

Essays of Political economy: Strategic timing of
confidence votes and similarity measures of
electoral promises

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Part I

Strategic timing in politics and media attention: Evidence from Italy

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Abstract

This dissertation examines whether politicians strategically time the approval of laws to avoid overlap with other significant news events, focusing on the scheduling of votes of confidence in the Italian parliament. The empirical analysis employs a reduced-form approach, using newsworthy events as a source of variation. The evidence shows that confidence votes are less likely to be scheduled on days coinciding with predictable newsworthy events during political governments. In contrast, there is a positive correlation between confidence votes and predictable newsworthy events during technical governments. Additional robustness checks using unpredictable newsworthy events show no statistically significant correlation. Moreover, tests of the underlying mechanism rule out the possibility that the results are driven by politicians avoiding work during events that capture their attention. This new empirical study sheds light on dual strategic timing behaviors, where policy can either be hidden or highlighted, and expands the application of this methodology, well established in the literature, beyond U.S. politics.

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1 Introduction

A fundamental aspect of modern politics is the ability of the electorate to scrutinize the work of the government in power. Accountability is a basic dimension of modern politics and many studies had suggest that is at the hearth of political action (Strömberg, 2004; Besley and Prat, 2006; Snyder Jr and Strömberg, 2010). To employ this, the electorate must be fully informed about the decisions taken by the political class. For this reason, the media have a major role in shaping public opinion. However, it has been shown in the literature that low media attention can be a threat to accountability (Eisensee and Strömberg, 2007). In short windows when major events distract the media and then the electorate, the political class can make strategic timing of unpopular policies (Durante and Zhuravskaya, 2018; Djourelova and Durante, 2019). This strategy is now widely accepted in the academic debate on Political Economy, and it is a basic aspect to fully understand the complex relations at stake in the political game.

So far it was only considered the case for unpopular policies and the intention to hide them, strategically timing them when public attention is low. Does this strategic behaviour emerge for polices that needs to be highlighted? There is no evidence on the intention to highlight a specific policy, due to its difficulties on the political side and the narrow space for empirical investigation. This paper tries to fill this gap, studying the use of confidence votes in order to show this new finding. A confidence vote is a political tool widespread in Western regimes, where the ruling government commits itself to the approval of a law by the legislative branch. This mechanism, with the specific focus of the Italian case, has been extensively debated especially in the Italian Juridical literature (Huber, 1996; Lupo, 2007). Most interestingly, this tool can be used to speed up and secure the legislative process, and it can be strategically timed to highlight the approval of a policy which is considered important from the constituency.

To show this, this paper investigates these questions with a reduced form approach exploiting a large set of predictable and unpredictable newsworthy events. I collected all the confidence votes issued by the Italian government between 2011 and 2018, distinguishing between technical governments (Monti) and political ones (Letta, Renzi, Gentiloni). More specifically, technical governments usually go in power when classical political parties decide to delegate their political agenda to a cabinet composed only from academics and high rank civil servant, for a short amount of time, especially during period of economic turmoil, in order to adopt policies that are difficult to approve during "normal" political governments. Being two really different types of government, we expect different patterns between the two,

and precisely an intention to highlight policy approvals during political government, when accountability mechanism is on full power, while no or negative effect during technical ones, when policies are usually unpopular and the accountability is lower. While the lower House provides public dataset of confidence votes, for the upper Senate there is no public dataset available. Then the first part of the research job was to construct such database, consulting the Parliamentary reports with automated text analysis tools, together with additional information useful for the additional robustness checks. The reduced form approach exploits the different effect of predictable and unpredictable newsworthy events: a strategic timing behaviour can be claimed when there is a correlation towards only the former type of events. As a validation test, I use unpredictable events to check no correlation. As an additional robustness check, I registered the strength of the majority for each confidence vote, and see a heterogeneity effect between tight and large majority, in political and technical government. More specifically, the need to highlight an approval is stronger when the majority is tight, because the constituency could have low trust in the ability to approve such law proposal. Then, if the government wants to reverse this trend and show to their constituency that a policy important to their political agenda can be passed faster and without any compromise, in this situation the incentive is to strategically time them is more binding. The assumption is that we should see a stronger effect during tight majorities in political governments and not in technical ones. The results show that during political governments, the occurrence of votes of confidence is negatively correlated with newsworthy events, particularly in the days following them, while for technical governments, the occurrence of votes of confidence is positively correlated with predictable newsworthy events, and more precisely the day before them. This shows that during political governments, politicians strategically time votes to avoid moments when public attention is distracted, while technical governments would prefer to avoid public scrutiny by scheduling a confidence vote the day before a newsworthy event. An additional text analysis on the laws approved during political and technical governments shows that while the former has more emphasis on increasing public expenditure, the latter are more prone to budget cuts. Additional check on unpredictable events shows no correlation for each type of government, and heterogenous effect of majority strength shows that the positive effect is almost entirely concentrated on tight majorities of political governments.

The effects found in the main empirical analysis bring out a couple of competing mechanisms that need to be inquired. On one hand the effect can be only dictated by the intention of the politician to avoid working during an important sport event. The predictable newsworthy events are mainly important sports matches, that are widely seen and culturally considered very important. For these reasons, the Members of the Parliament can impose their will on the Government and avoid a sitting on those specific days. If this is the underlying mechanism, we cannot link the previous results to strategic timing by the government,

and we call it the "lazy politician" hypothesis. On the other side, a real strategic timing involves the intention of the government to signal to the constituency the approval of an important law. For this reason, I called the second mechanism the "signaling politician" hypothesis. To test them I used two checks, distinguishing across the events, based on the exact hour of the soccer matches, and across the parliamentary work, taking the whole pool of parliamentary sitting. For the first approach, I restricted the sample of newsworthy event to the Euro and World Cup matches. Then, I hypothesize that, if the "lazy politician" is the strongest mechanism, we would see a negative effect only for matches happening before prime time (i.e. 8 PM). For this reason, I adopted the same reduced form regression used in the previous section, making heterogeneity test between matches on prime time and not. If we can see a negative significant coefficient only for the former subsample, we can claim that the effect is largely dictated by the "lazy politician". Quite the opposite, we see that there is an effect with respect to prime time matches only, for political governments only. This is the opposite effect that would be expected in the case of the "lazy politician", and more in line with the hypothesis of strategic timing. Additionally, for the second approach I used all the sittings of the Parliament to check if the coefficient remains significant also when we consider "business as usual". If the effect persists, also when all the sittings are considered, it can be claimed that the politician is always avoiding to work during important sport matches, and then the "lazy politician" hypothesis is proved. Also, in this case I divided the subsample between technical and political governments. The effect of a newsworthy event on a normal parliamentary sitting is null: there is no significant coefficient when we consider all the sittings of the parliament in any specification. The results in the main section and the following evidences in the section on mechanism highlight the will, during political government, to use the legislative tool of vote of confidence to speed up the approval of a law and the intention to do it when the attention from their constituency is the highest possible.

This paper contributes to the literature on political economy by providing a first case for strategic timing with the intention to highlight and not to hide the policy studied. Additionally, it enriches the same branch of the literature with a case outside US, where data are more available. This study starts from the general literature on accountability, which can be briefly studied starting from the surveys of Prat and Strömberg (2013) and Sobbrío (2014). The first attempts made by Strömberg (2004) and then by Besley and Prat (2006), gave an initial base on the theoretical setting of the recent papers of this literature. Even the studies by Gentzkow and Shapiro (2006; 2010) renovated this literature inserting the role of media in the theoretical and empirical setting. Similar development on the role of media are represented by Baron (2006) and the seminal paper by Snyder Jr and Strömberg (2010). Considering this literature, this paper shows how media attention is crucial not only for the political system as a whole but also on short term policy adoption. From the cited papers

emerged a whole literature on media coverage and its role on politics, like the study on propaganda of Yanagizawa-Drott (2014), Madestam et al. (2013); the studies on the role media entry and exit like the one from Drago et al. (2014); the studies on different forms of media, like the one by the one by Gagliarducci et al. (2020) about the diffusion of radio signal, the ones by Enikolopov et al. (2018; 2020) on the diffusion of social media, and finally the one of Durante et al. (2019) about cable tv. Finally, this paper, as said before, shows strategic timing not only in US politics (Durante and Zhuravskaya, 2018; Djourelouva and Durante, 2019), and outside politics, in US based firms (DellaVigna and Pollet, 2009; Hirshleifer et al., 2009) or NGOs (Couttenier and Hatte, 2016), but also in foreign context, even in cases when the optimal strategy is to highlight the attention instead of hiding from it.

The dissertation is structured as follows: Section 2 explains the institutional background, giving more information on the nature and use of confidence votes in Italy. Section 3 covers data and descriptive statistics, explaining the data collection process through scraping techniques on official websites and reports, and presenting tables and descriptive figures. Moreover, in Section 4 there are the empirical strategy and the main results, using leads and lags, together with robustness checks and heterogeneity effects. Section 5 presents hypotheses on the underlying mechanisms to explain the results from the previous part. The main idea is to distinguish between the "signaling politician" and the "lazy politician" hypothesis. Using simple econometric tools, we can establish a real causal link between strategic timing and confidence votes. Finally, the conclusion summarizes all findings, highlighting the main results and methodology, and suggests areas for further research.

2 Institutional background

To fully understand the institutional context, a brief section of this paper must be devoted to the legislative background. The legislative and constitutional tool studied here, the vote of confidence or, in Italian, "questione di fiducia", is a complex object with roots in Europe's constitutional history. We can start to claim that some sort of confidence relationship is common to every parliamentary regime (Galizia, 1968). As confidence, it's meant that an appointed government needs some sort of affirmative vote from the elected Parliament to be in power. This drastically differentiates this institutional system, the parliamentary one, from the presidential one, where the Executive is appointed by the President and has no confidence ties with the Parliament. In a presidential system, the government does not need a confirmation vote and cannot be dismantled directly by the elected assembly. However, as we will see, even many mixed systems, like the French semi-presidential system, still requires some form of confidence relationship. And even in presidential systems, there are checks and

balances on the Executive's power, as seen with Executive Orders in the U.S. system. Thus, our case can be easily applied to other systems for external validity, even though specific peculiarities of each public law systems must be considered.

For clarity, it is useful to divide confidence tools into two main types. The first one involves the Parliament, asked to legitimate a government voting its confidence. This is a measure of political subjugation that is older and serves as a check of the parliamentary system. The second type is usually linked to the approval of a law or a declaration of intent and it is asked by the government to verify if the confidence relationship still exists. The latter, more recent and newer, is often used today as a means for the government of impose its will on the Parliamentary majority, with the counter-threat of government resignation and potential political instability. The first type emerged in Uk during the 19th century, as an evolution of the even older impeachment. Especially after the Reform Act of 1832 and the tradition of the annual Royal Speech, the doctrine recognized a clear necessity for an appointed government to interpret in some way the majority's will of the elected Parliament (Galizia, 1968). However, for the first written formulation, we need to wait for the Third French Republic in 1875. The final formulation as we intend it today, emerged from a group of Constitutions drafted after World War I, in an effort to "rationalize" the Parliamentary system, that has as a symbol the constitution of the Weimar Republic (Fenucci, 2024).

Nowadays each system has its own way to secure parliamentary confidence for the government. In Germany, The Basic Law requires that a new Chancellor, upon appointment, is approved by the absolute majority of the Parliament. Similarly in Spain, only the head of government needs a confidence vote to be elected, even if in this case the election is based not just on the person but also on their program. It's interesting to note that this system includes a constructive vote of no confidence, meaning that after the initial vote, the government cannot be overthrown by the Parliament, unless the assembly proposes a new confidence with an alternative majority on another head of government. This is a means of stabilization, introduced among many others, in several constitutions after World War II (Fenucci, 2024). In Uk, as we said, the annual Royal Speech, exposing the main political agenda as written by the Prime Minister, is usually considered as a confidence vote. However, no confidence motions can also be proposed by the opposition party. In Italy, according to the Article 94 of the Constitution, every newly elected government must receive Parliament's confidence within 10 days from the appointment. Additionally, the Parliament can issue a motion of no confidence against the head of government or one of their ministers. This instrument of check and balance of the parliamentary system, often referred as "voto di fiducia" or "mozione di fiducia", is not our focus here. Apart from the initial vote, the motions are usually issued by the opposition and rarely obtain a majority. Our interest lies in the "questione di fiducia",

which is issued by the government to unify the majority, to speed up the process of approval and avoid a secret ballot on a specific law.

The second type of tools, like the "questione di fiducia", is requested by the ruling government, and it is more an instrument of power centralization rather than a check, unlike the previously described. In Italy the first use was in 1951, when Prime Minister De Gasperi tied the government's survival to a confidence vote, defending a minister under attack during a crucial legislative debate. However, the first notable case took place in 1953 when De Gasperi again tied the government's survival to a confidence vote on the new controversial majoritarian electoral reform, known as the "legge truffa," to ensure its approval before the elections. Unlike in 1951, this confidence vote was applied on a single-article bill, establishing two key precedents: the indivisibility and non-amendability of laws subjected to a confidence vote (Razza, 2016). The full formalization was first introduced in the Chamber of Deputies in 1971, with the reform of its assembly rules. Afterwards, the same was introduced in the Senate in 1988 and from the governmental side, the Law No. 400/1988 on the functioning of the Executive further clarified the decision process: it requires the Prime Minister to initiate a confidence vote with the Council of Ministers' approval and it assigns the official declaration to the Prime Minister or a delegated minister (Rivosecchi, 2008).

The current custom and legislative provision consider a "questione di fiducia" as a formal declaration by the Government to Parliament. This follows a decision of the Council of Ministers, in which the Government conditions its continued tenure on the outcome of a parliamentary vote on a specific law or piece of legislation (Razza, 2016). Procedurally, it has 3 characteristics: open vote, priority in the parliamentary discussion, indivisibility and, consequently, non-amendability of the item. This means that the specific article or law under consideration needs to be voted on the first useful voting, openly, and its approval overrides any other subpart of the law or amendment planned to be discussed. In practice, this tool, has significant implications beyond just committing the government, is usually used during the discussion of a law, if this is getting filibustered, if it is threatened by a secret ballot or if it needs to be approved before an expiring date. Its use has increased over the years and the tool is now widely employed relative to previous legislatures. Before 1994, it was used 149 times, averaging 3.23 time per year, while between 1994 and 2011 it was used 134 times, averaging 7.89 times per year. But it was after 2011 that became widely used, invoked 241 times between 2011 and 2022, 21.90 times per year.

This widely used tool has been both strongly debated and studied. Looking at Italy's main newspapers (La Repubblica, Corriere della sera and La Stampa) the term "voto di fiducia" was cited in 80 articles in 2001, 429 times in 2006, and 571 in 2011. It faced heavy

criticism, especially in law and constitutional studies (Huber, 1996; Lupo, 2007), yet it can also be seen as a means to parliamentary procedural rationalization. Anecdotal evidences about the importance of confidence votes and their dual role in both bypassing debate and showcasing unity is the approval of the civil unions law on May 11, 2016. The parliamentary discussion mimicked this double perspective: opposition figures criticized it for undermining debate and rushing the legislative process. On the other hand, Maria Elena Boschi, the minister responsible, stated that this approval was essential for their constituency, and so this policy tool was a safeguard for a new set of rights.¹

This tool is unique to the Italian legislative framework, but very similar mechanisms exist elsewhere. The most famous and comparable is the provision from the Art. 49.3 of the French Constitution. According to the Constitutional rule, the Prime Minister can take "commitment of responsibility" of the administration to a certain program or declaration of policy, initiated by the executive branch. The government can force the passage of a law without a legislative vote, unless a motion of no confidence is passed. However, such motions (motion de censure) rarely passes, as they also could lead to the dissolution of the legislature and new elections. This instrument, in some ways even more powerful than the "Questione", was once rarely used, but it has become now a key tool in the hands of the recent French governments, especially due to political instability (Leone, 2024). In Germany, the Chancellor can initiate a motion of confidence to consolidate the parliamentary majority, using the threat of the end of the Legislature, although it is not linked to a specific act. It has been used 6 times in the history of the Federal Republic and was rejected 4 times, leading to the resignation of the ruling government and snap elections (Fenucci, 2024). In Spain, the "cuestión de confianza" is similar to the German version, and it has been rarely used. In the Anglo-Saxon world, while in UK it exists an instrument that can be issued by the Government as a threat of dissolution, in order to persuade backbench MPs to support a bill, the use of Executive Orders in the U.S. shares similarities with the tools discussed here, and its used has already been studied by Djourelouva and Durante (2019).

