, we will use only those phrases that appear in the financial regulating body of interest and Congress. [18]

[Insert Figure 4 Here]

First, Figure 4 validates that the congressional samples that intersect with SEC (Panel A) and Fed (Panel B) document the same pattern shown in GST. We chart the internal regulator partisanship measure on these congressional samples. The same pattern is consistent with that shown in GST, albeit to a lesser extent, which is likely due to removal of politically charged terms that are not relevant for the financial regulating bodies and therefore no longer appear. Across both samples, we see relatively low partisanship (around 0.503-0.505) until the 1990s when the measure increases to 0.507 (0.510) for Panel A (Panel B). It then continues to rise to 0.510 (0.513) in the 2000s for Panel A (Panel B) and is strongest at 0.518 (0.522) in the 2010s. The "random" series is almost exactly 0.500 for all decades and never crosses that of the "real" series.

[Insert Figure 5 Here]

[18] From Figure 1, we use regions E and G for the SEC and regions F and G for the Fed.

Having validated the congressional samples, we can use them to measure the phrase polarization as detailed in Section IIB and apply them to the financial regulating bodies' frequencies to measure congressional similarity across political parties. Figure 5 graphs the Congress-based regulator partisanship measure on the SEC (Panel A) and Fed (Panel B). Although the Fed estimates show little partisanship, the SEC ones show an increasing pattern since the 1970s with strong and significant increase in the 2000s and most notably in the 2010s. It is worth noting the 1950s show slight significance as well, albeit with a much wider confidence interval. Still, the strongest decade (2010s) reaches 0.510 and is statistically significant well below the 10% level as the "random" series shows a meaningful deviation. While the SEC does not quite reach the level attained with these phrases in Congress (0.518), this provides evidence of spillover partisanship from Congress appearing in the SEC most recently.

[Insert Table 3 Here]

Once again, all phrases do not contribute evenly to this Congress-based regulator partisanship. In Table 3, we report the top 10 most partisan phrases for each party in each decade for the SEC (Panel A) and the Fed (Panel B). Similar to Table 2, we also show the predicted number of times each phrase will appear per 100,000 phrases for each party in the financial regulating body of interest. To generate this list of phrases, we run the Congress-based regulatory partisanship test 5,576 (12,865) times for the SEC (Fed), one time for each unique phrase in the intersection samples. Each time we remove the phrase of interest and then rank them based on the reduction in partisanship when removing it from the sample.

Interestingly, the most partisan Republican phrase in 2010-2016 SEC speeches is "corpor[ate] financ[e]," while the most Democrat phrase is "protect investor." The tendency of Republican regulators to favor less regulation than Democrats shows up in the top partisan phrase lists in a similar way that it did with the internal regulator partisanship approach. For example,

SEC Democrats emphasize investor and consumer protection, while SEC Republicans emphasize the unintended consequences of policy intervention. Interestingly, in the 1950s, SEC Republicans are the ones that call for protecting investors, while Democrats devote a large share of their speeches to investment companies.

Looking at Panel B for the Fed sample, shows that Fed Republicans currently emphasize business owners and worry about inflation expectations, which are more often used by Congress Republicans than Democrats. Fed Democrats, by contrast, often mention aggregate demand and unemployment.

IV. Conclusion

The Federal Reserve and SEC have institutional features that are designed to shield them from the effects of partisanship. In recent decades, these safeguards have been put to the test as the US political landscape has become significantly more polarized. Have the Fed and SEC been affected by this increased polarization? We addressed this question by examining the speeches of Federal Reserve Governors and SEC Commissioners.

Following the methodology developed by GST, we constructed two types of partisanship measures. To construct our internal regulator partisanship measure, we relied exclusively on the text of regulators. That is, we examined whether Republican and Democratic regulators exhibited systematic differences in their use of language. The magnitudes of partisanship were sensitive to our choice of leave-out estimator—when we excluded a given speech in our estimation of partisanship, we found levels of partisanship among SEC commissioners and Fed governors that exceeded the levels of partisanship among US congressmen and congresswomen. However, when we took a more conservative approach of excluding all speeches by the given speaker, we found no evidence of partisanship among the regulators. This non-result is not surprising due to the fact that there at most three SEC commissioners serving from the same party at any point in time; extreme partisans would have to comprise at least 2/3 of the Republican or Democratic

commissioners in order for us to detect any partisanship with this more conservative leave-out estimator.

Our Congress-based measure of partisanship classified speech as being "Republican" or "Democratic" based on the text of speeches by members of the US Congress. This approach essentially examines whether Republican (Democratic) regulators speak like Republican (Democratic) congressmen and congresswomen. With this approach, the Federal Reserve appears to be largely immune from the increased partisanship in American society. However, the SEC seems to have been affected, as there has been a significant increase in Congress-based regulator partisanship in the 2010's relative to earlier decades.

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Table 1: Decade Summary Statistics

This table shows the counts of unique two-word phrases (bigrams), total phrases, decade-speakers, and units of observation (speeches at the SEC/Fed and speaker-sessions at Congress) for each sample of text by decade. Panels A, B, and C show these summary statistics for the SEC, Fed, and Congress, respectively.

PANEL A: SEC

	Unique	Total Bigrams			Decade-Speakers			Speeches		
Decade	Bigrams	Total	R	D	Total	R	D	Total	R	D
1930s	4,393	22,436	5,834	16,602	13	2	11	117	18	99
1940s	4,277	21,100	9,173	11,927	14	4	10	80	26	54
1950s	5,496	51,023	42,994	8,029	16	9	7	164	138	26
1960s	5,528	33,191	12,864	20,327	13	8	5	118	46	72
1970s	7,343	100,405	56,875	43,530	13	9	4	351	212	139
1980s	7,501	99,798	49,802	49,996	15	7	8	318	157	161
1990s	7,068	58,344	33,617	24,727	10	6	4	277	142	135
2000s	7,709	161,344	103,805	57,539	18	10	8	759	516	243
2010s	7,164	113,002	49,313	63,689	7	4	3	399	185	214
Total	8,184	660,643	364,277	296,366	119	59	60	2,583	1,440	1,143

PANEL B: Fed

	Unique	Total Bigrams			Decade-Speakers			Speeches		
Decade	Bigrams	Total	R	D	Total	R	D	Total	R	D
1930s	7,228	30,851	13,770	17,081	13	6	7	122	43	79
1940s	10,255	60,931	19,957	40,974	10	2	8	241	76	165
1950s	11,999	81,954	23,044	58,910	13	4	9	322	90	232
1960s	14,974	136,324	13,587	122,737	13	3	10	430	60	370
1970s	16,839	240,751	136,779	103,972	21	10	11	667	441	226
1980s	16,949	233,415	132,834	100,581	16	11	5	584	353	231
1990s	17,069	246,513	191,705	54,808	14	8	6	689	552	137
2000s	17,342	344,046	258,232	85,814	15	10	5	886	679	207
2010s	15,080	172,641	60,491	112,150	12	4	8	411	154	257
Total	18,495	1,547,426	850,399	697,027	127	58	69	4,352	2,448	1,904

PANEL C: Congress

	Unique	Total Bigrams			Decade-Speakers			Speaker-Sessions		
Decade	Bigrams	Total	R	D	Total	R	D	Total	R	D
1930s	379,022	11,793,327	4,159,179	7,634,148	1,091	430	661	2,610	846	1,764
1940s	400,317	15,523,439	7,346,524	8,176,915	1,023	421	602	2,669	1,191	1,478
1950s	416,659	18,123,701	7,234,232	10,889,469	877	383	494	2,694	1,210	1,484
1960s	432,012	30,805,086	11,329,486	19,475,600	873	360	513	2,723	1,067	1,656
1970s	437,714	35,930,354	14,084,009	21,846,345	918	371	547	2,694	1,031	1,663
1980s	440,182	34,281,679	15,743,910	18,537,769	789	353	436	2,698	1,151	1,547
1990s	439,659	37,017,851	17,631,274	19,386,577	905	416	489	2,701	1,295	1,406
2000s	436,240	31,920,563	14,013,525	17,907,038	807	395	412	2,703	1,325	1,378
2010s	415,293	12,517,974	5,943,367	6,574,607	707	384	323	1,616	876	740
Total	443,591	227,913,974	97,485,506	130,428,468	7,990	3,513	4,477	23,108	9,992	13,116

Table 2: Internal Regulator Partisan Phrases

This table shows the 10 most partisan Republican and Democratic phrases by decade using the internal regulator partisanship measure, π_t^{IR}, as detailed in Section IIB for the SEC (Panel A) and the Fed (Panel B). Similar to GST, we also report the predicted number of times each phrase is said per 100,000 phrases spoken by Republicans and Democrats. To generate this list of phrases, we run the internal regulatory partisanship test 8,184 (18,495) times for the SEC (Fed). Each time we remove the phrase of interest to determine its influence on the overall partisanship measure. The phrases are then rank based on the reduction in partisanship when removing it from the sample, and they are assigned a party based on the relative frequency in each party.