3 Data

¹Alfonso Bonafede, member of the Parliament for the 5 Stars Movement, said that This government [ed.: imposing condence vote] intends the Parliament as a doormat; Antonio Palmieri, member of the Parliament for Forza Italia, added that "What happened is something that goes beyond anything we have seen in the history of the Republic. [...] I remember that Renzi had left freedom of conscience. With the condence vote he took the freedom away". Maria Elena Boschi, the minister responsible, stated that "After decades 3 of waiting for the homosexual people, tomorrow in our country for the rst time we will have a law governing civil unions. [...] Imposing a condence vote had a political value because our government considered the law on civil unions as a fundamental element of the political agenda".

In the following dissertation, the main goal is to verify if confidence votes in Italy are strategically timed. Therefore, data on the occurrence of confidence votes, unpredictable and predictable events must be collected. Confidence votes are registered on a daily basis, with scraping techniques, together with the overall report. Data on unpredictable events are mainly gotten from the EM-DAT database for natural disasters. It is possible to get the number of victims, the nature of the disaster (e.g. flood, earthquake, or hurricane), and the start and end date. Finally, predictable events are collected from official reports on the internet. This is a wide collection of events obtained through a long exercise of scraping, which is explained later. I mainly use data on the World, Euro Cup and Olympic events. The methodology and its use is explained later in this section. In the next paragraphs, a more complete description of how I collected the data and some descriptive statistics are provided. The analysis is made within a time span from 2011 to 2018, mainly because, as showed in the introduction, before 2011 the use of confidence votes is less present. However, the extension to the period after 2018 is planned in the research agenda. The possibility to collect all the data directly from the internet makes it possible to choose the time span with complete freedom.

3.1 Newsworthy event

The precise definition of “newsworthy event” is not trivial. A methodology used by the previous literature (Eisensee and Strömberg, 2007; Durante and Zhuravskaya, 2018) is to include all the events that monopolize the breaking news (i.e. that are correlated with an increase in news pressure). The list of such events is not comprehensive: the previous literature has not provided a complete one. On the other hand, there are some events that have a strong correlation with the news pressure. We can claim that, even if we don’t know all the events, we can rely on a bunch of them that monopolize the attention for sure. The precise selection of those events is related to Durante and Zhuravskaya (2018), and in our case is presented in Table 1.

For predictable events, sport is the main source of data. More precisely, I collect the data from the Euro and World cup, and Olympic games. All data are taken through scraping.²The Euro and World cup data include both preliminary and final tournament matches, while for

²For the Euro Cup, I used <https://www.uefa.com> and <https://en.wikipedia.org> . For the World Cup, I used <https://www.fifa.com> and <https://en.wikipedia.org> where possible. In order to get data on the local time in which those matches were played, I used <https://fbref.com> . All data were scraped using bs4 and selenium through Python scripts.

Predictable Events
Baseline model:
All matches played by Italy for World and Euro Cup Olympic medals won by Italy
Unpredictable events
Baseline model:
Natural disasters w. > 20 victims happened in Italy or w. > 100 victims happened abroad (lasted < 15 days)

Table 1: Event specification

the Olympic games I report only the day when a medal was won by Italy. Globally 78 days have a newsworthy event related to sport. Those events are not concentrated during summer: 53% of them occur in the other seasons. This happens because I included in the research also preliminaries of soccer cups and winter editions of the Olympic Games. The occurrence of those events, and their distribution across years and months, is represented in the Appendix (Figure 2).

For unpredictable events, I collect mainly natural disasters. I find the data on natural disasters from the EM-DAT database. As previously mentioned, I decide to keep only disasters with more than 20 victims if happened in Italy, or with more than 100 killed abroad. Moreover, I exclude all the events that lasted more than 15 days, as suggested by Durante and Zhuravskaya (2018). Globally, 399 days have a newsworthy event related to natural disasters. The occurrence of those unpredicted events is distributed across the months and the years, as in the graphs in the Appendix (Figure 3).

3.2 Confidence votes and sittings

For the first part of my analysis, only a daily report on when a confidence vote was issued is needed. In order to do that, I used both a scraping library and a Natural Language Toolkit to get the necessary data from the official sites of the two Chambers (Deputy and Senate).³ After that, another check is made, date by date, to verify if those votes are for a “mozione” or a “questione”. As explained in the introduction, the “mozione” must be issued when a Government is formed or can be claimed by the opposition. It’s a scrutiny about the general political line of the Government and it’s present in many other countries. The “questione” is a vote on any act, usually a law, where the government commits its mandate. My analysis

³Source: <https://storia.camera.it/> for confidence votes of Chamber of Deputy. <http://www.senato.it/> for the Senate. I used bs4 and NLTK on Python in order to process the raw data.

focuses only on “questione” votes. Data on confidence votes range from 2001 to 2018, even if for my analysis I used a smaller period. In Table 4 are reported some descriptive on the occurrence of this type of vote.

Confidence votes				
	Only “mozione”	Only “questione” (Deputy)	Only “questione” (Senate)	All confidence votes (No “mozione”)
<i>N</i>	18	86	85	129

Table 2: Confidence vote occurrence

My analysis for the baseline model is on the 129 confidence votes observed in the table between 2011 and 2018. We can also see that the sum of the Senate and the Deputy votes is more than the total amount, because sometimes both Chambers have a confidence vote on the same day. In the Appendix (Figure 4) can be seen that the distribution of confidence votes is quite uniform, both over the years and the months. We included years before 2011 to show that the period of analysis (2011-2018) is justified by its poor use before it. The low numbers in January and September could be probably because of the presence of holidays right before these months, which makes it difficult to prepare laws.

In order to analyze the mechanism, reports on sittings are needed. For this reason, I collect each sitting of the two Chambers from 2011 to 2018, registering on which day every session occurred. Also, in this case, all data are collected with the scraping technique.⁴ The total number of days with at least a parliamentary sitting is 1163 (Senate met 777 times and Deputy Chamber 1093 times), which accounts for 52% of the whole time span. It is obvious to observe that this event is more likely than a confidence vote. Further information can be found in the Appendix “Additional info on data collection”. In the next section, I am about to present the econometric model and the main results of this research.

4 Econometric model and results

Regarding the econometric model, I implement a methodology that, as previously mentioned, taken from previous literature on strategic timing (Durante and Zhuravskaya, 2018; Djourelouva and Durante, 2019).

⁴I used bs4 on <https://storia.camera.it/> and <http://www.senato.it>

I consider every day an observation from November 16, 2011 (the first day of Monti’s government) to December 31, 2017 (last government of the legislature lasted longer but no confidence vote was issued in 2018) (2,235 days in total). For each day, a dummy variable express an event. For example, if a confidence vote occurs on a given day, this variable takes a value of 1. The identification strategy begins with an event study using leads and lags around a noteworthy, predictable event. Given the stark differences in political mandate and legislative agenda between political and technical governments, we argue that strategic timing behaviour is different between the two. Therefore, we split the sample into two and analyze each subsample independently. The estimation uses the following model:

$$C_t = \sum_{\tau=-5}^5 \alpha_{\tau} E_{t+\tau} + \gamma W_t + \eta_d + \psi_m + \vartheta_y + \varepsilon_{it}$$

where C_t is 1 if there is a Confidence vote in day t , E_t is predictable newsworthy event at time t , W_t is the number of weeks from the beginning of the legislature, and η_d, ψ_m and ϑ_y are respectively day, month, and year fixed effect. Finally, SEs are clustered at year-month level. We can infer strategic timing if the coefficient near the date of the confidence vote is significant. A significantly negative coefficient suggests politicians avoid predictable newsworthy events, and this could happen to not crowd out the attention on his policy. Conversely, a positive coefficient indicates they time measures to coincide with other events, when the attention of the public opinion is captured by other events.

For political governments, the occurrence of confidence votes is negatively correlated with newsworthy events, particularly in the days following them, as illustrated in Figure 5. On the other hand, for technical governments, the occurrence of confidence votes is positively correlated with predictable newsworthy events, and more precisely the day before them (Figure 5). We can clearly see two opposing effects: during political governments, politicians avoid moments when public attention is distracted, indicating that there would prefer to highlight the approval of a law. We call this effect “signaling politician”. In this sense the days after a newsworthy event are crucial, because the usually monopolize the public attention. In contrast, technical governments would prefer to avoid public scrutiny by scheduling a confidence vote the day before a newsworthy event, in order to cover the public discussion. The timing reflects the same strategic behaviors but on opposite sign. For sensitivity check, I made the same regression using different time windows instead of the 5 days before and after. Even considering only 3 days before and after the event, or 7 before and after, the coefficients remain significant, as shown in Table 3. For an additional robustness check, I exploited heterogeneity across confidence votes, analyzing the impact of vote size and, expecting a more significant effect for tight majorities under political governments. This

means that only for political government, if confidence vote is used to signal political strength, the effect is bigger when majority is tight or weak. For technical government, if confidence votes are not used to signal cohesion but strategically timed to avoid public attention, this heterogeneous effect should be null. I split the sample into tight and large majorities and ran separate event studies for political and technical governments. A tight majority is when the government collected less votes than the third quantile among all votes. On the other hand, all votes that took more votes than the fourth quantile, are considered large majorities. For each subsample (Tight-Political, Large-Political, Tight-Technical and Large-Technical) the econometric model used is the one presented above.

In Figure 6 , only the significant coefficient from the main regression is present: T+1 for political governments and T-1 for technical ones. For political governments, the negative effect seen the day after is almost entirely due to votes with a tight majority. However, for technical governments, there’s no noticeable difference between tight and large majorities the day before. The main argument suggests that if confidence votes signal unity and effectiveness, this primarily applies to political governments. Consequently, a tight majority becomes crucial for these governments, necessitating prompt approval and speeding up discussions. For a sensitivity check, I changed the time windows and the effect remains significant, as showed in Figure 7. Another interesting approach is a textual analysis of the content of the approved laws under both technical and political governments. I retrieved the text of laws and linked law decree if present. Then I encoded this corpus using TF-IDF. TF-IDF (term frequency–inverse document frequency) represents documents by considering each possible word, bigram, or n-gram as features. For each document, the count of each feature’s occurrence is divided by the document’s total length (TF part), and further divided by the word’s occurrence across the entire corpus, to reduce the importance of frequently occurring words. This transforms every document (or law, in this case) into a high-dimensional vector. Using this high dimensional vector as dependent variables x_{gram} , I appended a dummy y_t which is equal to 1 if the law was approved during a technical government, and zero otherwise. In this way, shrinking the relevant columns using LASSO, I could identify characteristic expressions of laws approved during technical government. LASSO (Least Absolute Shrinkage and Selection Operator) is a regression technique used to enhance prediction accuracy and model interpretability. It adds a penalty term to the least squares objective, proportional to the absolute values of the regression coefficients. This penalty forces some coefficients to become exactly zero, effectively selecting a subset of the most important features. The strength of the penalty is controlled by a tuning parameter (lambda). Flipping the value of the y_t variable, we can do the same for political governments.

The results, shown in Table 4, indicate significant differences in the semantic domains and

legislative topics of laws approved by the two types of governments. For political governments, one of the most representing expression is “fond riduzion pression” (fund for fiscal pressure reduction). In contrast, for technical one we can mention “senz oner” (without tax burden), “disavanz sanitar” (health fiscal surplus) and “somm deriv riduzion” (amount derived from reduction). There’s a clear trend: laws passed during technical governments focus on budget cuts, whereas laws approved during political governments aim to increase public expenditure. This is of course related to the political context, and the aim that drove Monti’s government to specifically make unpopular choices on fiscal budget. However, future research should conduct ex-ante analyses of fiscal austerity measures and perform heterogeneity tests without differentiating by government type.

Before concluding this section, a final validation is needed. I previously showed the presence of a negative and significant effect of the scheduling of a confidence vote on predictable, newsworthy events. In the next section, I’ll explore two possible hypotheses and use additional empirical research to disentangle them. All the empirical evidence suggests some attempt of strategic timing on confidence votes and more specifically, the will by the government to monopolize the attention about some policy and present itself as united. This process cannot be extended to those events that monopolize the public attention but cannot be predicted. In order to show that politicians do not strategically time this type of policy when they don’t know which day needs to be avoided, in this section, I include a validation test on unpredictable newsworthy events. This type of event is previously specified and listed in Section 2. These unexpected events should not present significant evidence of strategic timing, like the results is in line with the methodology used in the previous literature in this field (Durante and Zhuravskaya, 2018; Djourelouva and Durante, 2019). The coefficients that are presented in Figure 8 are the betas from leads, lags, and exact dates of the unpredictable events, as specified in the following regression:

$$C_t = \sum_{\tau=-2}^2 \alpha_{\tau} E_{t+\tau} + \gamma W_t + \eta_d + \psi_m + \vartheta_y + \epsilon_{it}$$

where E_t is 1 if an unpredictable newsworthy event occurs in day t , like in the previous reduced form. For both technical and political governments, results show that there is no effect of unpredictable newsworthy events on confidence vote scheduling, aligning with the methodology of previous literature (Djourelouva and Durante, 2019). Therefore, there’s robust evidence of strategic timing in confidence vote scheduling. To strengthen my findings, I’ll explore the underlying mechanisms and present two hypotheses with further quantitative research to determine the most credible one.

5 Mechanism

In the previous section, a clear pattern emerged: politicians strategically time confidence votes to avoid high news pressure and newsworthy events. Additionally, reduced form on unpredictable newsworthy events confirms this pattern. However, this effect must be explained. I present two different hypotheses, which I call here “lazy” and “signaling” politicians. The first explanation (“lazy politician”) could be related to the activity of the two Chambers: more generally, the Italian members of the parliament do not want to schedule sittings during an important predictable event. I set as predictable newsworthy events mainly important sports matches: that type of matches is widely seen, and it is culturally considered very important. For these reasons, the Members of the Parliament can impose their will on the Political Government and avoid a sitting on those specific days. If this is the underlying mechanism, we cannot link the previous results to strategic timing by the government. The other effect, called “signaling politician”, is more related to the activity of the Executive. According to this hypothesis, the use of confidence votes, and then the increased speed for a law approval, can be a signal of an active and pragmatic government. In this sense, the politician during political government wants to avoid special days when the attention of the public opinion is diverted, and concentrate confidence votes when he can show off his activity. In this sense, the political agent wants to be sure to inform its constituency about its achievement.

My aim in this section is to disentangle those two effects. In order to do that, I use two different identification strategies. For the first one, I use the exact time in which the Euro and World Cup matches occurred. I hypothesize that, if the “lazy politician” is the strongest mechanism, we would see a negative effect only for matches happening before prime time (i.e. 8 PM). For this reason, I only consider soccer matches as newsworthy events, and I divide them based on their timing. For both subsamples, I run a reduced form regression of confidence votes on those two samples of predictable newsworthy events. If we can see a negative significant coefficient only for the first subsample, we can claim that the effect is largely dictated by the “lazy politician”. Furthermore, I use all the sittings of the Parliament to prove if the coefficient remains significant also when we consider “business as usual”. If we see that the effect persists, also when all the sittings are considered, we can claim as well that we are dealing with the mechanism recalled before. For both sections I divided the subsample between technical and political governments.

5.1 Exact timing for soccer matches

In the following section, I try to disentangle the two hypotheses explaining the coefficients found in Section 3. Those hypotheses are the “lazy politician” vs. the “signaling politician”, explained in the previous paragraph. In the first identification strategy, the exact time of

football matches is considered. Therefore, I take only soccer matches and I divide them by their timing. In this way, there are two subsamples: matches that took place during prime time and matches which did not. I run a reduced form regression, using both subsamples. If the “lazy politician” is the dominant mechanism, there would be a negative effect only for matches during the afternoon. This happens because the Members of the Parliament are more interested in following those matches than the sittings. The first results in Figure 9 seem to suggest the opposite.

If we consider only the exact coefficient of the two regressions (on the two different subsamples), we see that there is an effect with respect to prime time matches only, for political governments only. This is the opposite effect that would be expected in the case of the “lazy politician”. The explanation can be found in the structure of the data: the main part of matches is played in prime time (about two thirds). This would mean that the power of the sample is stronger in the second regression. We can also find a political explanation for these results. Usually, matches during prime time are more relevant than the other ones for the public opinion. For this reason, the “signaling politician” is mainly interested in avoiding this kind of event. On the other hand, the “lazy politician” wants to follow every match. Hence, the “lazy politician” is the one more prone to avoid sittings overlapping with afternoon events. More generally, the “lazy politician” hypothesis cannot be excluded from those results. However, they suggest that the dominant effect could be the “signaling politician” hypothesis. From further studies, we can also claim that half of the confidence votes are passed during the morning, decreasing even more the strength of the sample. Summing up the results, this type of analysis is really sensitive to how powerful the sample is, therefore we cannot form a clear conclusion. Anyway, the fact that all the coefficients are stronger considering prime time events, would suggest that the prevailing effect is the “signaling politician”.