PANEL A: SEC

1930s

Republican	#R	#D	Democrat	#R	#D
servic compani	1217	54	administ agenc	51	741
broker dealer	788	259	profit system	0	404
earn surplus	703	0	busi financ	0	235
oper compani	1526	217	busi men	17	331
balanc sheet	1131	193	way life	0	102
secur dealer	206	18	american busi	0	187
capit surplus	617	24	fiscal agent	0	235
invest banker	737	367	social econom	0	175
nation associ	291	54	custom men	0	217
profit loss	514	72	high financ	0	229

1940s

Republican	#R	#D	Democrat	#R	#D
insur compani	3227	419	foreign invest	0	310
competit bid	589	59	corpor financi	0	193
life insur	2780	268	american investor	33	268
invest compani	916	252	progress made	0	59
million share	65	0	within industri	0	101
purchas stock	120	8	get togeth	0	59
construc program	251	50	administ agenc	0	92
stock invest	305	0	full prospect	0	59
professi manag	65	0	nation world	0	75
feder agenc	142	8	public inform	0	17

1950s

Republican	#R	#D	Democrat	#R	#D
offer circular	223	0	raw materi	16	324
local govern	26	0	invest compani	1296	3014
broker dealer	514	87	mutual fund	181	760
mine industri	102	0	held account	0	349
secur sold	181	12	financi statemen	305	1233
rais capit	209	25	self regul	0	75
region offic	181	25	achiev object	0	50
issu secur	258	50	product capac	0	50
feder secur	367	112	mani other	0	87
protect public	181	25	would difficul	2	62

1960s

Republican	#R	#D	Democrat	#R	#D
independ agenc	78	0	hear examin	8	221
noaction letter	202	5	institut manag	0	162
piec paper	93	0	fund share	39	315
public relat	202	34	proxi insid	0	187
target compani	155	0	rais standard	8	108
provis act	148	15	type institut	0	84
transfer agent	109	15	offshor fund	0	143
convert secur	117	0	fund report	0	20
stock option	171	20	file compani	0	20
option plan	109	0	govern busi	0	64

1970s

Republican	#R	#D	Democrat	#R	#D
transfer agent	315	11	corpor account	72	448
commiss rate	404	110	commerci speech	0	94
secur activ	265	25	capit format	56	278
stock certif	123	5	regulato reform	42	221
tax shelter	98	5	conceptu framewor	28	221
bank regulato	169	14	manag integr	2	136
brokerag firm	204	41	mani instanc	40	165
fix rate	116	23	respons privat	28	124
public order	69	0	corpor profit	9	119
competit rate	139	18	second circuit	12	110

1980s

Republican	#R	#D	Democrat	#R	#D
clearanc settleme	333	18	twotier bid	4	244
settleme system	153	2	technolo financ	0	110
bookentr system	88	0	ventur capit	4	156
releas fed	88	0	account provis	10	146
act releas	478	142	option trade	16	136
necessar reflect	104	6	trebl damag	2	58
expir friday	60	0	grundfes commissi	2	88
potenti signific	10	0	regulato reform	24	130
municip secur	211	30	foreign issuer	68	300
electron bookentr	66	0	ny time	14	120

1990s

Republican	#R	#D	Democrat	#R	#D
eastern europ	250	4	sale practic	36	275
otc deriv	327	40	polici act	0	16
econom growth	190	8	interest investor	27	226
index futur	265	0	get fact	0	69
regulato agenc	196	12	place busi	0	97
onlin broker	137	0	orang counti	0	146
stock index	265	0	educ investor	12	162
insid trade	357	69	fund prospect	12	162
equiti secur	170	8	best practic	6	121
definedc plan	170	0	professi standard	0	93

2000s

Republican	#R	#D	Democrat	#R	#D
interact data	460	56	municip secur	65	440
histor societi	18	0	happi support	3	28
statemen open	64	10	sharehol access	23	191
regul sho	47	0	execut qualiti	17	165
redempt fee	65	0	respons privat	5	116
unintend consequ	126	12	polici disclaim	4	111
item agenda	47	0	employe view	4	111
investor educ	176	52	statemen employe	4	111
fund advisor	104	7	order flow	25	174
index annuiti	39	2	matter polici	6	115

2010s

Republican	#R	#D	Democrat	#R	#D
statemen open	247	8	investor advisori	14	132
costbene analysi	148	2	lack divers	0	116
sb sef	69	0	larg trader	6	71
proxi advisori	304	11	american public	4	49
alway look	32	2	street reform	61	188
prudenti regul	262	13	divers corpor	0	93
unintend consequ	107	11	reform consum	61	184
econom analysi	260	30	board divers	0	99
adopt final	75	27	consum protect	65	187
cost benefit	120	19	transpar effici	0	28

PANEL B: Fed

1930s

Republican	#R	#D	Democrat	#R	#D
nation incom	1605	146	forti year	0	18
immedi releas	36	0	pay tribut	0	18
nation debt	109	6	world larg	0	64
balanc budget	370	6	agricult polici	0	100
copi x	131	0	industri commerci	0	252
incom econom	22	0	feder open	22	410
privat enterpri	312	29	result effort	0	41
monetari polici	574	129	credit control	44	556
tho gold	312	0	privat manag	0	187
govern expendit	240	6	welfar peopl	7	53

1940s

Republican	#R	#D	Democrat	#R	#D
immedi releas	85	5	xero copi	0	181
confer board	55	2	american nation	0	12
governor feder	451	183	farm product	15	447
excess profit	376	10	copi xero	0	66
profit tax	261	12	soil conserv	0	249
insur compani	215	164	farm incom	15	305
individu incom	170	15	european countri	0	266
press releas	25	2	industri product	20	237
toward goal	25	2	million acr	0	83
measur would	55	12	american british	0	142

1950s

Republican	#R	#D	Democrat	#R	#D
increas product	529	73	voluntar credit	9	446
farm oper	230	2	restrain program	9	297
farm credit	191	8	american peopl	17	148
agricult credit	126	0	credit control	22	273
trust depart	43	2	exist legisl	0	20
econom growth	621	209	estat credit	13	171
rural develop	139	0	state depart	0	10
protect purchas	104	3	feder open	13	171
segment economi	187	22	deposit insur	30	216
fiscal polici	473	149	product act	9	117

1960s

Republican	#R	#D	Democrat	#R	#D
farm loan	508	11	intern monetari	15	276
posit world	132	5	credit card	7	350
compani act	162	42	state member	7	151
form govern	29	3	privat corpor	0	4
credit need	493	51	thrift institut	0	93
farm credit	324	15	intern liquid	0	90
increas product	316	21	secretar treasuri	0	50
nonbank busi	81	18	merger act	0	71
agricult credit	199	4	foreign credit	0	85
govern assum	15	2	financ charg	0	72

1970s

Republican	#R	#D	Democrat	#R	#D
exchang rate	469	111	credit card	45	657
opec countri	86	3	total deposit	18	220
wage increas	115	21	data process	14	93
coldwel member	40	1	black communit	0	107
immedi releas	6	1	central citi	4	53
last resort	62	9	foreign asset	10	186
inflat premium	65	4	electron system	1	30
unemploy inflat	46	5	present danger	1	26
busi firm	153	37	total loan	5	189
safeti sound	51	5	transfer act	3	29

1980s

Republican	#R	#D	Democrat	#R	#D
trade compani	269	34	tax reduct	3	97
export trade	189	38	progress inflat	14	141
currenta deficit	56	1	monetari credit	11	117
home equiti	60	0	inflatio process	6	76
real rate	59	3	truth lend	30	93
secreci act	42	0	sustain growth	35	148
leverag buyout	85	10	feder credit	7	101
futur option	57	5	real incom	14	95
state member	81	16	credit growth	14	101
econom valu	35	0	growth stabil	5	64

1990s

Republican	#R	#D	Democrat	#R	#D
governor feder	287	80	event access	21	221
commerci real	128	9	us last	22	221
otc deriv	89	4	news event	23	221
central plan	74	0	home news	21	206
balanc sheet	240	53	retail payment	9	155
circuit breaker	22	0	subordin debt	12	228
hmda data	87	7	fund rate	53	445
financ urban	39	0	debit card	4	124
nation treatmen	51	2	market discipli	72	354
soviet union	49	0	suppli shock	2	230

2000s

Republican	#R	#D	Democrat	#R	#D
inflat expect	319	78	predator lend	14	155
governor feder	366	148	event access	44	211
balanc sheet	279	77	home news	39	195
natur gas	103	22	news event	46	211
crude oil	82	14	us last	45	164
commerci paper	114	20	benefitc analysi	0	75
nontradi mortgag	46	0	capit charg	13	202
secreci act	31	0	social secur	67	332
econom activ	316	122	neighbor reinvest	1	23
enterpri risk	40	0	loan guarante	6	85

2010s

Republican	#R	#D	Democrat	#R	#D
financi educ	164	0	capit requir	31	440
credit card	255	17	product growth	20	163
busi owner	207	9	natur rate	8	130
financi literaci	53	2	neutral rate	0	103
neighbor stabil	94	3	central clear	8	101
vacant properti	88	3	econom mobil	2	25
educ program	26	2	prudenti regul	18	154
creditwo borrow	104	7	dollar libor	0	27
technic assist	66	1	capit surcharg	5	119
financi futur	21	1	fund rate	344	755

Table 3: Congress-based Regulator Partisan Phrases

This table shows the 10 most partisan Republican and Democratic phrases by decade using the Congress-based partisanship measure as detailed in Section IIB for the SEC (Panel A) and the Fed (Panel B). Similar to GST, we also report the predicted number of times each phrase is said per 100,000 phrases spoken by Republicans and Democrats. To generate this list of phrases, we run the congressional similarity partisanship test 5,576 (12,865) times for the SEC (Fed). Each time we remove the phrase of interest to determine its influence on the overall partisanship measure. The phrases are then rank based on the reduction in partisanship when removing it from the sample, and they are assigned a party based on the relative frequency in each party.

PANEL A: SEC

1930s

Republican	#R	#D	Democrat	#R	#D
broker dealer	949	316	administ agenc	62	903
balanc sheet	1361	235	reorgan proceed	41	257
secur violat	186	44	trust institut	0	220
secur busi	392	257	local region	0	147
public util	2228	778	basic econom	0	81
public account	413	51	constitu right	41	66
account principl	289	44	social econom	0	213
account profess	144	44	trade privileg	21	95
standard busi	83	7	human be	0	103
independ public	144	0	secur legisl	62	220

1940s

Republican	#R	#D	Democrat	#R	#D
invest trust	930	143	secur holder	646	1459
integr system	594	153	inform investor	26	122
capit structur	788	602	benefici owner	0	61
secur transact	116	10	compani system	672	1541
public util	1253	1234	account standard	13	92
stock offer	52	10	secur regist	77	173
secur sold	142	51	interest investor	65	224
million share	77	0	investor need	0	41
util financ	103	41	investor confid	65	82
trust invest	258	10	fiveyear period	0	71

1950s

Republican	#R	#D	Democrat	#R	#D
broker dealer	687	113	invest compani	1732	3919
public investor	637	211	american gas	28	356
issuer secur	180	65	account corpor	3	130
protect investor	532	308	consid independ	3	567
account principl	177	81	lack independ	3	194
regist secur	208	49	invest advis	330	372
feder secur	491	146	averag investor	19	146
congress mandat	62	0	compani share	44	324
civil liabil	168	81	account profess	87	259
trade exchang	146	49	firm account	3	243

1960s

Republican	#R	#D	Democrat	#R	#D
stock certif	164	26	secur industri	481	1019
transfer agent	143	19	secur regist	92	273
invest advis	584	305	hear examin	10	292
target compani	205	0	commiss rate	225	539
secur transact	410	175	interest investor	41	78
act invest	164	32	general secur	0	65
turnov rate	174	130	regul secur	102	117
invest compani	1526	1454	account corpor	10	26
purchas share	143	39	concern account	10	19
inform act	102	13	total asset	72	221

1970s

Republican	#R	#D	Democrat	#R	#D
transfer agent	425	16	feder secur	646	888
individu investor	361	120	corpor govern	159	412
hot issu	62	31	invest advis	278	466
materi fact	171	72	corpor account	97	614
member firm	109	69	auditor independ	26	63
negoti rate	52	31	account profess	395	652
equiti capit	135	31	account control	48	176
institut custom	38	9	intern audit	17	132
alloc capit	57	13	american corpor	52	176
attract investor	31	3	regul secur	105	157

1980s

Republican	#R	#D	Democrat	#R	#D
exchang act	1199	687	independ director	68	205
audit standard	310	149	us secur	222	330
view express	361	249	account profess	264	522
ultim born	80	0	leverag buyout	85	178
trade system	290	38	insid trade	1176	1284
investor corpor	82	3	public compani	242	351
institut investor	438	178	interest rate	190	273
compani advis	60	0	prepar financi	23	70
audit account	60	11	public investor	54	103
state secur	287	95	board room	3	84

1990s

Republican	#R	#D	Democrat	#R	#D
electron trade	181	54	sale practic	48	371
auditor independ	137	136	investor protect	406	692
capit rule	318	82	invest advis	253	518
cost capit	314	136	municip debt	0	65
public investor	72	71	corpor financ	88	202
nonpubl inform	101	22	custom order	28	153
execut compens	209	76	investor interest	93	436
effect capit	28	11	investor confid	169	354
econom growth	257	11	trade account	16	22
desist order	60	0	investor need	36	180

2000s

Republican	#R	#D	Democrat	#R	#D
capit format	261	179	municip secur	94	655
unintend consequ	184	18	investor protect	522	877
intern control	973	613	order flow	36	259
inspect examin	100	60	retail investor	232	334
tender offer	67	28	secur firm	90	300
final rule	240	135	access fee	56	116
fanni mae	49	3	trade strategi	20	72
govern regul	91	34	intern account	150	251
investor get	72	16	materi inform	86	269
barrier entri	39	16	conflict interest	399	618

2010s

Republican	#R	#D	Democrat	#R	#D
corpor financ	534	382	protect investor	504	727
final rule	1098	663	street reform	111	318
capit requir	271	40	reform consum	111	310
report compani	126	53	consum protect	119	316
special studi	59	5	corpor board	19	234
frontend load	15	5	investor protect	300	716
deliveri requir	7	0	net capit	30	101
stabil board	137	34	credit default	7	88
unintend consequ	197	19	default swap	7	88
rate rule	33	11	institut investor	204	427

PANEL B: Fed

1930s

Republican	#R	#D	Democrat	#R	#D
nation debt	134	7	feder open	27	494
secur corpor	45	0	help achiev	0	42
govern busi	27	14	forti year	0	21
privat credit	260	28	collect check	0	141
entir economi	45	0	use credit	90	459
morn paper	45	21	substant differ	0	7
balanc budget	457	7	general credit	18	389
strength system	9	0	result effort	0	49
balanc sheet	81	14	technic skill	0	14
govern debt	340	49	deposit liabil	72	141

1940s

Republican	#R	#D	Democrat	#R	#D
capit valu	91	3	soil conserv	0	297
governor feder	548	218	relat currenc	6	9
immedi releas	104	6	individu farm	0	180
asset held	67	6	high return	0	49
econom world	12	3	credit problem	37	70
billion dollar	1444	913	improv program	12	221
balanc budget	207	23	rise incom	6	29
fiscal monetari	165	26	rest economi	12	79
confer board	67	3	credit area	6	15
privat credit	171	41	treasuri comptrol	0	9

1950s

Republican	#R	#D	Democrat	#R	#D
inflat inevit	119	27	feder open	15	212
monetari unit	88	6	govern secur	315	881
rural develop	165	0	credit polici	253	431
increas product	630	90	consum credit	217	519
farm product	263	53	deposit insur	36	267
creep inflat	139	69	discount rate	243	532
farm oper	273	2	monetari polici	1027	1379
financi manag	67	2	consum real	10	63
sustain growth	155	38	merger consolid	26	208
govern spend	98	15	feder deposit	36	212

1960s

Republican	#R	#D	Democrat	#R	#D
farm lend	116	7	time deposit	410	713
farm debt	107	4	demand deposit	267	382
borrow lender	125	12	merger act	0	90
million check	18	6	discount rate	187	361
farm product	205	6	financi institut	223	562
govern assum	18	2	interest rate	873	1398
increas product	383	27	privat corpor	0	5
assum respons	27	7	thrift institut	0	118
econom cycl	36	6	conveni need	0	39
like give	18	5	stabil polici	0	92

1970s

Republican	#R	#D	Democrat	#R	#D
central banker	63	26	credit card	56	844
monetari expans	96	30	demand deposit	193	348
rate inflat	330	119	central citi	6	68
reserv currenc	65	6	discount rate	62	248
wage rate	89	16	electron transfer	18	78
wage increas	145	27	capit outflow	18	94
econom expans	201	77	payment system	70	179
treasuri balanc	14	0	save loan	139	215
busi cycl	97	40	payment mechan	101	146
direct borrow	21	6	check credit	5	121