5.2 Confidence vote vs. business as usual

In the previous paragraph, the results suggest the dominance of the “signaling politician” hypothesis. It is clear, though, that the design is really sensitive to the number of observations of the different subsamples. Another methodology can involve the dependent variable, instead of the independent one. In the previous section, I divided the pool of the newsworthy events; in this one, I change the shape of the variable on the left-hand side. Instead of using confidence votes, I run the same reduced form regression using a different dummy variable. This dummy takes 1 if a sitting of one of the two Chambers happened. I aim to compare the correlation that emerged in part 3, with what we can find when the parliament works like “business as usual”. More generally, if the correlation remains negative and significant, even when we

consider all the sittings of the Parliament, we can argue that the dominant effect is the “lazy politician”. On the other hand, if the coefficients become statistically 0, this suggests the prevalence of the “signaling politician”. As reported in Section 2, the data on the sittings are collected with the scraping technique. They are denser than the data on the confidence votes: 1,163 days out of 2,235 have a Parliamentary sitting, accounting for about 52% of all observations. The regression is the same reduced form used in all previous specifications of this section, as shown in Figure 10.

The results are clear: there is no significant coefficient when we consider all the sittings of the parliament. This, especially if we look at the exact day coefficient, that in the previous Sections was the coefficient of interest. This means that there is no correlation between the scheduling of a generic Parliamentary session and the presence of a newsworthy event. It’s important to recall that, in this case, the specification of a newsworthy event is the same used in Section 3 (Euro cup, World cup, and the Olympics). The absence of significant coefficients should suggest that strategic timing is active only if we consider the confidence votes. Thus, this would be an element in favor of the “signaling politician” hypothesis.

Summing up, the results from Section 3 highlight a strategic timing for confidence votes during political governments to avoid predictable newsworthy events. Additionally, there is no effect with respect to unpredictable ones. In this section, I present two possible explanations. The first one is that the government wants to enjoy the maximum amount of public attention when a confidence vote is issued. The second one is that this correlation could be simply dictated by the intention of the Members of Parliament not to have sittings during those important events. In order to see which one is the real mechanism in place, I use two different identification strategies. The first one acts on the independent variable: I divide the sample of sports matches based on their timing, and I see that the preliminary results suggest the dominance of the “signaling politician”. Anyway, the results are also very sensitive to the design of the subsamples. For this reason, I cannot exclude the “lazy politician” hypothesis. Then, the second strategy concerns the dependent variable: I regress the presence of predictable newsworthy events on the overall amount of Parliamentary sittings, finding no correlation under any specification. Even if we cannot exclude the presence of the “lazy politician” hypothesis yet, this result is a piece of additional evidence in favor of the “signaling politician”.

6 Conclusion

In the previous pages, I investigated the use of strategic timing in politics in Italy, exploit-

ing the same methodology from previous studies (Durante and Zhuravskaya, 2018; Djourelouva and Durante, 2019). The actual policy I wanted to study is the confidence vote: if it is correlated with predictable events, while it has no links with the occurrence of unpredictable ones, we can claim that it is strategically scheduled. I chose this tool because it's a distinctive feature of Italian legislation and remains highly debated. This procedure is criticized by legal literature because it's often seen as undermining the role of parliament. However, we can reverse this concern, arguing that this type of instrument can be used by the government to highlight its activities. Moreover, this research is interesting for its links with the more general literature on political agency.

The data were mostly collected using web scraping and categorized into four groups: confidence votes, sports matches, Olympic medals and Natural disasters. The period I wanted to analyze is from 2011 to 2018, even if data on confidence votes covers a longer period, from 2001 to 2018. The results are divided for political and technical governments. I used for my empirical research 227 confidence votes, 1,163 parliamentary sittings, and 2 Legislatures. To determine which events could be considered newsworthy, I followed the previously cited literature. For predictable newsworthy events, all the matches played by Italy during the Euro and the World Cup, and the Olympic medals won by Italy were included. For what concerns the unpredictable newsworthy events, I used natural disasters lasting less than 15 days and causing more than 20 fatalities in Italy or more than 100 abroad, as reported by the EM-DAT database. To study the underlying mechanism related to the strategic timing, I collected the exact time of every Euro and World Cup match, along with the exact date of all Parliamentary sittings.

In Section 3 I presented the econometric model. The results show that for political governments, there's a negative relationship between confidence votes and predictable newsworthy events in the days following. Conversely, the sign is positive and before the event during technical government. The validation test and several sensitivity tests, changing the time window, seem to confirm this aspect. This seems to suggest strategic timing: politicians in political governments try to maximize public attention when scheduling confidence votes, while technical governments try to avoid public scrutiny by timing votes to coincide with newsworthy events, especially when passing unpopular policies. This is also confirmed by a quick textual analysis on the content of laws. Moreover, under the robustness check, the coefficient of interest remains significant in almost all specifications and subsamples.

In Section 4 I tried to present two different explanations, which I called the "lazy" and the "signaling" politician. Focusing on political governments, the first explanation ("lazy politician") relates to the activity of the two Chambers: more generally, the Italian members of the parliament do not want to schedule sittings during an important predictable event. The

other effect, called the “signaling politician”, is more related to the activity of the Executive. According to this hypothesis, confidence votes are not negative tools but signals of an active and unified government. In this sense, the political agent wants to be sure to inform the constituency about his achievements. To verify which hypothesis is stronger, I used two different identification strategies. For the first, I used the exact time in which the Euro and the World Cup matches occurred. I hypothesized that, if the “lazy politician” is the strongest mechanism, we would have seen a negative effect only for the matches happening before prime time (i.e. 8 PM). However, results show significant coefficients only for prime-time matches, suggesting the "signaling" effect is stronger. This cannot exclude the “lazy politician” hypothesis, but it suggests that the dominant effect is the “signaling” one. More generally, this type of analysis is really sensitive to how powerful the sample is, and then we cannot have a clear answer. In the second method, I compared the results obtained in the previous Section with the normal activity of the parliament. More specifically, I used the same econometric strategy for all sessions and found no correlation under any specification. Even though we cannot completely dismiss the “lazy politician” hypothesis yet, this result is a shred of additional evidence in favor of the “signaling politician”.

Preliminary results suggest that the politicians seem to strategically time confidence votes, avoiding predictable newsworthy events during political governments and leveraging them during technical ones. This is a novel result with respect to the previous literature. However, for a more general identification, the activity from 2011 to 2018 must be compared with more recent data. Therefore, further study is needed, especially expanding the dataset past 2018.

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Appendix - Tables and Figures

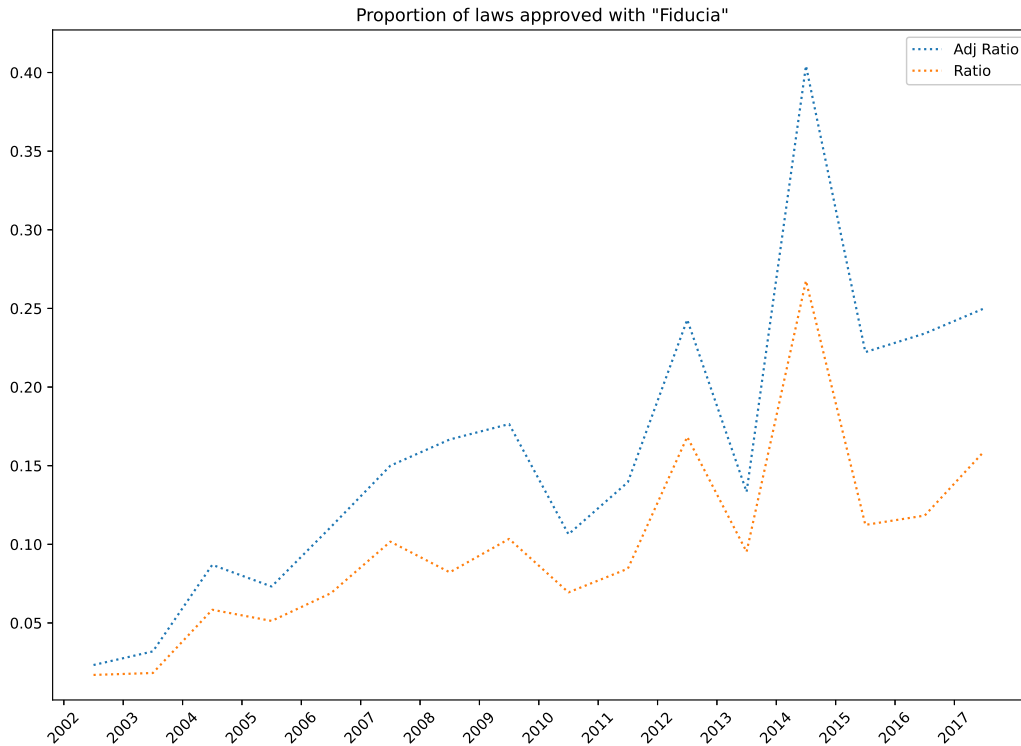
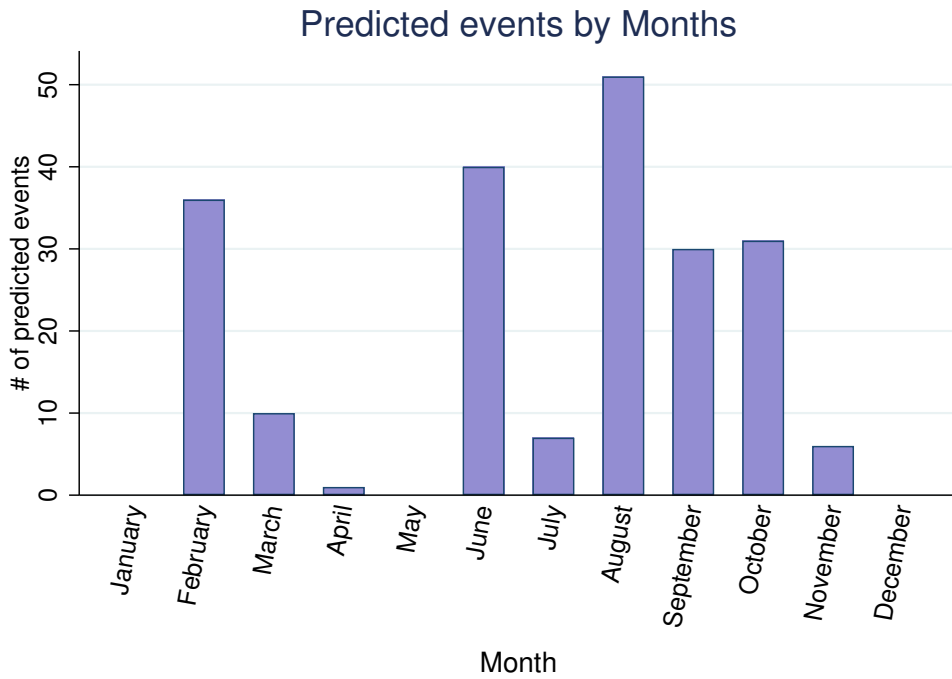
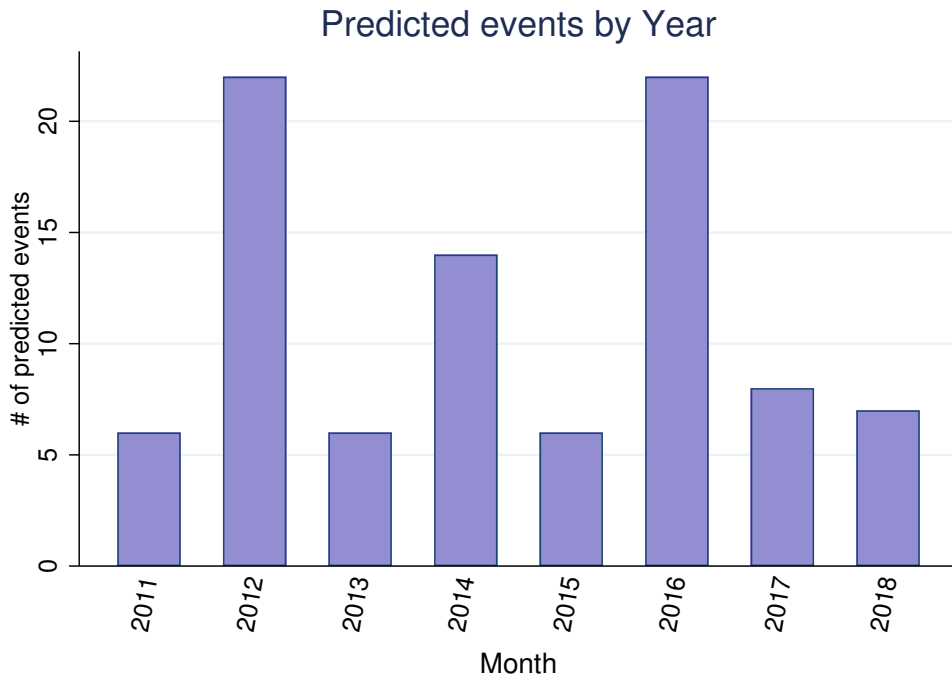


Figure 1: Ratio of laws approved using a “Questione di fiducia”

Notes: The Adjusted Ratio does not count Ratification of Treaties, Recurring approval of international agreements, Guidelines or Regulations approved by a vast majority.

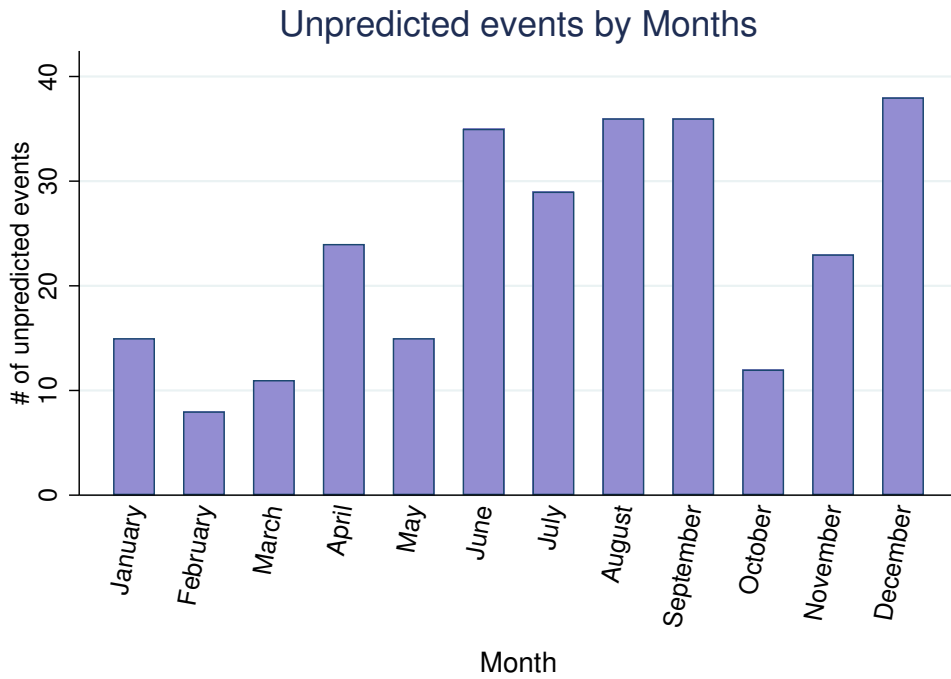


(a) By Month

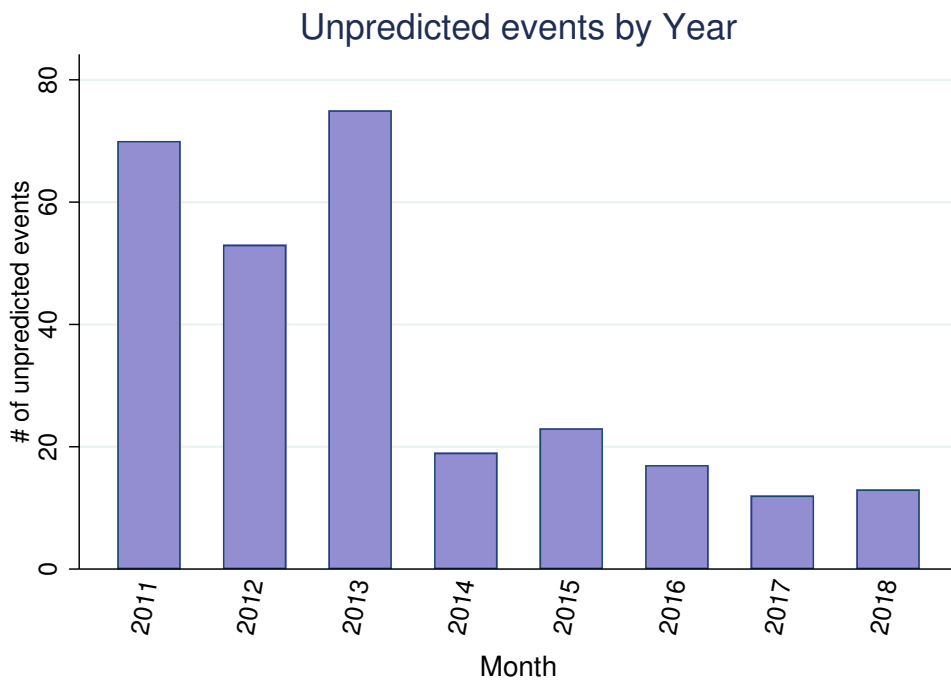


(b) By Year

Figure 2: Predictable Events



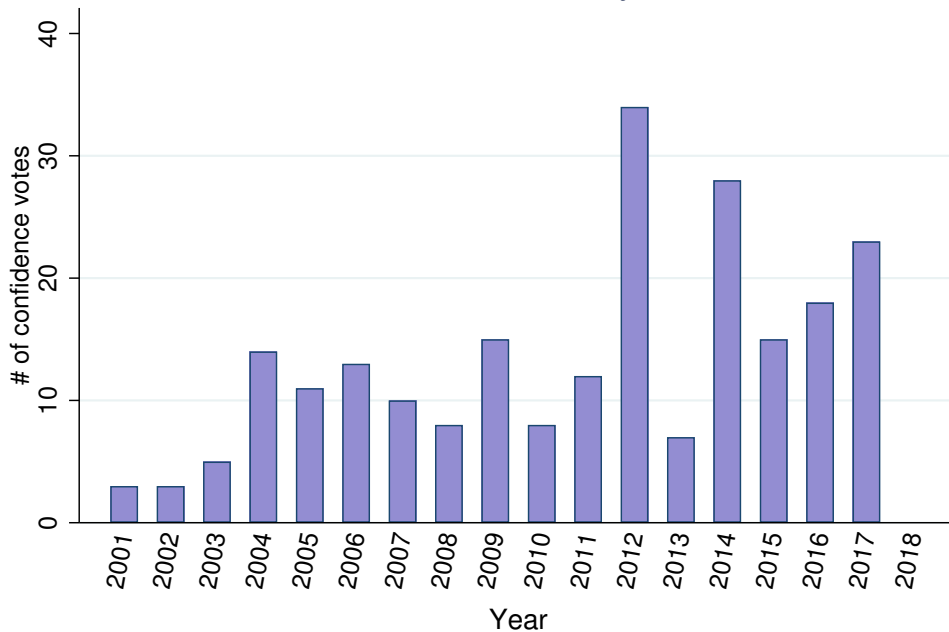
(a) By Month



(b) By Year

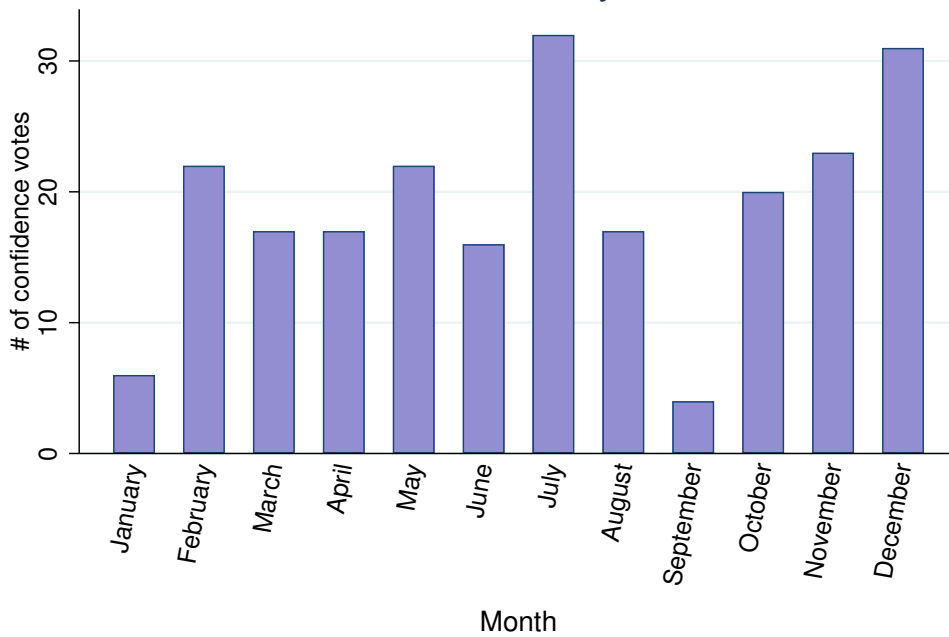
Figure 3: Unpredictable Events

Confidence votes by Year



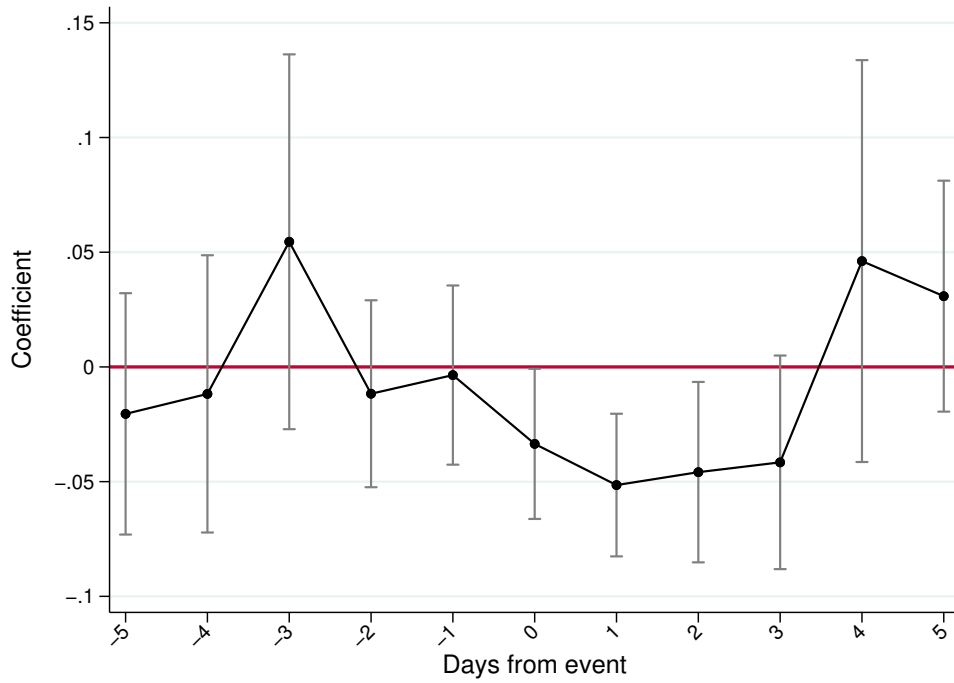
(a) By Year

Confidence votes by Months

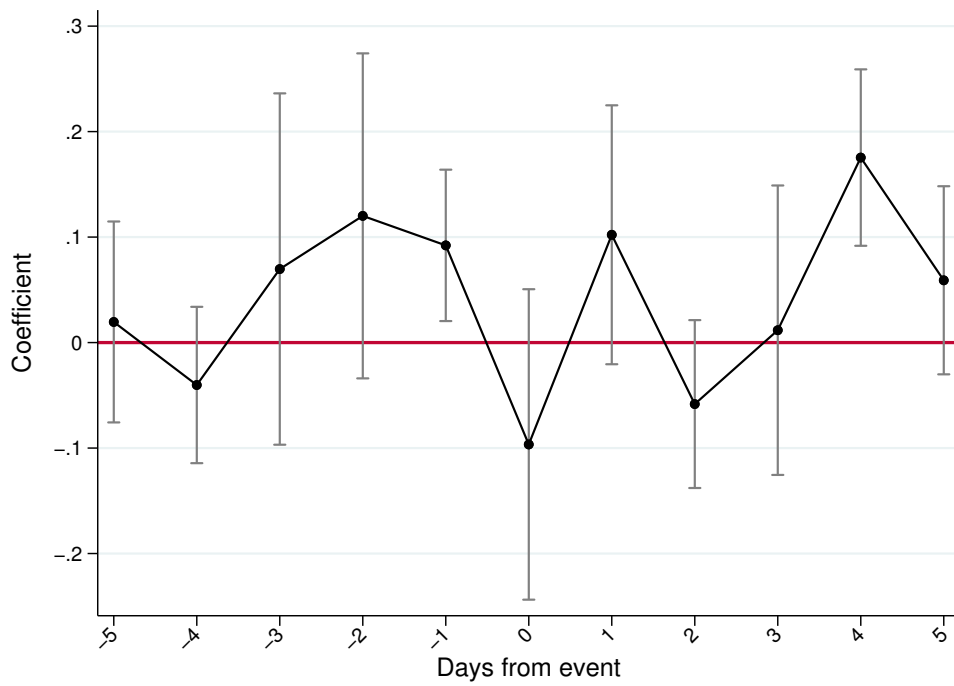


(b) By Month

Figure 4: Confidence votes



(a) Political Government



(b) Technical Government

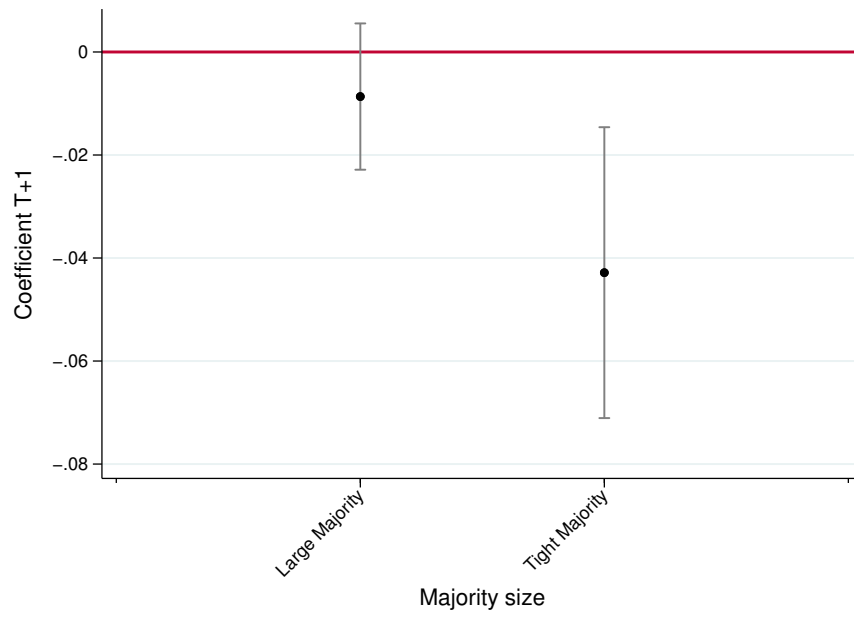
Figure 5: Baseline model: event study with leads and lags

	Political Gov't			Technical Gov't		
	(1)	(2)	(3)	(4)	(5)	(6)
	C_t	C_t	C_t	C_t	C_t	C_t
E_{t+1}	-0.0515** (0.0159)	-0.0431** (0.0148)	-0.0514** (0.0155)	0.102 (0.0626)	0.135* (0.0622)	0.0997 (0.0712)
E_t	-0.0335* (0.0167)	-0.0284 (0.0150)	-0.0335 (0.0180)	-0.0966 (0.0751)	-0.0477 (0.0844)	-0.0749 (0.0699)
E_{t-1}	-0.00356 (0.0199)	-0.000914 (0.0233)	-0.00282 (0.0170)	0.0921* (0.0366)	0.0943* (0.0402)	0.0978* (0.0356)
Time window (days)	3	5	7	3	5	7
Weeks from legislature	Yes	Yes	Yes	Yes	Yes	Yes
Day, month, and year FEs	Yes	Yes	Yes	Yes	Yes	Yes
N	1701	1703	1699	524	526	522

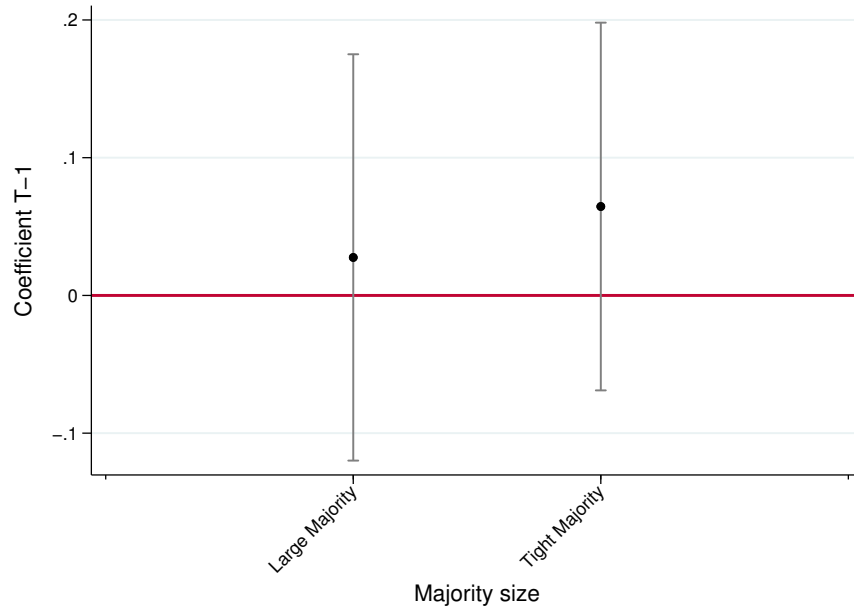
Standard errors in parentheses, clustered at year-month level

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3: Sensitivity analysis: baseline event study



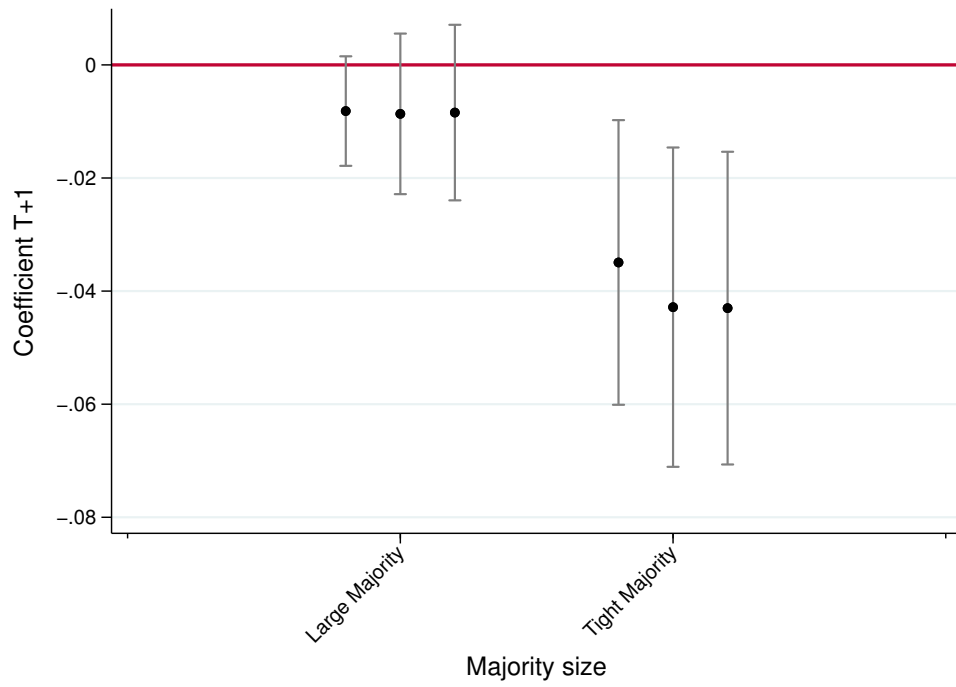
(a) Political Government



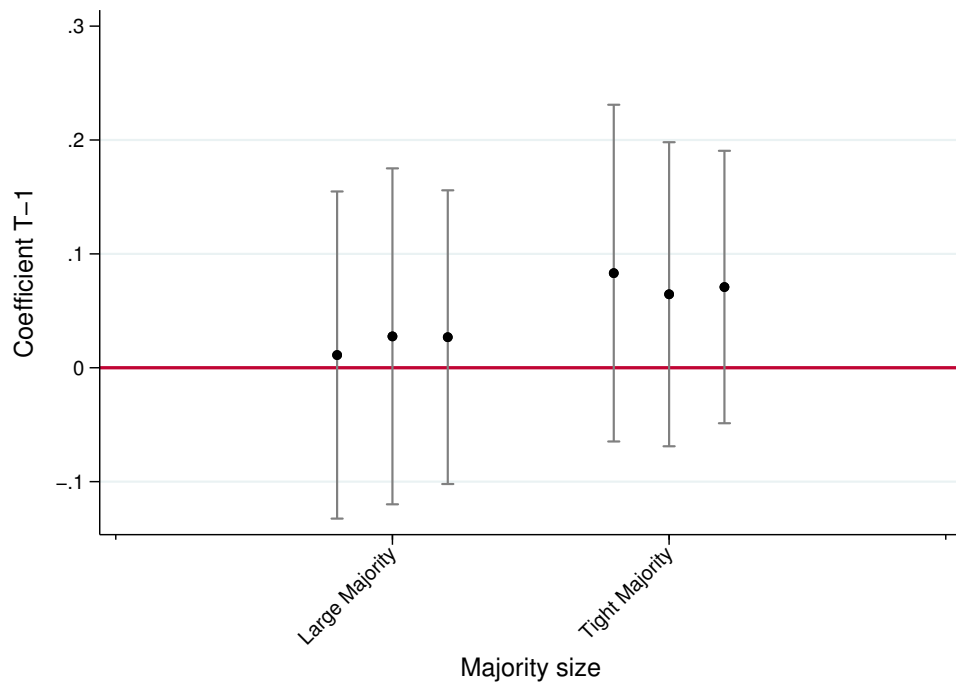
(b) Technical Government

Figure 6: Robustness check: Tight vs large Majority

Notes: In the Figure, the betas of baseline regression, for different subsample. For Political Government is the beta of E_{t+1} , while for technical is E_{t-1} . Model, Fixed effects and SE clustering as in the baseline model.