1980s

Republican	#R	#D	Democrat	#R	#D
credit card	581	523	monetari credit	14	151
gold standard	113	22	high interest	107	237
trade compani	345	43	specul activ	4	26
fund rate	198	46	interest rate	2359	2514
export trade	242	49	state usuri	8	33
secreci act	54	0	fight inflat	26	101
monetari standard	19	0	econom polici	166	267
fix exchang	39	10	central banker	30	46
deposit rate	62	36	monetari fiscal	43	88
payment system	168	131	level unemploy	11	47

1990s

Republican	#R	#D	Democrat	#R	#D
governor feder	381	109	monetari polici	856	2556
central plan	97	0	fund rate	71	603
commerci real	170	12	unemploy rate	101	425
feder regul	103	17	trend product	12	106
intern control	157	47	acceler inflat	6	54
econom growth	366	109	restrain inflat	6	62
govern regul	57	5	wage worker	1	22
rate return	115	42	capit budget	17	35
cash flow	91	12	merger acquisit	45	151
supervis regul	250	237	net export	19	128

2000s

Republican	#R	#D	Democrat	#R	#D
inflat expect	445	110	fiscal polici	83	252
governor feder	511	209	aggreg demand	118	310
natur gas	144	31	news event	64	298
commerci paper	159	28	capit ratio	45	173
intern control	279	74	competit equiti	3	56
crude oil	115	20	nation save	72	280
econom review	86	35	cra rate	2	15
econom growth	393	254	function regul	21	82
econom activ	442	173	trade deficit	19	124
fanni freddi	55	5	social secur	93	470

2010s

Republican	#R	#D	Democrat	#R	#D
busi owner	284	13	financi system	881	1177
central banker	84	46	aggreg demand	41	164
credit standard	52	5	asset purchas	275	516
organ financi	23	0	larg financi	48	227
feder debt	98	22	feder fund	477	1059
financi futur	30	1	improv labor	59	113
demand credit	45	3	asset manag	11	84
financi econom	113	60	order liquid	7	63
econom financi	216	123	regul supervis	136	204
polit scienc	9	7	fire sale	20	186

Figure 1: Venn Diagram of Unique Phrase Counts

This figure shows the counts of unique phrases in the SEC, Fed, and Congress samples and their intersections. Regions A, B, and C represent the number of unique phrases only spoken in the SEC, the Fed, and Congress, respectively. Region D represents the number of unique phrases that occur in the SEC and Fed, but not Congress. Region E represents the number of unique phrases that occur in the SEC and Congress, but not the Fed. Region F represents the number of unique phrases that occur in the Fed and Congress, but not the SEC. Finally, region G represents the number of unique phrases that occur in all three samples.

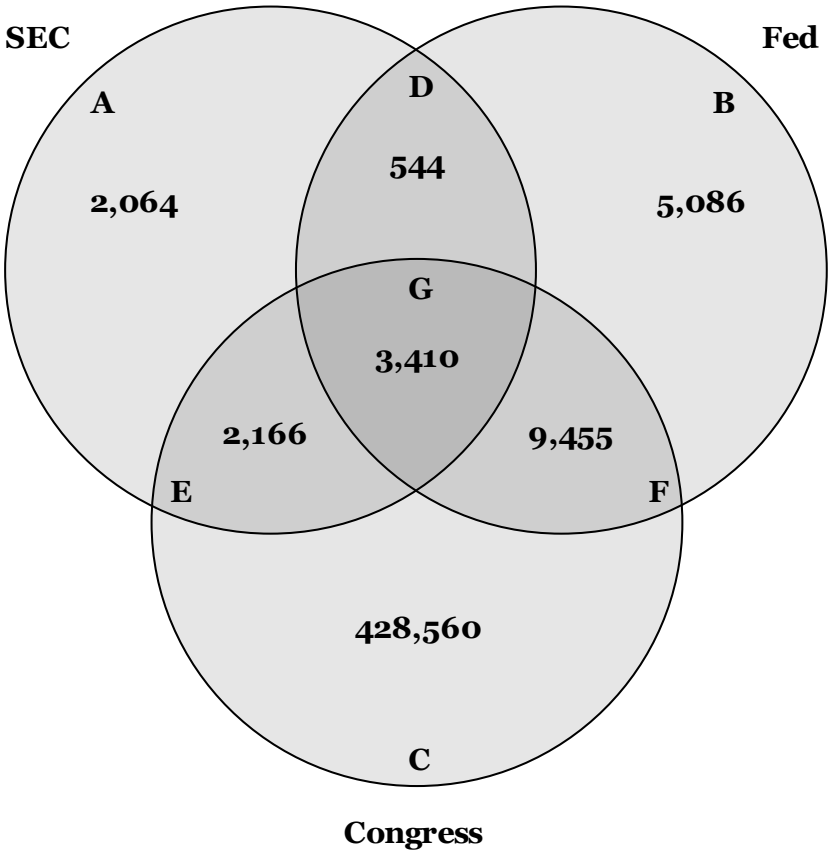
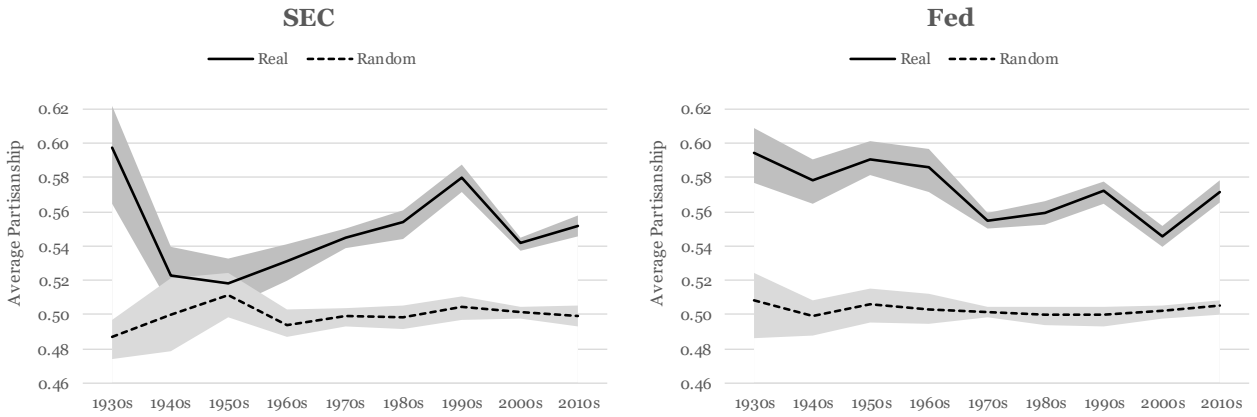


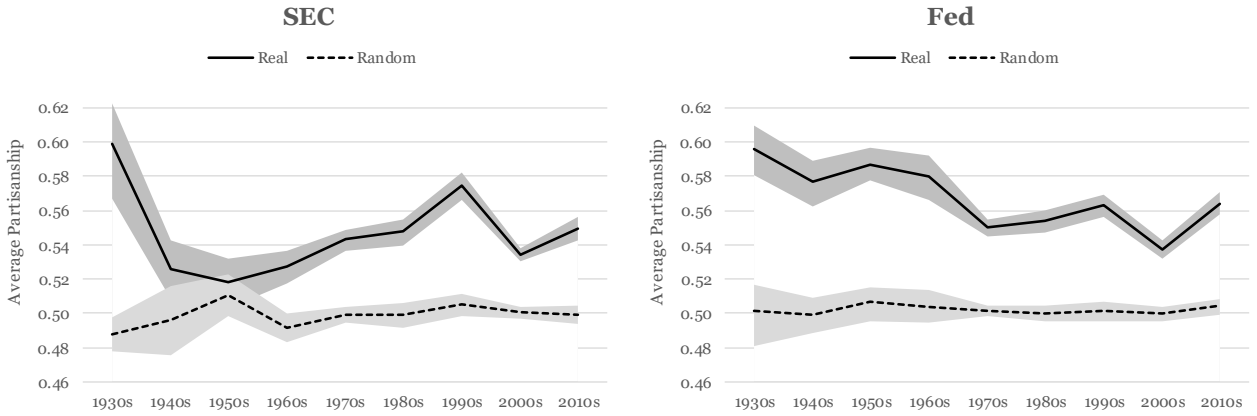
Figure 2: Internal Regulator Partisanship

This figure graphs the average partisanship in the SEC (left) and Fed (right) using the internal regulator partisanship measure, π_t^{IR}, as detailed in Section IIB. Panel A uses the full SEC and Fed samples. Panel B (Panel C) uses only those phrases that also (do not) appear in the congressional sample. In each graph, we plot the average partisanship using actual party affiliations as "real" (the solid line) and random party affiliations as "random" (the dotted line). For the random assignments, each speech's party is randomly assigned using the probability that a speech is Republican in that given decade. The shaded regions around both lines represent a pointwise confidence interval consistent with Politis, Romano, and Wolf (1999). More specifically, we subsample 20% of the speeches without replacement 100 times, and for each subsample k, we compute the partisanship estimate, π_t^k. Similar to GST, let τ_k be the number of speeches in the kth subsample and τ be the number of speeches in the full sample. Also, define $(Q_t^k)_{(b)}$ to be the bth order statistic of $Q_t^k = \sqrt{\tau_k}(\pi_t^k - \frac{1}{100}\sum_{l=1}^{100}\pi_t^l)$. Then, the confidence interval on the partisanship estimate is $(\pi_t^{IR} - \frac{(Q_t^k)_{(90)}}{\sqrt{\tau}}, \pi_t^{IR} - \frac{(Q_t^k)_{(11)}}{\sqrt{\tau}})$.