(a) Political Government

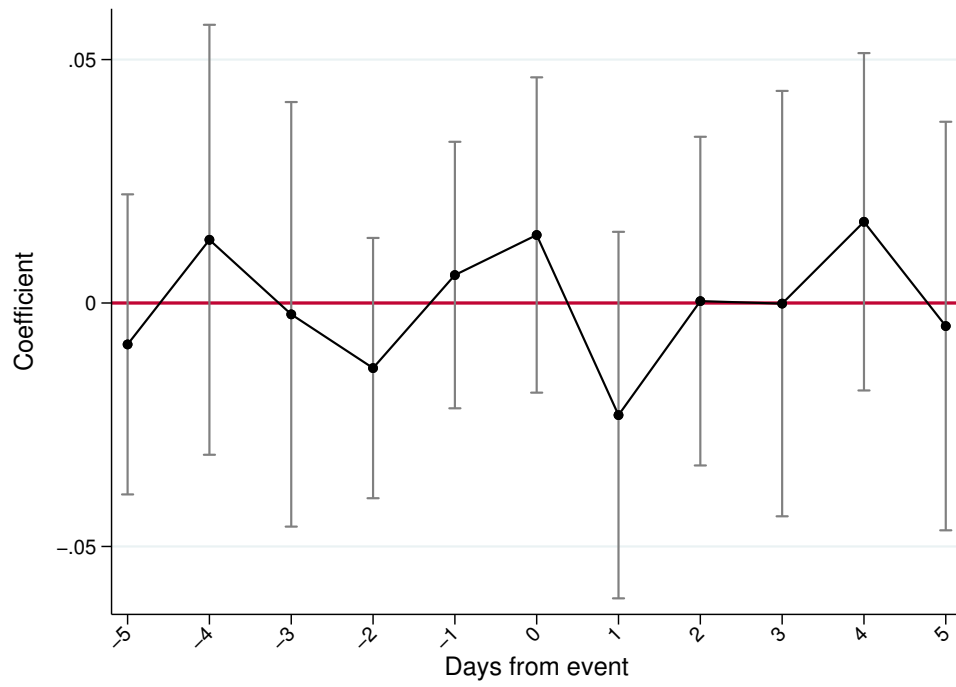


(b) Technical Government

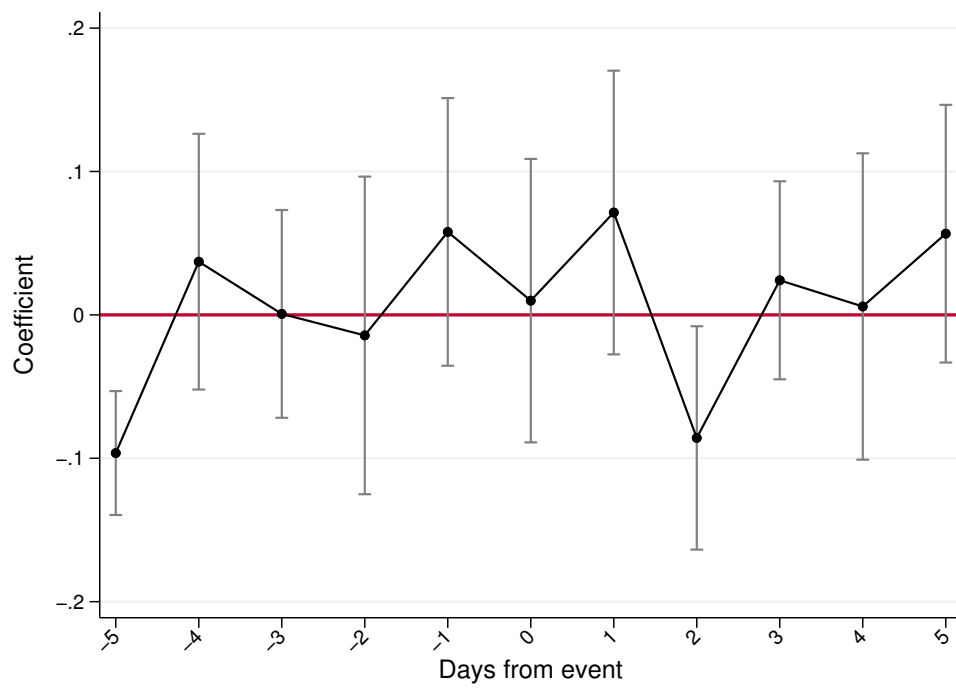
Figure 7: Tight vs large Majority with 3,5 and 7 days time window

Political Gov't	Technical Gov't
anno milion	regol eman
fond riduzion pression	divent
rifer relat decret	concert ministr public
natur regolament	applic vident
dat decorrt	lugl modific
	deliber bilanc prevision
	turism sport
	somm deriv riduzion
	ampiezz
	senz oner
	disavanz sanitar
	pun sanzion amministr
	eventual critic
	decret natur
	prepost gestion

Table 4: Distinctive expressions, by type of Government

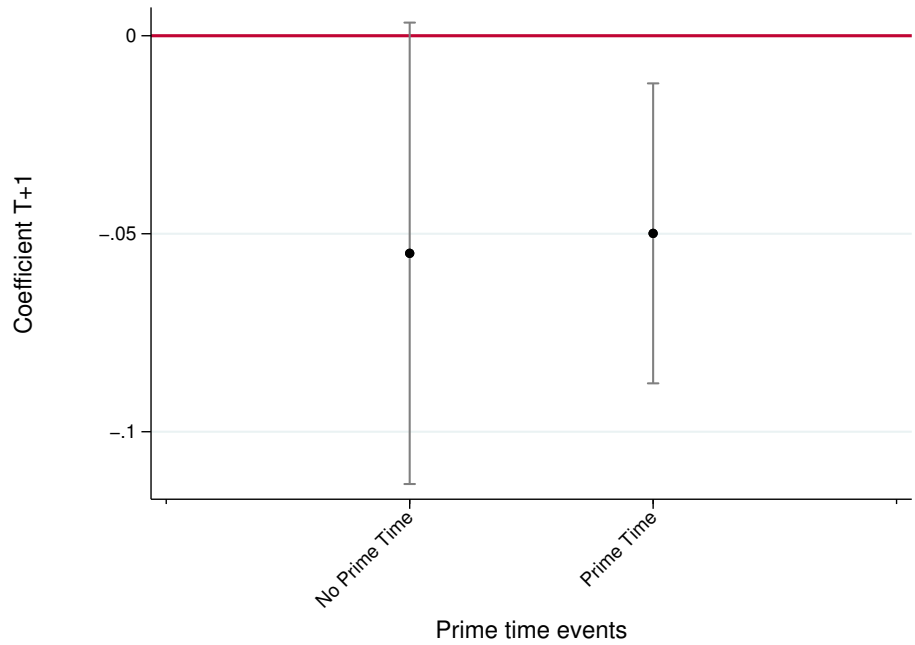


(a) Political Government

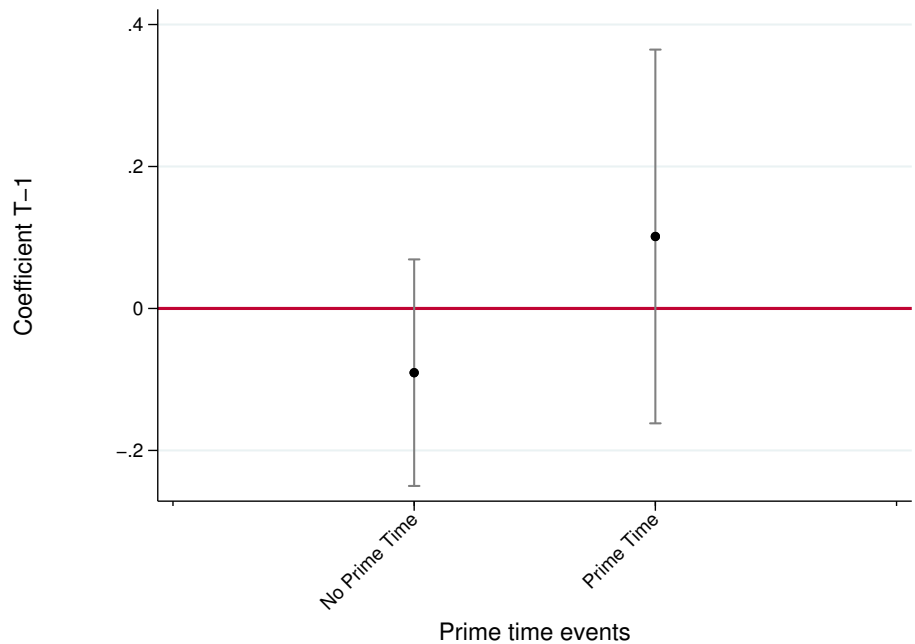


(b) Technical Government

Figure 8: Robustness check: event study with unpredictable events



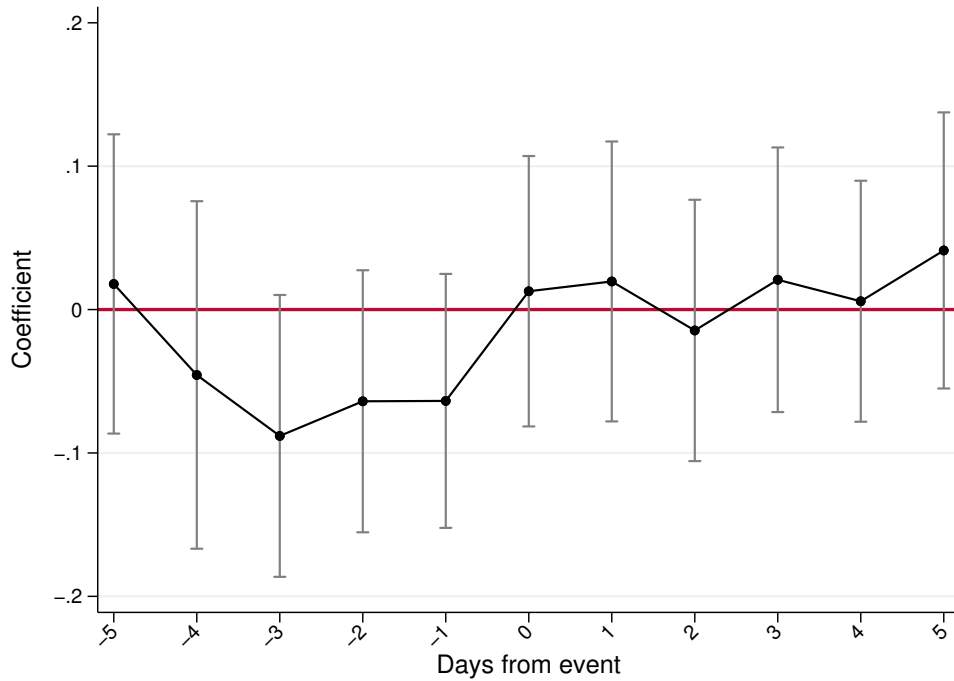
(a) Political Government



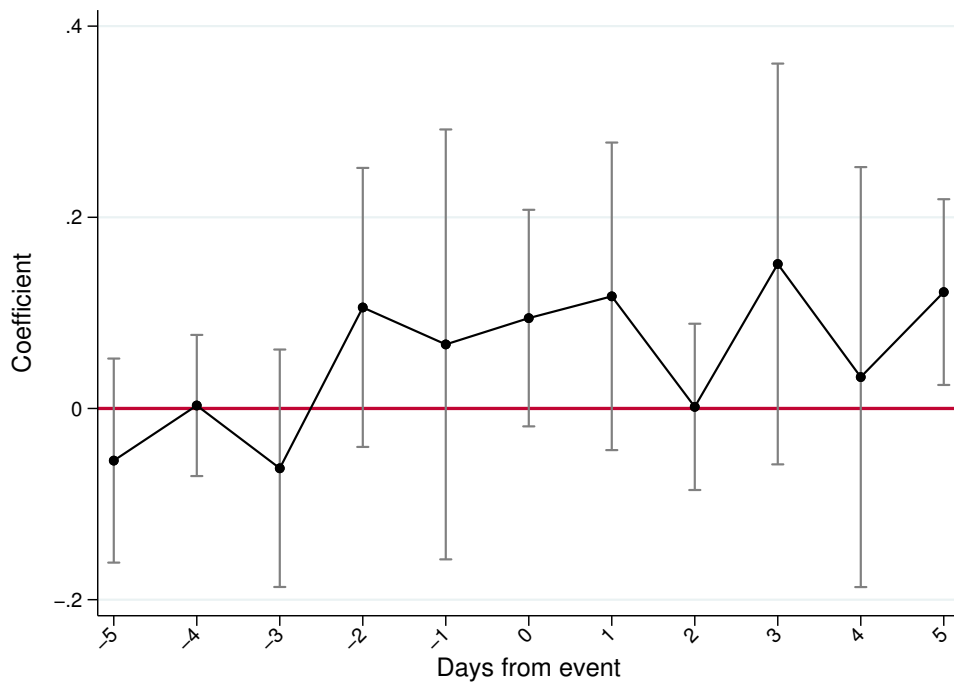
(b) Technical Government

Figure 9: Mechanism: Exact time of sports events

Notes: Betas of the baseline regression are shown for different subsamples (E_{t+1} is a dummy variable equal to 1 if the event (does not) occurs in prime time for the first (second) subsample). For Political Government is the beta of E_{t+1} , while for technical is E_{t-1} . Model, Fixed effects and SE clustering as in the baseline model.



(a) Political Government



(b) Technical Government

Figure 10: Mechanism: predictable events vs. normal Parliamentary activity
Notes: Baseline model but dependent variable $C_t = 1$ if there is a Parliamentary sitting in date t . Fixed effects and SE clustering as in the baseline model.

Appendix - Additional info on data collection

As described in Section 2, most of the data are collected through the scraping technique. More specifically, in the following table are presented the main libraries and sites I used in order to get all the data.