PANEL A: Full Sample



PANEL B: Intersect Congress



PANEL C: Remove Congress

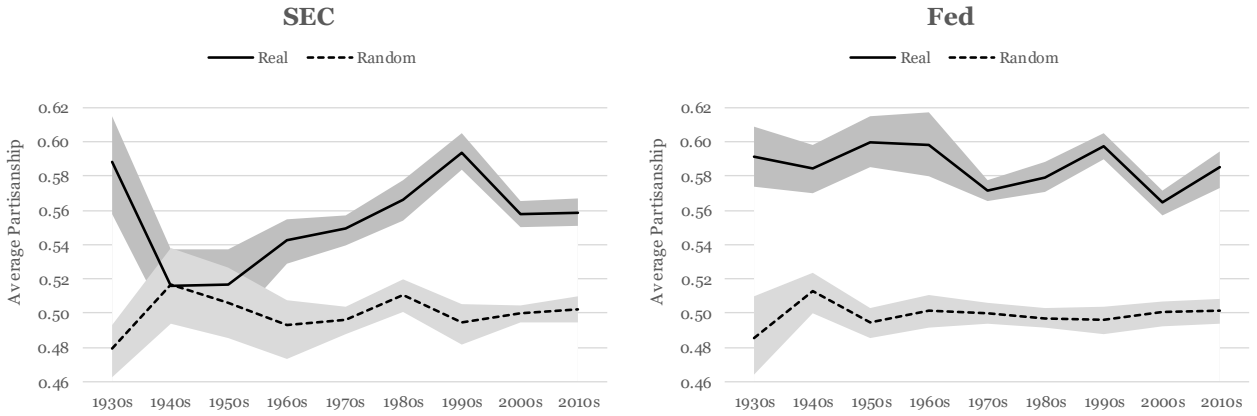
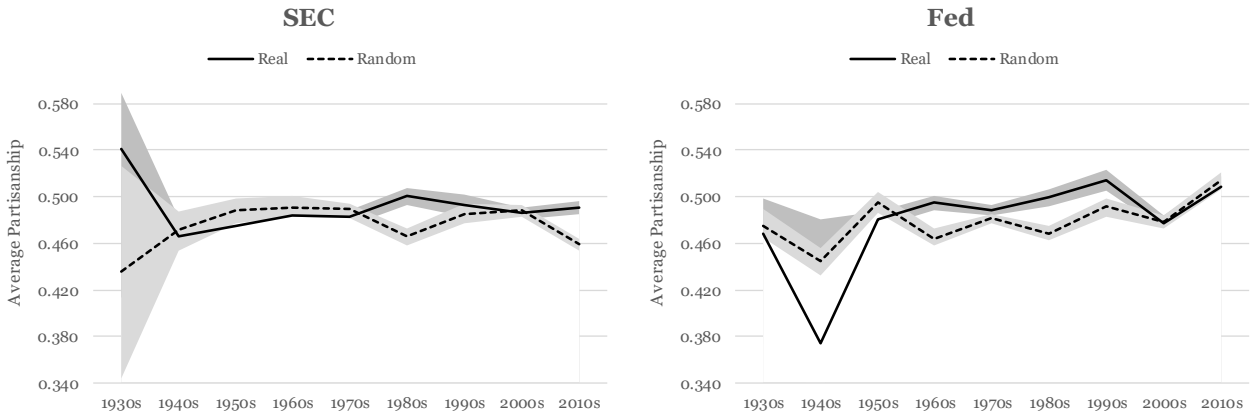


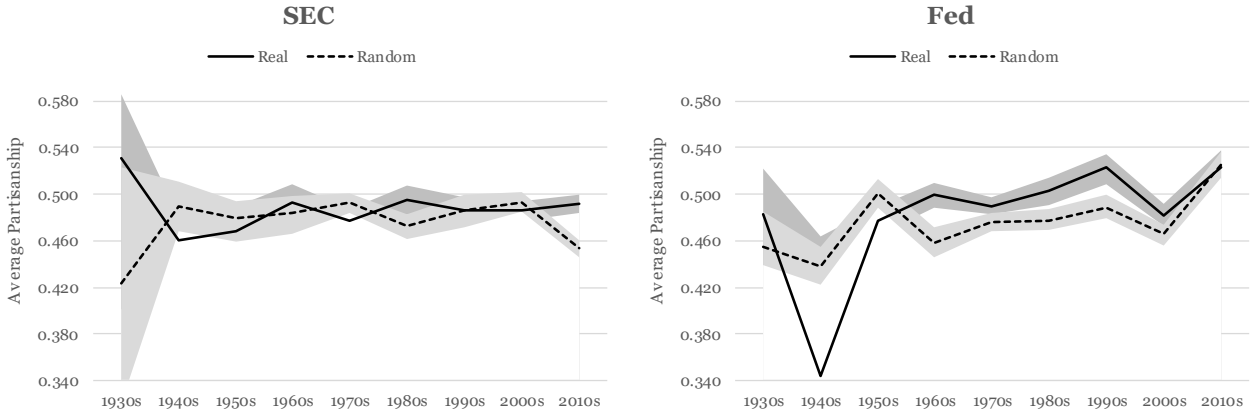
Figure 3: Speaker-Level Internal Regulator Partisanship

This figure graphs the average partisanship in the SEC (left) and Fed (right) using the speaker-level internal regulator partisanship measure, π_t^{SIR}, as detailed in Section IIIA. Panel A uses the full SEC and Fed samples. Panel B (Panel C) only uses phrases that also (do not) appear in the congressional sample. For each graph, we plot average partisanship using actual party affiliations as "real" (the solid line) and random party affiliations as "random" (the dotted line). For the random assignments, each speech is randomly assigned using the probability that a speech is Republican in the given decade. The shaded regions around both lines represent a pointwise confidence interval consistent with Politis, Romano, and Wolf (1999). Specifically, we subsample 20% of the speeches without replacement 100 times, and for each subsample k, we compute the partisanship estimate, π_t^k. Similar to GST, let τ_k be the number of speeches in the kth subsample and τ be the number of speeches in the full sample. Also, define $(Q_t^k)_{(b)}$ to be the bth order statistic of $Q_t^k = \sqrt{\tau_k}(\pi_t^k - \frac{1}{100}\sum_{l=1}^{100}\pi_t^l)$. Then, the confidence interval on the partisanship estimate is $(\pi_t^{IR} - \frac{(Q_t^k)_{(90)}}{\sqrt{\tau}}, \pi_t^{IR} - \frac{(Q_t^k)_{(11)}}{\sqrt{\tau}})$.

PANEL A: Full Sample



PANEL B: Intersect Congress



PANEL C: Remove Congress

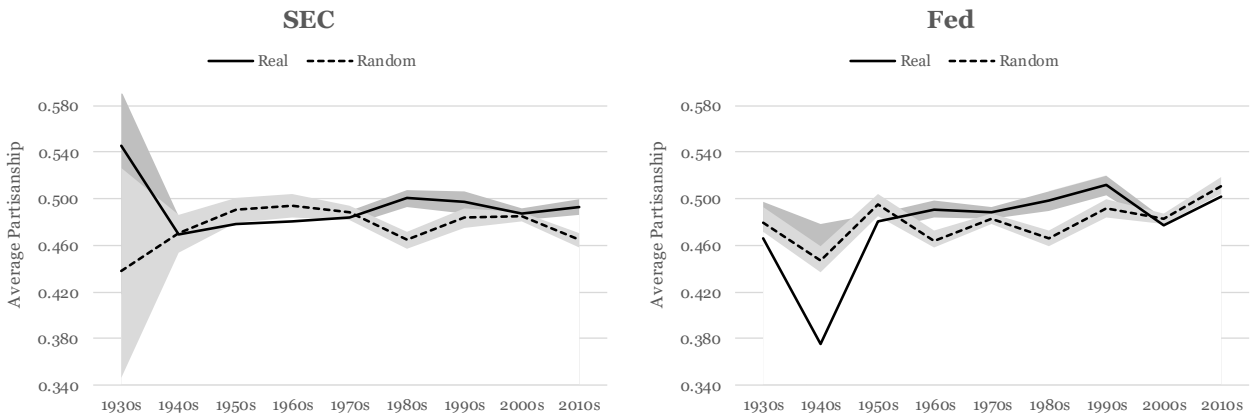


Figure 4: Internal Congressional Partisanship Validation

This figure graphs the average partisanship in Congress using the internal regulator partisanship measure, π_t^{IR}, as detailed in Section IIB on the congressional sample that intersects with the SEC (Panel A) and the Fed (Panel B). In each graph, we plot the average partisanship using actual party affiliations as "real" (the solid line) and random party affiliations as "random" (the dotted line). For the random assignments, each speech's party is randomly assigned using the probability that a speech is Republican in that given decade. The shaded regions around both lines represent a pointwise confidence interval consistent with Politis, Romano, and Wolf (1999). More specifically, we subsample 20% of the speeches without replacement 100 times, and for each subsample k, we compute the partisanship estimate, π_t^k. Similar to GST, let τ_k be the number of speeches in the kth subsample and τ be the number of speeches in the full sample. Also, define $(Q_t^k)_{(b)}$ to be the bth order statistic of $Q_t^k = \sqrt{\tau_k}(\pi_t^k - \frac{1}{100}\sum_{l=1}^{100}\pi_t^l)$. Then, the confidence interval on the partisanship estimate is $(\pi_t^{IR} - \frac{(Q_t^k)_{(90)}}{\sqrt{\tau}}, \pi_t^{IR} - \frac{(Q_t^k)_{(11)}}{\sqrt{\tau}})$.

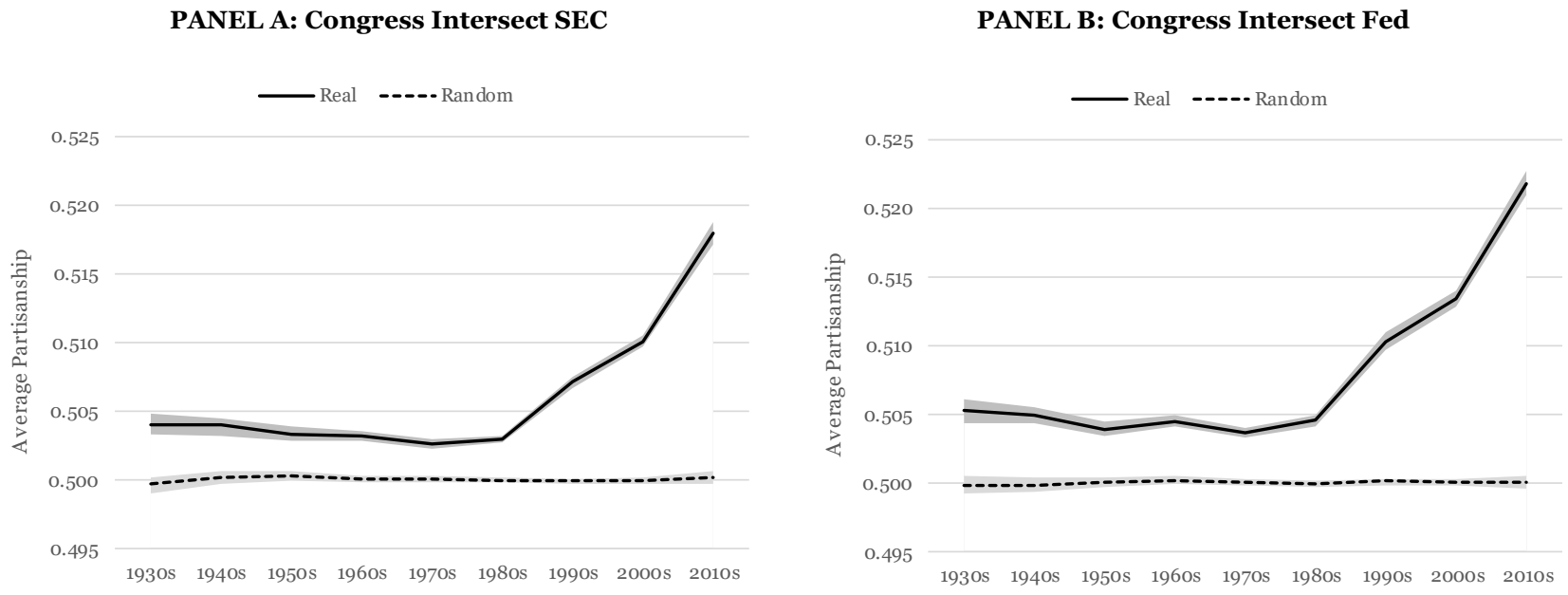
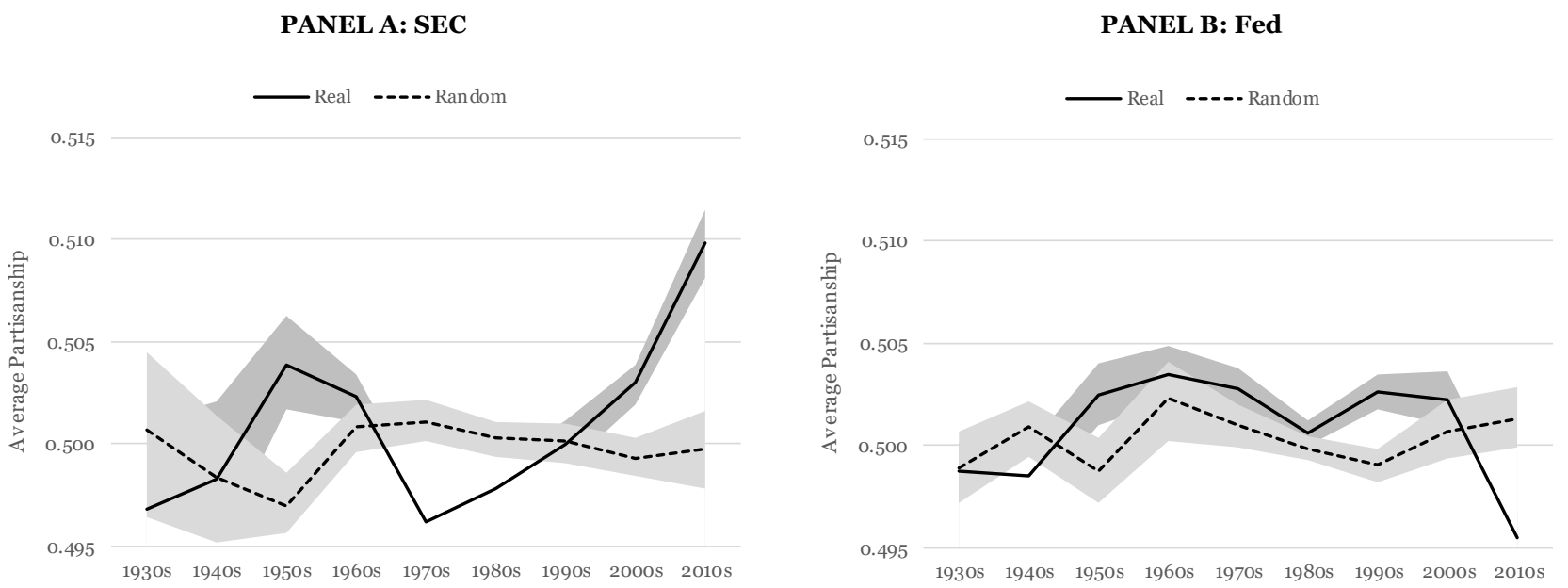


Figure 5: Congress-based Regulator Partisanship

This figure graphs the average partisanship in the SEC (Panel A) and Fed (Panel B) using the Congress-based regulator partisanship measure, π_t^{CR}, as detailed in Section IIB. For these tests, we use those SEC/Fed samples that intersect with Congress. In each graph, we plot the average partisanship using actual party affiliations as "real" (the solid line) and random party affiliations as "random" (the dotted line). For the random assignments, each speech's party is randomly assigned using the probability that a speech is Republican in that given decade. The shaded regions around both lines represent a pointwise confidence interval consistent with Politis, Romano, and Wolf (1999). More specifically, we subsample 20% of the speeches without replacement 100 times, and for each subsample k, we compute the partisanship estimate, π_t^k. Similar to GST, let τ_k be the number of speeches in the kth subsample and τ be the number of speeches in the full sample. Also, define $(Q_t^k)_{(b)}$ to be the bth order statistic of $Q_t^k = \sqrt{\tau_k}(\pi_t^k - \frac{1}{100}\sum_{l=1}^{100}\pi_t^l)$. Then, the confidence interval on the partisanship estimate is $(\pi_t^{IR} - \frac{(Q_t^k)_{(90)}}{\sqrt{\tau}}, \pi_t^{IR} - \frac{(Q_t^k)_{(11)}}{\sqrt{\tau}})$.