Data	Program	Library	Site
Euro Cup	PyCharm (Python)	Selenium	https://www.uefa.com/
World Cup	PyCharm + Jupyter (Python)	Selenium + BeautifulSoup	https://www.fifa.com/ https://en.wikipedia.org/
Olympic medals	PyCharm (Python)	Selenium	https://www.sports-reference.com/
Natural Disasters	Stata	#	https://www.emdat.be/
Confidence votes (Senate)	Jupyter (Python)	BeautifulSoup	http://www.senato.it/
Confidence votes (Ch. of Deputy)	Jupyter (Python)	BeautifulSoup + NLTK	https://storia.camera.it/
Parliamentary sittings	Jupyter (Python)	BeautifulSoup + NLTK	http://www.senato.it/ https://www.camera.it/

For a more detailed description of my collection work:

- **Euro Cup** matches are collected using Selenium from official reports on <https://www.uefa.com/>. **World Cup** matches have a mixed source. Most of the data I collected from the archive on <https://www.fifa.com/>. This archive was shut down during my research and this made necessary to find further data on <https://en.wikipedia.org/>. I collected teams, dates, results and role of the matches (Preliminaries, Final Tournament etc.). For the **exact timing** of the matches I used <https://fbref.com/>. All the data were organized in a dataset with Pandas and exported as a file .dta.
- **Olympic medals** are collected using Selenium on <https://www.sports-reference.com/>. I collected only medals won by Italy, with the date and the value (Gold, Silver or Bronze). Also in this case, the data were organized in datasets with Pandas and exported as files .dta
- **Confidence votes** are collected with BeautifulSoup and NLTK from the official sites of the two Chambers. For the Deputy Chamber I used a chronological list, I searched for all the dates where is present the word “fiducia”, and then I checked date by date. The same for the Senate, but in this case I used date by date reports. I also collected the law discussed, and then I divided them in the categories exposed in the main body. For the total number of **parliamentary sittings** I just recorded all the day by day reports from the site of the two Chambers.

Part II

The effect of populism on electoral promises

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Giuseppe Spataro**

**University College London*

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Abstract

This study examines whether populist politicians are more likely to fulfill their electoral promises compared to non-populists. Focusing on U.S. House Representatives from 2016-2020, we develop a novel measure of semantic similarity between electoral platforms and approved laws using various text analysis techniques. Employing a regression discontinuity design to address endogeneity concerns, we analyze 633 electoral platforms and 743 approved laws across three Congresses. Our findings suggest a positive and significant correlation between populist rhetoric and promise fulfillment, particularly during Republican-majority sessions. The effect is robust across multiple text vectorization methods, with populist platforms showing 2-3% higher similarity to approved laws. However, this relationship flips when considering only co-sponsored laws, indicating a complex dynamic between populist rhetoric and legislative outcomes. These results are preliminary and need to be corroborated with a wider dataset of platforms and new vectorization technique in our next research agenda.

JEL codes: D72, D73, L88

Fields: Political Economy

1 Introduction and motivation

Populism has become a significant research topic in recent years due to its growing presence in politics. Scholars in political economy have extensively studied this phenomenon, following Cas Mudde's seminal work in 2004 (Mudde, 2004). Two main approaches have been used to study populism. The first involves theoretical models to understand its causes, developed by researchers like Guiso et al. (2017); Rodrik (2018); Acemoglu et al. (2013); Levy (2021). The second approach involves using applied identification strategies, such as those developed by Autor et al. (2013) and DellaVigna and Kaplan (2007). Both of these approaches have shed light on the complex factors that contribute to the rise of populism in current politics.

In the first attempt to rigorously define contemporary populism, scholars, especially in German political science, started by identifying common characteristics of its policies. According to Bergsdorf (2000), populism is closely related to proposing simple solutions for complex political problems. Later, Dahrendorf (2003) suggested that all modern populist platforms are marked by opportunistic policies that promise quick and pleasing results. However, the most widely used definition is by Mudde (2004), who describes populism as an ideology that considers society to be ultimately separated into two homogeneous and antagonistic groups, 'the pure people' versus 'the corrupt elite'. Guiso et al. (2017) later consolidated various definitions, framing different views as aspects of supply, demand, and consequences. They argued that the three necessary aspects of a populist rise are: (1) populists' claim to side with the people against the elite (supply rhetoric); (2) a general sense of fear or enthusiasm driving the demand for populism; and (3) a disregard for the long-term consequences of populist policies. It's important to note that only the supply aspect has been extensively measured empirically, as in the work of Gennaro et al. (2021), which we will adopt for defining a populist platform.

Populism has also been a subject of much political debate, especially regarding the ability of populists to keep their electoral promises. This aspect has been extensively debated in the media but remains underexplored academically. Despite mixed anecdotal evidence in political debates, the topic of electoral promises remains relevant and underexplored in the literature. The literature on electoral promises is a sub-branch of the broader literature on accountability, with studies by Besley and Prat (2006), Strömberg (2004), and Snyder Jr and Strömberg (2010) establishing the topic. The literature on accountability examines the mechanisms by which constituents can hold politicians accountable for political activity, and some studies have highlighted the central role of electoral promises, as shown by Elinder et al. (2015) and

Cruz et al. (2018). Another study by Morelli et al. (2021) proposed a model that examines the trade-off between citizens' commitment and delegation. More specifically, in prolonged period of increasing distrust in politics among the citizenship, some politician can emerge proposing a stronger commitment on simpler policies easily monitorable by the electorate. Historically, in the recent years this aspect has been adopted by populist politicians. This paper tries to shed a light on whether populists are more likely to fulfill their electoral promises compared to non-populists. More generally, taking in consideration again the paper by Guiso et al. (2017), our aim in this study is to link 'supply rhetoric' and 'consequences on policies', and to verify if the rise of populist platforms and agendas had an impact on approved policies.

To do this, we start from the creation of a new measure of semantic similarity between the electoral platform of the elected officials and the laws approved during the subsequent legislature. Our aim is to focus on the U.S. House, and then the electoral platforms of all the elected representatives and their opponents are needed. So, our study started from a deep work of data collection aimed at constructing a comprehensive database of electoral promises. We used a method already present in the literature (Di Tella et al., 2023), extracting the campaign websites of the candidates from the Library of the Congress, and then the historical screenshot of those sites, the nearest to the election date, retrieving data from the Wayback Machine of the Internet Archive. This task, made of thousands of historical web page scanned and selected, is partially automated using LLMs (ChatGPT). Using this method we were able to collect 633 electoral platforms from the winners and 478 electoral platforms from the opponents, across the 114th, the 115th, and the 116th U.S. Congress. Eventually, we proceeded with the collection of the whole set of laws approved in the aforementioned legislatures, made easily using the Congress API (Congress.gov).

Once constructed the database, the next step is the actual part of designing the measure of similarity. The Literature on semantic similarity using text analysis is relatively recent but rich (for a complete review: Ash and Hansen, 2023). Our aim is to measure the semantic similarity between the electoral promises and the laws approved during the subsequent legislature. To doing so, we need to convert the selected texts into vector form, and then measure, for each pair platform-law, the Euclidian distance. This is a measure ρ_{ij} for each representative (and platform) i and each law j . In this context, the vectorization used is crucial. Following the literature, we used 3 methods to vectorize the text: TF-IDF, LDA and LSI. TF-IDF, or term frequency-inverse document frequency, represents each document by a matrix of frequencies of each word or bigram in the corpus, inversely weighted by the length of the document and the commonality across the other documents of the corpus. LDA, or Latent Dirichlet Allocation, is a generative or statistical model, with a latent parametrization, that acts as a tool of dimensionality reduction, extracting the main topics from the

corpus and assigning to each document their relative importance of each topic. Finally, the last method is Latent Semantic Indexing (LSI), which is a simple Singular Value Decomposition (SVD), adapted to an original vector representation (usually TF-IDF). To measure the degree of populism of each platform, we used the methodology established in Gennaro et al. (2021). This is a dictionary method, mediated by a TF-IDF text representation, where the final measure will be the sum of the TF-IDF values for words taken from an anti-elite dictionary e and a pro-people dictionary p . This work of encoding, made using extensively tools of text analysis, preceded the actual causal inference.

Before the econometric analysis, the similarity measure must pass some robustness check. Text-based measures are increasingly used in applied economics, but there is no consensus on methods. Ash and Hansen (2023) highlight the lack of standardized tools and robustness checks, but at the same time propose some methodology to apply and they are the ones used in this study. We first construct a simple cross-correlation measure of the similarities among different vectorization techniques: if the measures are stable across vectorizations, we expect high values in the table. Secondly, we use regression on external variables: we suppose that a working measure of similarity has a positive correlation with cosponsors and tenure. This is because bipartisan and highly endorsed laws should have on average higher similarities with respect to the pool of electoral platforms. At the same time, looking at the activity of the Representatives, politicians with higher legislative experience should have higher capability to maintain promises. We take the average similarity score of each law with all the platforms, and we regress this average similarity on the number of cosponsors. Additionally, we take the average similarity of each Representative with all the laws approved and we regress it on the tenure length. We can confirm from preliminary results, that the measure is valid: the cross-correlation table has values in line with the literature (Ash and Hansen, 2023), and the regression on cosponsorship and tenure is significant and positive for all vectorization methods.

The main part of the preliminary results involves the evidences of a causal relationship between populism and electoral promises. To prove this, we employ a Regression Discontinuity Design (RDD). RDD is widely used in political economy, leveraging the assumption that politicians elected by a narrow margin (within $\pm 5\%$) are effectively randomized. This allows for an unbiased comparison between constituencies, isolating the effects of populist affiliation. The econometric model estimates the similarity between electoral promises and enacted legislation, using the margin of victory as a running variable and a dummy for populist politicians. A balance test confirms that control variables do not show significant effects around the cutoff, ensuring validity. The results indicate a positive effect of populism on legislative similarity, particularly when using TF-IDF and LSI vectorization techniques. However,

no effect is observed with LDA, likely due to increased noise in the measure. The positive relationship is only significant during Republican-majority Congresses (114th and 115th). Robust RDD estimates, following Calonico et al. (2014), confirm a statistically significant effect of 2-3%. An unexpected finding arises when focusing only on cosponsored laws: the effect reverses, showing a negative relationship. This anomaly calls for further investigation in future research.

This paper contributes to the literature on accountability, enriching the framework to new political narratives, and using new methodological tools. Literature on accountability could be traced back from the surveys of ? and ?. The studies by Gentzkow and Shapiro (??) gave new point of analysis to this branch, involving the role of media in the theoretical and empirical setting. The literature on accountability, which examines the mechanisms by which constituents can hold politicians accountable for political activity, had highlighted early the central role of electoral promises, as shown by Elinder et al. (2015) and Cruz et al. (2018). The second branch of literature involves the study of populism, a part of the general field of political economy which has massively grown during recent years. Starting from the previously cited papers about populism (Mudde, 2004; Acemoglu et al., 2013; Guiso et al., 2017; Rodrik, 2018; Levy and Razin, 2021), major contributions are related to the aim to link 'supply rhetoric' and 'consequences on policies': a shift from political discourse to performance, that tries to verify if the rise of populist platform and agendas had an impact on approved polices. We can take an empirical test to the question "do populist walk the talk? What do they do when in power?", trying also to distinguish among the several definitions of populism that emerged in the literature. The last strand of literature related to this study is the more general literature on text analysis. Starting from the data collection process, where we use LLMs for assistance, to the identification of the similarity measure, with methodologies still new, we aim to give some new advancement on the way this type of study could be set up.

The dissertation is structured as follows: Section 2 explains the data collection process and describe the data, starting from the methodology used in order to have the biggest amount of political platforms, the possible challenges and the agenda of the future research. Section 3 gives a general framework on the models of text analysis used in this paper, starting from a description of the most diffused and why we employ some of them. An additional explanation on our approach to measuring populism ends this part. Moreover, in Section 4 the empirical strategy is presented, while section 5 is dedicated to the preliminary results. Starting from the robustness check of the new measure of similarity, we move on with the presentation of the preliminary casual effects. Finally, the conclusion summarizes all finding, highlighting the main results and methodology, and suggests areas for further research.

2 Data

The main challenge is to collect a comprehensive dataset of individual political platforms. Many open-source datasets, like the Manifesto Project, have a wide collection of political platforms at the party level. However, our methodology needs to explore finer variations, and a natural candidate would be the individual level. For this reason, in this study, we will consider the personal platforms of candidates for the US House of Representatives during the significant period between 2016 and 2020. The platforms under consideration are derived from the US House candidates' campaign issues. We selected three distinct Congresses (114th, 115th, and 116th) because they held significant importance, being around and under the Trump Presidency. We started with the database from the Library of Congress site, which has an almost complete collection of personal campaign websites. For each constituency, we took the campaign websites, whenever available, of the winner and the main opponent. To analyze the collected web pages, we extensively used GPT models. First, we asked ChatGPT via its API to search for the main menu of the website. Then, using a deterministic algorithm, we selected those websites that contained subsections with some form of platforms (trigger words included 'issue', 'platform', 'vision', 'plan', 'priorit', 'position'). We collected all the HTML pages selected by the algorithm and manually categorized them into those that directly presented full platforms and those that were just a collection of several sub-links. For the first group, we returned to ChatGPT and asked it to extract the main text from the webpage. For the second group, we first retrieved all the sub-links and then scraped all the web pages of the sub-links, asking ChatGPT to extract the text from each page.

We collected 633 electoral platforms from the winners (212 from the 114th Congress, 217 from the 115th, and 204 from the 116th), while for the opponents, we collected 478 electoral platforms (224 from the 114th Congress, 208 from the 115th, and 46 from the 116th). We faced a major issue with the data from the Library of Congress about the 116th Congress. After collecting data for the winners, we aimed to gather data for the opponents, only to find that the entire section for the 2018 elections had disappeared. Upon contacting the Library of Congress, we were informed that the data was removed for additional checks and would be made publicly available as soon as possible. As a result, the number of platforms for the last Congress is very low for opponents. Overall, the platforms from the winners represent 49% of all candidates and 53% of all opponents (not considering the 116th Congress and absent opponents).

The method we used is similar to the one used in the literature to collect similar database (Di Tella et al., 2023), with the major difference being our extensive use of ChatGPT for

automating simple tasks. Our next step is to manually check the missing candidates for additional platforms. Regarding laws, we collected the complete text of every law that was finally approved and initiated by the House, complete with the names of the presenter and co-sponsor, the summary, and the first draft introduced. We collected 743 laws (219 from the 114th Congress, 302 from the 115th, and 222 from the 116th). All the laws were obtained through the Congress API (Congress.gov). This dataset represents the entire corpus of approved laws during the Congress sessions. We also gathered additional information about the Representatives' education, tenure, and age. Several controls were added, partially merging available data from CongressData. CongressData is a project undertaken by Matt Grossmann et al. 2022 at Michigan State University (Grossmann et al., 2022) aimed at collecting all the available data on each Congressman and their relative demographic, economic and political information on the linked constituency.

3 Text analysis on platforms and laws

The objective is to establish a measure of semantic similarity between platforms and laws. To do this, we need to convert the selected texts into vector form. Among the various methods used in text analysis, we chose three major algorithms. TF-IDF (term frequency-inverse document frequency) represents documents by considering each possible word, bigram, or n-gram as a feature. For each document, the count of each feature's occurrence is divided by the total length of the document (TF part). Additionally, to reduce the importance of frequently occurring words, each entry is divided by the occurrence of that word across the entire corpus (IDF part). In this way, every document (in our case, a law or a platform) becomes a high-dimensional vector (in our case, 19,874 features). Another vectorization method we used involves filtering the words through a political dictionary, constructed by aggregating three political dictionaries (the Legislative Indexing Vocabulary, the Legislative Subject Terms by the Library of Congress, and the Concise Oxford Dictionary of Politics), and the Presidential platforms from Ballotpedia.com.

The second method is called Latent Dirichlet Allocation (LDA), which is a generative model primarily used in natural language processing to uncover hidden topics within a collection of documents. The basic idea is that documents are composed of a mixture of topics, and each topic is represented by a distribution over words. LDA assumes that there are a fixed number of topics across the documents, and each document is generated by selecting a mixture of these topics, where each topic contributes to the document's content according to certain probabilities. The algorithm then works to infer both the topic distribution in each document and the word distribution within each topic. This allows LDA to reveal the

underlying thematic structure of a corpus of text, and for each text infer a distribution over topic. This distribution is sort of small dimensional representation of the text, way more synthetic of the high dimensionality representation made by TF-IDF.

The last model we used is a classical Singular Value Decomposition (SVD), adapted to an original vector representation (usually TF-IDF). In this case, we reduced the dimensionality of the original TF-IDF vector to 1,000 and 500 dimensions, much less than the initial 19,874 features. In the literature on semantic similarity, all three methods are widely used: Plain TF-IDF or filtered TF-IDF is mainly used in innovation or experimental economics literature (Chen et al., 2019; Kelly et al., 2021; Biasi and Ma, 2022), while Latent Dirichlet Allocation is used in political economy and social media (Hansen et al., 2018; Bandiera et al., 2020; Hinnosaar and Hinnosaar, 2022). Latent Semantic Analysis is usually used in studies mostly linked to industrial organization (Bertrand et al., 2021).

Finally, the main measure of semantic similarity can be indicated as

$$\rho_{ij}$$

where ρ is cosine similarity between the vector version of platform i and law j . In this way the measure yields a platform-law pairing for each politician's platform with each law.

Data on populism is obtained from the electoral platforms using the methodology from Gennaro et al., 2021: this is a dictionary method, mediated by a TF-IDF text representation, as in the following formula.

$$Pop_s = \begin{cases} \sum_{e \in s} tf - idf_{e,s} + \sum_{p \in s} tf - idf_{p,s} & \text{if } \sum_{p \in s} tf - idf_{p,s}, \sum_{p \in s} tf - idf_{p,s} > 0 \\ 0 & \text{Otherwise} \end{cases}$$

The final measure of populism in a given platform s will be the sum of the TF-IDF values for words taken from an anti-elite dictionary e and a pro-people dictionary p . However, measure is greater than 0 if and only if both dictionaries appear. The anti-elite dictionary is

['cast', 'class', 'elit', 'elitist', 'establish', 'polit', 'politic', 'politician', 'corrupt',
'regim', 'regimen', 'rule', 'propaganda', 'director', 'promin', 'arrog', 'arrogantli',
'betrai', 'treason', 'promis', 'shame', 'undemocrat', 'deceit', 'absurd',
'absurdli', 'admit', 'admitt']

while the pro-people dictionary includes

['peopl', 'tradi', 'tradition', 'direct', 'directli', 'referendum']

4 Methodology

4.1 Validation of the similarity measure

Measures heavily dependent on text analysis are novel in applied Economics, and there has emerged a demand for rigorous methodologies when using them. One of the most complete and advanced studies is by Ash and Hansen (2023). According to them, there is no consensus on text analysis methods in empirical applications. Researchers often use various algorithms without clear justification. Moreover, there's no standard set of tools or robustness checks well established. For this reason, in our study, we will use all the main methods referenced in the economic literature and employ them as a sort of cross-check among them. Only if the results are shared by the majority of measures can we consider them to be statistically significant. Additionally, we present two robustness checks from the previously cited paper. The first one is a simple cross-correlation measure of the similarities among different vectorization techniques. If the correlation is high, this indicates that the measure is robust to changes in the model of text vectorization. The second method involves taking an external variable that we expect to have a specific correlation and checking it with a simple linear regression. In this case, we collapse the dataset of pairwise similarities along the laws' axis. Each law will have an average similarity score with all the platforms of its Congress. We then regress this average similarity on the number of cosponsors. Our hypothesis is that the higher the number of cosponsors, the higher the average similarity will be. Again, we expect a positive correlation for all different vectorization techniques. Finally, for our last check, we collapse the dataset of pairwise similarities along the politicians' axis, resulting in an average similarity between the politicians' platforms and all the laws approved during the legislature. We hypothesize that tenure is positively correlated with similarity, based on the idea that longer tenures correlate with a politician's better ability to tailor promises to the laws actually approved. These checks will be presented in the results section.

4.2 Causal effect

To prove the main causal relationships between populism and electoral promises, we use a Regression Discontinuity Design (RDD). RDD is a widely used method in political economy (Marshall, 2024), to the point of having its own name as a standalone methodology (Politician characteristic regression discontinuity). The main thesis is that politicians elected in single-member constituencies by a small margin can be considered as good as randomly elected. This allows the constituency to be tested for the specific characteristics (or its absence) of the elected politician. The main empirical formula is:

$$\rho_{ij} = f(X_i) + \gamma D_i + \varepsilon$$

where ρ_{ij} is the outcome variable, in this case the measure of similarity, while X_i is the margin of victory fitted to a polynomial equation $f(\cdot)$, and D_i is a dummy for populist politician. In our case, we fitted the running variable to a third-degree polynomial and considered a small margin of victory within the interval of $(-5, +5)$ %. Additionally, in the section on preliminary results a balance test is made in order to set continuity for other controls and the same method is applied using a robust RDD that implements the robust bias-corrected confidence intervals proposed by Calonico et al. (2014)

5 Preliminary results

Before presenting our preliminary results, some general information about the text cleaning process should be provided. For the electoral platforms, we applied basic cleaning operations such as punctuation, digit, and internet link removal; tokenization; stemming; and stopwords removal. For the laws, the process was slightly more complex. If a law exceeded 100,000 characters, we used a summary, and then applied the same cleaning process, along with additional sector-specific stopwords removal (e.g., "act," "title," "shall"). We used Scikit-learn for TF-IDF vectorization. The LDA models were constructed using Mallet, creating models with 15 and 50 topics. For the LSA models, we again used Scikit-learn, creating alternatives with 500 and 1000 principal components.

5.1 Validation of the similarity measure

The robustness checks confirm the reliability of our measure. Figure 1 clearly shows that the log of the number of cosponsors for a given law is positively related to its mean similarity with all the platforms in the database, and the coefficient remains stable across alternative measures. Moreover, Figure 2 indicates that Representatives with many years of tenure tend to present electoral platforms more similar to approved laws. This pattern suggests experienced Representatives are not only capable of making realistic promises but also possess the political influence and expertise to implement them. According to Ash and Hansen, 2023 again, a good way to check robustness is to measure cross-correlations among measure, to prove their stability. New analysis on the extended dataset highlights this stability (Figure 3). In light of these findings, in our conclusions we will explore potential strategies to enhance the reliability and accuracy of such measures, ensuring that they remain a valuable tool for future research and policy analysis.

To illustrate the mechanism through which the measure works, it is interesting to report here two anecdotal cases where similarity is high. One of the highest scores is between the platform of Brendan Boyle, a representative from Pennsylvania, and Law No. 115-9. In the representative’s platform the candidate explicitly marks a point about Health and Veterans’s rights in Pennsylvania:

I believe Medicare should be allowed to negotiate for cheaper drug prices. The U.S. Department of Veterans Affairs is able to negotiate for cheaper drug prices and the cost savings are significant.

This passage has an high semantic similarity with the content of the cited law, which is titled

Designation of the Department of Veterans Affairs health care center in Center Township, Butler County, Pennsylvania

Another case could be the one of Annie Kuster, a Democratic representative from New Hampshire, who explicitly stated in her platform:

Annie founded the Bipartisan Task Force to Combat the Heroin Epidemic [...] Annie is also helping secure federal funding to open new treatment facilities, expand programs to fight the epidemic here in New Hampshire, and is working with health insurance companies to cover addiction treatment.

This resulted in a high score for Law No. 115-271, titled:

Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act

While these examples shed light on the mechanism through which semantic similarity works, they should be considered anecdotal. The robustness checks presented earlier provide strong evidence of the measure’s nature and reliability.

5.2 Causal effect

We used RDD (Regression Discontinuity Design) to address two types of bias in this study. First, the number of populist majorities can vary across Congresses and time, impacting the ability to maintain electoral promises of this subset of representatives, who can gain or lose collective political power. The second issue relates to usual concerns of endogeneity, both in selecting the unbalanced panel and in confounders that can impact the coefficients. Before presenting the results of RDD regressions, some balance tests are needed to prove the continuity assumption. Table 1 clearly shows that control variables does not have any specific effect around the cutoff. Results are divided by congress and presents different bandwidth

in each column. The significant coefficient for congress 116th can be interpreted as random significant coefficients.

The results of RDD design presents some promising points. There seems to be a positive effect of the populist agenda on the similarity index, which is robust when TF-IDF and LSA are considered. The effect is zero when using LDA vectorization, as shown in Figure 4. Another important aspect is that, considering only LSA and TF-IDF, the positive relation is present only during Congresses with a Republican majority (114th and 115th) (Figure 5). The non-significant coefficient for the LDA model can be explained by the large noise in the measure, as shown in Figure 6. This increases the need to check with more vectorization methods, as mentioned in the conclusions. From Table 2, we see that the effect is between 2 and 3%. Also robust RDD results, using the methodology from Calonico et al. (2014), confirms positive and significant results (Table 3).

A strikingly strange result emerges if we only consider the subsample of cosponsored laws. Preliminary results on this subsample highlight that the regression sign is flipped, leading to a negative effect (Table 4). This suggests that populist platforms tend to be more semantically similar with non-populist ones during Congress sessions with a Republican majority, but only to the general universe of approved laws, and less so when only cosponsored laws are considered. This is a result that requires further study for explanation and is part of our next research agenda.

6 Conclusions and research agenda

Our measure has been validated through robustness checks on controls, establishing its reliability. They show strong cross-correlation among different vectorization techniques and positive correlations with variables expected to present such effects. This check aligns with the procedure suggested by Ash and Hansen (2023). Additionally, preliminary findings indicate significant, positive, and stable correlations with populist Representatives, especially during their majority. This suggests that the laws passed were more aligned with populist platforms, demonstrating their ability to keep promises when in power. We addressed endogeneity issues with an RDD approach and presented results divided by Congress session to disentangle the majority effect. Furthermore, our robust RDD methods show consistent results across various specifications. However, the sample power for individual Congresses is weak, indicating the need to expand our dataset of platforms through a manual search. Interestingly, the results reversed when we looked at only co-sponsored laws, but here too, the subsamples are very small, making the statistical significance weak and making it clear that expanding the dataset is necessary. This recent finding would greatly benefit from feedback.

In addition, we have a follow-up project that aims to extend the analysis to include Twitter penetration. The extent of Twitter penetration is determined by a vast dataset of geotagged tweets collected by Kinder-Kurlanda et al., 2017. The dataset spans from June to November 2014 and June to November 2015 and contains nearly 500 million tweets. Tweets with geolocation were selected within a geographic bounding box and then allocated to specific GPS coordinates. However, in April 2015, Twitter substantially altered the way users shared their location, leading to an impact on the number of tweets in the sample among 2014 and 2015. For the purpose of this analysis, the distribution of Twitter usage could be based on the sub-sample of tweets in 2015. Twitter penetration can be instrumented using a methodology proposed by Fujiwara et al. (2021). The main aim is to assess the impact of Twitter penetration on electoral promises. Finally, to improve the precision of measuring similarity, more advanced methods, like word embeddings (Word2Vec or GLOVE) and transformers (BERT), can be fine-tuned for better vectorization, as well as GPT models like OpenAI embeddings.