Appendix A/B: SEC and Fed Political Party Identification

This appendix lists political party affiliations for all SEC Commissioners (Panel A) and Fed Governors (Panel B). For each official, we list the name, assigned party, affiliated party, presidential (pres) appointed party, and start/end service dates. Pres appointed party is defined as the party affiliation of the president who appointed the Commissioner/Governor. We define affiliated party as the individual's personal party affiliation. For the SEC, all Commissioners' party affiliations and service start/end dates are publicly available at the SEC website.[19] Although the Fed Governors' service start/end dates are available at the Fed website, their political party affiliations were harder to determine.[20] Of the 86 Fed Governors, we could only identify 22 individual party affiliations using various sources listed in the rightmost column of Panel B. Therefore, we define assigned party as affiliated party when available; otherwise, we define assigned party as pres appointed party. Assigned party is the speaker's party affiliation used throughout the analysis.

The SEC and Fed officials in Panels A and B are listed in order by their service start date. Officials assigned as Democrats (Republicans) are blue (red). Individuals that are independent or changed party affiliation during service are white. All officials with bolded font are included in the initial sample collection. Individuals may not be included in the sample (unbolded) for four potential reasons: (1) the official is assigned independent party, (2) the official switched party affiliations during service, (3) the official served outside the period of interest (1930-2016), or (4) the official did not have any recorded statements or speeches available for download.

[19] See https://www.sec.gov/about/sechistoricalsummary.htm for SEC Commissioners' party affiliations and start/end service dates.
[20] See https://www.federalreserve.gov/aboutthefed/bios/board/boardmembership.htm for Fed Governors' service dates.

PANEL A: SEC					
Commissioners	Assigned Party	Affiliated Party	Pres Appointed Party	Start	End
Joseph P. Kennedy	D	D	D	7/2/1934	9/23/1935
George C. Mathews	R	R	D	7/2/1934	4/15/1940
James M. Landis	D	D	D	7/2/1934	9/15/1937
Robert E. Healy	R	R	D	7/2/1934	11/16/1946
Ferdinand Pecora	D	D	D	7/2/1934	1/21/1935
J. D. Ross	D	D	D	10/5/1935	10/31/1937
William O. Douglas	D	D	D	1/31/1936	4/16/1939
Jerome N. Frank	D	D	D	12/27/1937	4/30/1941
John W. Hanes	D	D	D	1/14/1938	6/30/1938
Edward C. Eicher	D	D	D	12/3/1938	2/2/1942
Leon Henderson	D	D	D	5/18/1939	7/8/1941
Sumner T. Pike	R	R	D	6/4/1940	4/30/1946
Ganson Purcell	D	D	D	6/17/1941	6/30/1946
Edmund Burke, Jr.	D	D	D	7/31/1941	10/19/1943
Robert H. O'Brien	D	D	D	2/3/1942	12/28/1944
Robert K. McConnaughey	D	D	D	12/29/1943	6/5/1949
James J. Caffrey	D	D	D	5/2/1945	12/31/1947
Richard B. McEntire	R	R	D	6/4/1946	5/31/1953
Edmond M. Hanrahan	D	D	D	7/22/1946	11/3/1949
Harry A. McDonald	R	R	D	3/26/1947	2/25/1952
Paul R. Rowen	D	D	D	5/28/1948	6/5/1955
Donald C. Cook	D	D	D	11/1/1949	6/17/1953
Edward T. McCormick	D	D	D	11/4/1949	3/31/1951
Robert I. Millonzi	D	D	D	7/17/1951	6/5/1952
Clarence H. Adams	R	R	D	5/12/1952	6/5/1956
J. Howard Rossbach	D	D	D	8/4/1952	2/14/1953
Ralph H. Demmler	R	R	R	6/17/1953	5/25/1955
J. Sinclair Armstrong	R	R	R	7/16/1953	6/27/1957
A. J. Goodwin, Jr.	D	D	R	7/16/1953	12/31/1955
Andrew Downey Orrick	R	R	R	5/26/1955	7/15/1960
Harold C. Patterson	D	D	R	8/5/1955	11/29/1960
Earl F. Hastings	D	D	R	3/11/1956	8/31/1961
James C. Sargent	R	R	R	6/29/1956	10/21/1960
Edward N. Gadsby	R	R	R	8/20/1957	8/4/1961
Byron D. Woodside	R	R	R	7/15/1960	4/30/1967
Daniel J. McCauley, Jr.	R	R	R	10/24/1960	3/26/1961
J. Allen Frear, Jr.	D	D	D	3/15/1961	9/30/1963
William L. Cary	D	D	D	3/27/1961	8/21/1964
Manuel F. Cohen	D	D	D	10/11/1961	2/22/1969
Jack M. Whitney II	R	R	D	11/9/1961	6/15/1964
Hugh F. Owens	D	D	D	3/23/1964	11/20/1973
Hamer H. Budge	R	R	D	7/8/1964	1/2/1971
Francis M. Wheat	D	D	D	10/2/1964	9/30/1969
Richard B. Smith	R	R	D	5/1/1967	7/30/1971
James J. Needham	R	R	R	7/10/1969	7/14/1972
A. Sydney Herlong	D	D	R	10/29/1969	6/30/1973
William J. Casey	R	R	R	4/14/1971	2/2/1973
Philip A. Loomis, Jr.	R	R	R	8/13/1971	6/18/1982
John R. Evans	R	R	R	3/3/1973	12/2/1983
G. Bradford Cook	R	R	R	3/3/1973	5/16/1973
Ray Garrett, Jr.	R	R	R	8/6/1973	10/28/1975
A. A. Sommer, Jr.	D	D	R	8/6/1973	4/2/1976
Irving M. Pollack	D	D	R	2/13/1974	6/5/1980
Roderick M. Hills	R	R	R	10/28/1975	4/10/1977
Harold M. Williams	D	D	D	4/18/1977	3/1/1981
Roberta S. Karmel	D	D	D	9/30/1977	2/1/1980
Stephen J. Friedman	D	D	D	4/14/1980	6/5/1981
Barbara S. Thomas	D	D	D	10/21/1980	11/11/1983
John Shad	R	R	R	5/6/1981	6/18/1987
Bevis Longstreth	D	D	R	7/29/1981	1/13/1984
James C. Treadway, Jr.	R	R	R	9/13/1982	4/17/1985
Charles C. Cox	R	R	R	12/2/1983	9/30/1989
Charles L. Marinaccio	D	D	R	5/24/1984	7/10/1985
Aulana L. Peters	D	D	R	6/11/1984	7/8/1988
Joseph A. Grundfest	D	D	R	10/28/1985	1/18/1990
Edward H. Fleischman	R	R	R	1/6/1986	3/31/1992
David S. Ruder	R	R	R	8/7/1987	9/30/1989
Mary L. Schapiro	I	I	R, D	12/5/1988, 1/27/2009	10/13/1994, 12/14/2012
Richard C. Breeden	R	R	R	10/11/1989	5/7/1993
Philip R. Lochner, Jr.	R	R	R	3/12/1990	6/23/1991
Richard Y. Roberts	RD	RD	R	10/1/1990	7/15/1995
J. Carter Beese, Jr.	R	R	R	3/10/1992	11/14/1994
Arthur Levitt	D	D	D	7/27/1993	2/9/2001
Steven Wallman	D	D	D	7/5/1994	10/2/1997
Norman S. Johnson	R	R	D	2/13/1996	5/10/2000
Isaac C. Hunt, Jr.	D	D	D, R	2/29/1996, 1/23/2002	12/20/2001, 8/2/2002
Paul R. Carey	D	D	D	11/3/1997	6/14/2001
Laura S. Unger	R	R	D	11/5/1997	1/25/2002
Harvey L. Pitt	R	R	R	8/3/2001	2/17/2003
Cynthia A. Glassman	R	R	R	1/28/2002	7/14/2006
Harvey J. Goldschmid	D	D	R	7/31/2002	7/31/2005
Paul S. Atkins	R	R	R	8/8/2002	8/1/2008
Roel C. Campos	D	D	R	8/22/2002	9/18/2007
William H. Donaldson	R	R	R	2/18/2003	6/30/2005
Christopher Cox	R	R	R	8/3/2005	1/20/2009
Annette L. Nazareth	D	D	R	8/4/2005	1/31/2008
Kathleen L. Casey	R	R	R	7/17/2006	8/5/2011
Elisse B. Walter	D	D	R	7/9/2008	8/9/2013
Luis A. Aguilar	D	D	R, D	7/31/2008	12/31/2015
Troy A. Paredes	R	R	R	8/1/2008	8/3/2013
Daniel M. Gallagher	R	R	D	11/7/2011	10/2/2015
Mary Jo White	I	I	D	4/10/2013	
Kara M. Stein	D	D	D	8/9/2013	
Michael S. Piwowar	R	R	D	8/15/2013	

PANEL B: FED						
Governors	Assigned Party	Affiliated Party	Pres Appointed Party	Start	End	Affiliated Party Source
John Skelton Williams	D		D	2/2/1914	3/2/1921	
Frederic A. Delano	D		D	8/10/1914	7/21/1918	
Paul M.Warburg	D		D	8/10/1914	8/9/1918	
W. P. G. Harding	D		D	8/10/1914	8/9/1922	
Adolph C. Miller	**D**		**D**	**8/10/1914**	**2/3/1936**	
Charles S. Hamlin	**D**	**D**	**D**	**8/10/1914**	**2/3/1936**	**federalreservehistory,org**
Carter Glass	D	D	D	1/1/1918	1/1/1920	congress.gov
Albert Strauss	D		D	10/26/1918	3/15/1920	
Henry A. Moehlenpah	D		D	11/10/1919	8/9/1920	
Edmund Platt	**R**	**R**	**D**	**6/20/1920**	**9/14/1930**	**congress.gov**
John R. Mitchell	D	D	R	5/12/1921	5/12/1923	congress.gov
Daniel R. Crissinger	D	D	R	5/1/1923	9/15/1927	wikipedia.org
Edward H. Cunningham	**R**		**R**	**5/14/1923**	**11/28/1930**	
George Roosa James	**R**		**R**	**5/14/1923**	**2/3/1936**	
Roy A. Young	**R**	**R**	**R**	**10/4/1927**	**8/31/1930**	**nationalcurrencyfoundation.org**
Eugene Meyer	**R**	**R**	**R**	**9/16/1930**	**5/10/1933**	**washingtonpost.com**
Eugene R. Black	**D**		**D**	**5/19/1933**	**8/15/1934**	
M. S. Szymczak	**D**		**D**	**6/14/1933**	**5/31/1961**	
Marriner S. Eccles	**R**	**R**	**D**	**11/15/1934**	**7/14/1951**	**centerforfinancialstability.org**
Joseph A. Broderick	**D**		**D**	**2/3/1936**	**9/30/1937**	
Ronald Ransom	**D**		**D**	**2/3/1936**	**12/2/1947**	
Chester C. Davis	**D**		**D**	**6/25/1936**	**4/15/1941**	
Ernest G. Draper	**D**		**D**	**3/30/1938**	**9/1/1950**	
Rudolph M. Evans	**D**		**D**	**3/14/1942**	**8/13/1954**	
James Kimble Vardaman, Jr.	**D**	**D**	**D**	**4/4/1946**	**11/30/1958**	**wikipedia.org**
Lawrence Clayton	**D**		**D**	**2/14/1947**	**12/4/1949**	
Thomas B. McCabe	**D**		**D**	**4/15/1948**	**3/31/1951**	
Oliver S. Powell	**D**		**D**	**9/1/1950**	**6/30/1952**	
William McChesney Martin, Jr.	**D**	**D**	**D**	**4/2/1951**	**1/31/1970**	**nytimes.com**
Abbot Low Mills	**D**		**D**	**2/18/1952**	**2/28/1965**	
James Louis Robertson	**D**		**D**	**2/18/1952**	**4/30/1973**	
C. Canby Balderston	**R**		**R**	**8/12/1954**	**2/28/1966**	
Charles Noah Shepardson	**R**		**R**	**3/17/1955**	**4/30/1967**	
G. H. King	**R**		**R**	**3/25/1959**	**9/18/1963**	
George Wilder Mitchell	**D**		**D**	**8/31/1961**	**2/13/1976**	
J. Dewey Daane	**D**		**D**	**11/29/1963**	**3/8/1974**	
Sherman J. Maisel	**D**		**D**	**4/30/1965**	**5/31/1972**	
Andrew F. Brimmer	**D**	**D**	**D**	**3/9/1966**	**8/31/1974**	**biography.jrank.org**
William W. Sherrill	**D**		**D**	**5/1/1967**	**11/15/1971**	
Arthur F. Burns	**R**		**R**	**1/31/1970**	**3/31/1978**	
John E. Sheehan	**R**		**R**	**1/4/1972**	**6/1/1975**	
Jeffrey M. Bucher	**R**		**R**	**6/5/1972**	**1/2/1976**	
Robert C. Holland	**R**		**R**	**6/11/1973**	**5/15/1976**	
Henry Christopher Wallich	**R**		**R**	**3/8/1974**	**12/15/1986**	
Philip E. Coldwell	**R**		**R**	**10/29/1974**	**2/29/1980**	
Philip Chappell Jackson, Jr.	**R**		**R**	**7/14/1975**	**11/17/1978**	
J. Charles Partee	**R**		**R**	**1/5/1976**	**2/7/1986**	
Stephen Symmes Gardner	**R**		**R**	**2/13/1976**	**11/19/1978**	
David Maher Lilly	**R**		**R**	**6/1/1976**	**2/24/1978**	
G. William Miller	**D**	**D**	**D**	**3/8/1978**	**8/6/1979**	**nytimes.com**
Nancy H. Teeters	**D**		**D**	**9/18/1978**	**6/27/1984**	
Emmett John Rice	**D**		**D**	**6/20/1979**	**12/31/1986**	
Frederick Henry Schultz	**D**	**D**	**D**	**7/27/1979**	**2/11/1982**	**ipfs.io**
Paul A. Volcker	**D**	**D**	**D**	**8/6/1979**	**8/11/1987**	**nytimes.com**
Lyle E. Gramley	**D**		**D**	**5/28/1980**	**9/1/1985**	
Preston Martin	**R**		**R**	**3/31/1982**	**4/30/1986**	
Martha Romayne Seger	**R**		**R**	**7/2/1984**	**3/11/1991**	
Manuel H. Johnson	**R**		**R**	**2/7/1986**	**8/3/1990**	
Wayne D. Angell	**R**	**R**	**R**	**2/7/1986**	**2/9/1994**	**federalreservehistory,org**
H. Robert Heller	**R**		**R**	**8/19/1986**	**7/31/1989**	
Edward Watson Kelley, Jr.	**R**		**R**	**5/26/1987**	**12/31/2001**	
Alan Greenspan	**R**	**R**	**R**	**8/11/1987**	**1/31/2006**	**nytimes.com**
John Patrick Laware	**R**		**R**	**8/15/1988**	**4/30/1995**	
David W. Mullins	**R**		**R**	**5/21/1990**	**2/14/1994**	
Lawrence Lindsey	**R**	**R**	**R**	**11/26/1991**	**2/5/1997**	**wsj.com**
Susan M. Phillips	**R**		**R**	**12/2/1991**	**6/30/1998**	
Alan S. Blinder	**D**		**D**	**6/27/1994**	**1/31/1996**	
Laurence H. Meyer	**D**		**D**	**6/24/1996**	**1/31/2002**	
Alice M. Rivlin	**D**	**D**	**D**	**6/25/1996**	**7/16/1999**	**latimes.com**
Janet L. Yellen	**D**	**D**	**D**	**8/12/1994, 10/4/2010**	**2/17/1997**	**washingtonpost.com**
Edward M. Gramlich	**D**		**D**	**11/5/1997**	**8/31/2005**	
Roger Walton Ferguson, Jr.	**D**		**D**	**11/5/1997**	**4/28/2006**	
Mark Walter Olson	**R**		**R**	**12/7/2001**	**6/30/2006**	
Susan Schmidt Bies	**R**		**R**	**12/7/2001**	**3/30/2007**	
Ben S. Bernanke	**R**	**R**	**R**	**8/5/2002, 2/1/2006**	**6/21/2005**	**nytimes.com**
Donald L. Kohn	**R**		**R**	**8/5/2002**	**9/1/2010**	
Kevin M. Warsh	**R**	**R**	**R**	**2/24/2006**	**3/31/2011**	**ipfs.io**
Randy Kroszner	**R**		**R**	**3/1/2006**	**1/21/2009**	
Frederic S. Mishkin	**R**		**R**	**9/5/2006**	**8/31/2008**	
Elizabeth Ashburn Duke	**R**		**R**	**8/5/2008**	**8/31/2013**	
Daniel K. Tarullo	**D**	**D**	**D**	**2/28/2009**	**4/5/2017**	**washingtonpost.com**
Sarah Bloom Raskin	**D**		**D**	**10/4/2010**	**3/13/2014**	
Jeremy C. Stein	**D**		**D**	**5/30/2012**	**5/28/2014**	
Jerome H. Powell	**D**		**D**	**5/25/2012, 6/16/2014**	**.**	
Stanley Fischer	**D**		**D**	**5/28/2014**	**.**	
Lael Brainard	**D**		**D**	**6/16/2014**	**.**	