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Appendix - Figures

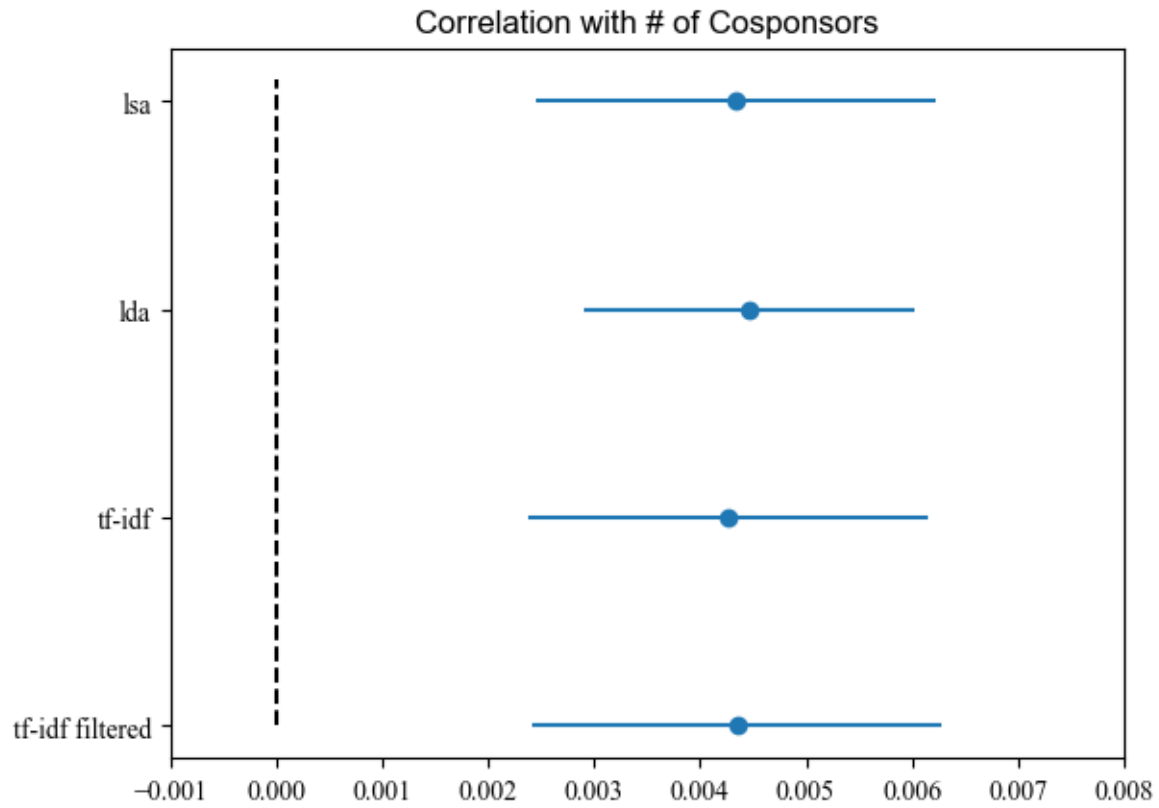


Figure 1: Robustness check

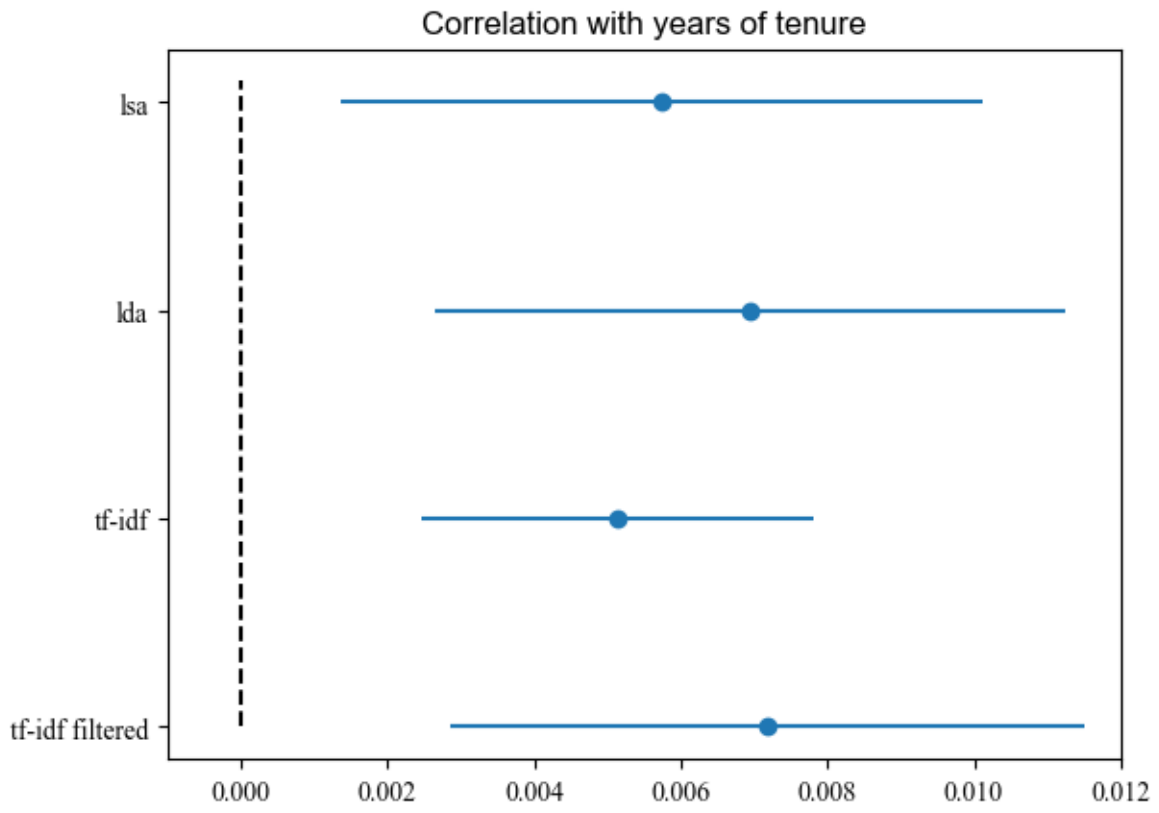


Figure 2: Robustness check

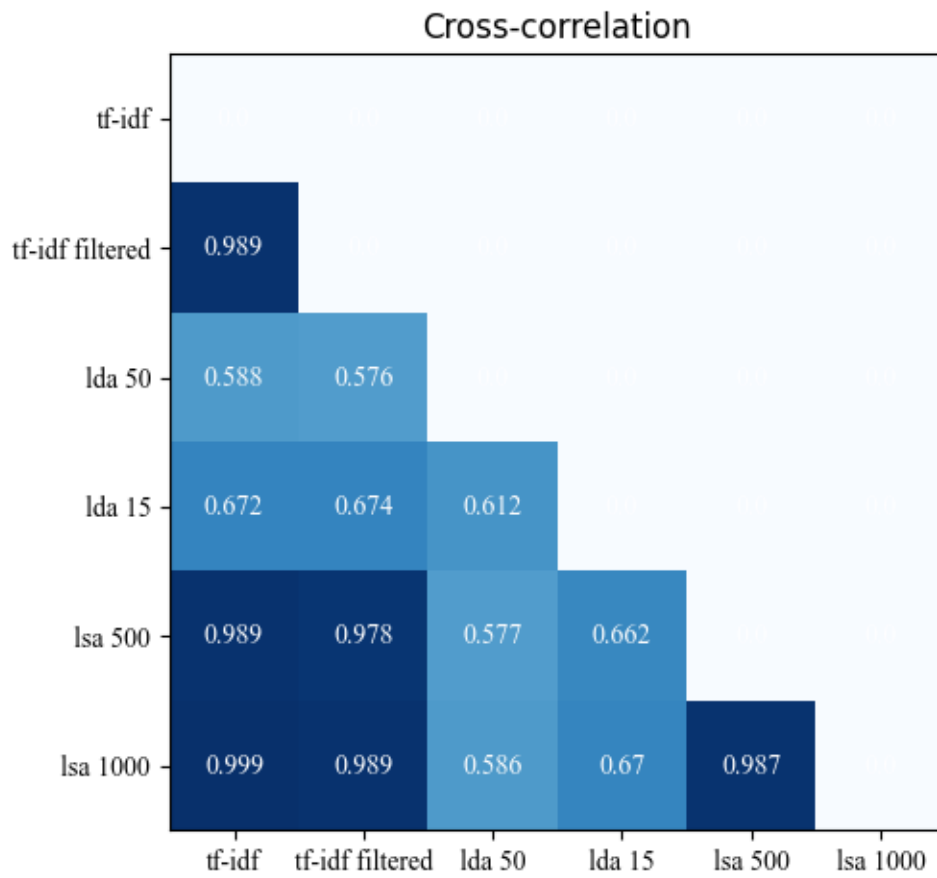
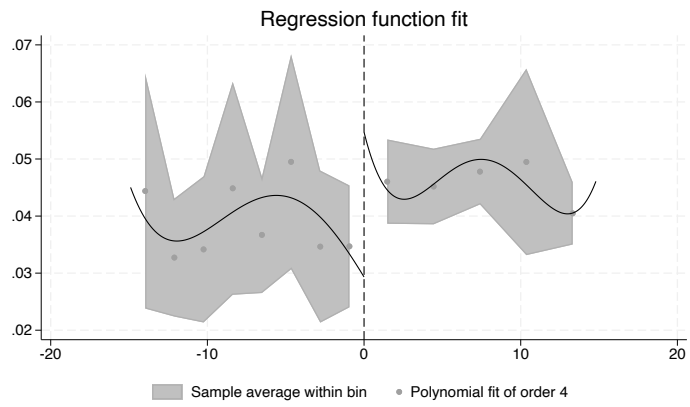
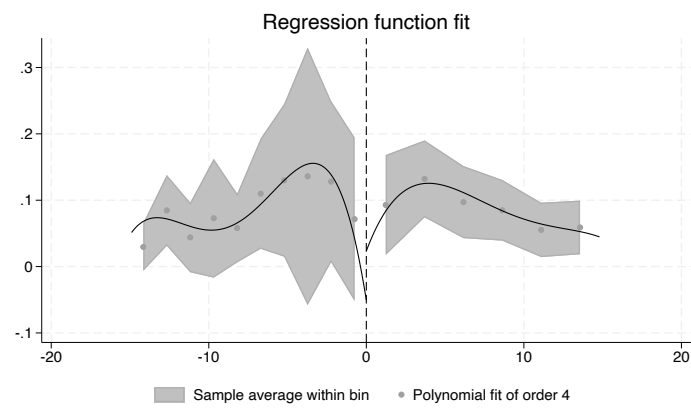


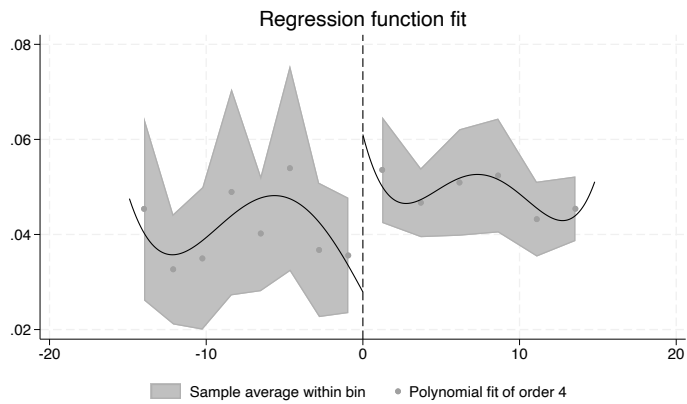
Figure 3: Cross-correlation among measures



(a) Filtered TF-IDF

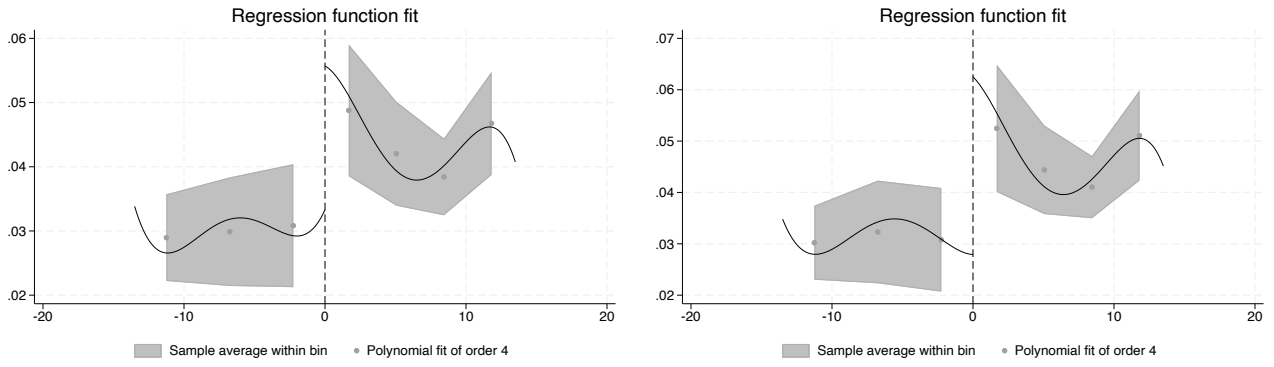


(b) LDA (15 K)

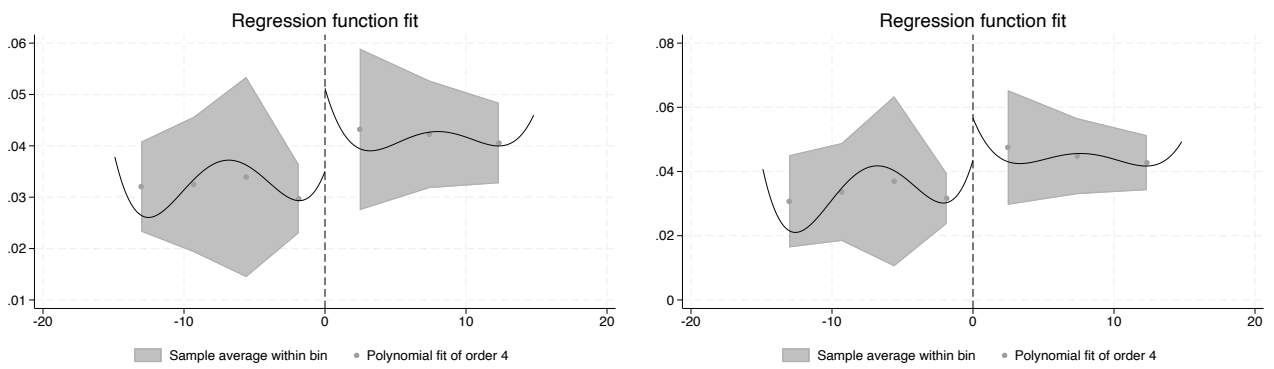


(c) LSA (500 components)

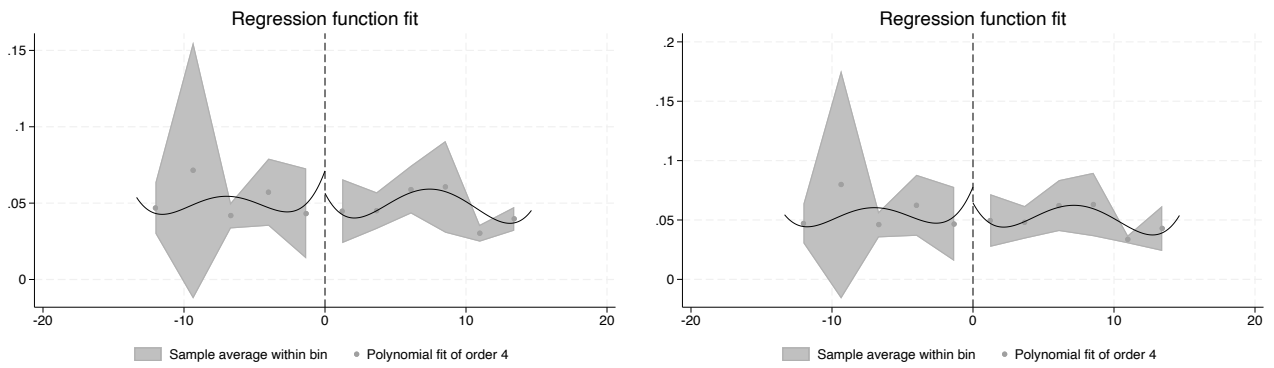
Figure 4: RDD graphs



(c) 114th Congress (TF-IDF ; LSA 500)

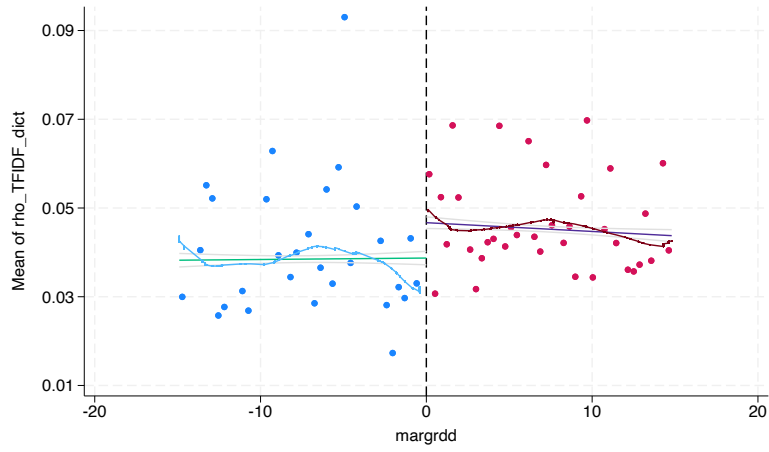


(f) 115th Congress (TF-IDF ; LSA 500)

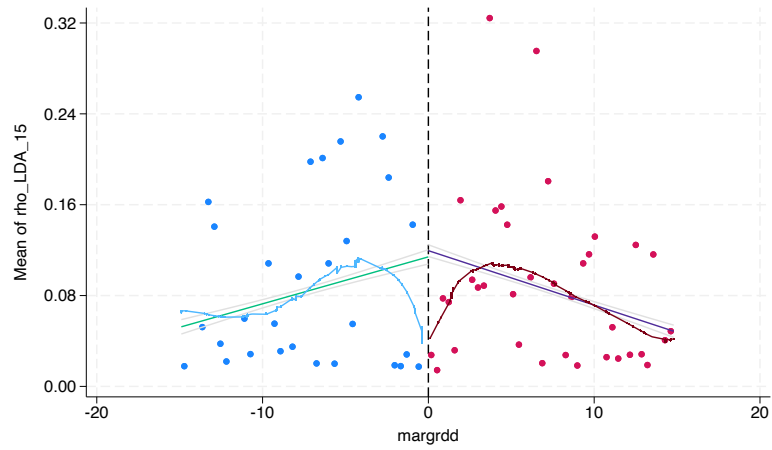


(i) 116th Congress (TF-IDF ; LSA 500)

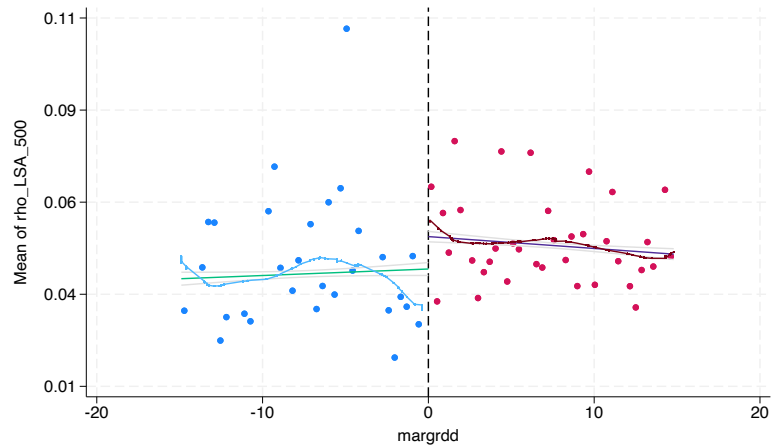
Figure 5: RDD graphs, split by Congress



(a) Filtered TF-IDF



(b) LDA (15 K)



(c) LSA (500 components)

Figure 6: Dot plot of RDD desing, by vectorization technique

Notes: The scatterplot for LDA presents a much higher error, suggesting that this vectorization method leads to a highly noisy similarity measure.

Appendix - Tables

	Margin of victory		
	(-5; +5)	(-10; +10)	(-15; +15)
Age	59.118 (12.752)	54.852 (11.306)	-4.266 (3.769)
Tenure	3.765 (4.603)	2.407 (3.029)	-1.357 (1.254)
Cosponsoring	6.278 (3.177)	5.407 (2.990)	-0.870 (0.942)
Presenting	0.444 (0.984)	0.370 (0.565)	-0.074 (0.255)
Republican Party	0.389 (0.502)	0.259 (0.447)	-0.130 (0.146)
Observations	18	27	45

	Margin of victory		
	(-5; +5)	(-10; +10)	(-15; +15)
Age	55.000 (14.142)	58.762 (11.072)	3.762 (5.018)
Tenure	2.700 (4.473)	2.762 (4.939)	0.062 (1.763)
Cosponsoring	9.273 (5.159)	9.391 (6.221)	0.119 (2.012)
Presenting	0.545 (1.036)	0.739 (1.421)	0.194 (0.428)
Republican Party	0.455 (0.522)	0.435 (0.507)	-0.020 (0.188)
Observations	11	23	34

	Margin of victory		
	(-5; +5)	(-10; +10)	(-15; +15)
Age	57.000 (9.667)	49.515 (11.248)	-7.485** (2.808)
Tenure	2.957 (3.820)	1.848 (2.751)	-1.108 (0.927)
Cosponsoring	4.696 (2.494)	5.121 (3.560)	0.426 (0.809)
Presenting	0.348 (0.573)	0.667 (0.854)	0.319 (0.191)
Republican Party	0.870 (0.344)	0.455 (0.506)	-0.415*** (0.114)
Observations	23	33	56

Table 1: Balance test (114th, 115th and 116th Congress)

	(1)	(2)	(3)	(4)	(5)	(6)
	ρ_{ij} - TF-IDF	ρ_{ij} - TF-IDF	ρ_{ij} - TF-IDF	ρ_{ij} - LSA	ρ_{ij} - LSA	ρ_{ij} - LSA
$D_i =$ Populist	0.0222*** (0.00660)	0.0248*** (0.00655)	0.0246*** (0.00474)	0.0381*** (0.00750)	0.0393*** (0.00743)	0.0391*** (0.00569)
Republican \times Cosponsor	-0.00105 (0.00336)	-0.00113 (0.00335)	-0.000839 (0.00308)	-0.00185 (0.00376)	-0.00186 (0.00375)	-0.000766 (0.00358)
N	11263	11263	11263	11263	11263	11263
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Congress FE		Yes	Yes		Yes	Yes
Law FE			Yes			Yes
Mean of Dep Var	0.0433	0.0433	0.0433	0.0466	0.0466	0.0466

Table 2: Base RDD

Notes: RDD implemented with OLS. We include 3rd order polynomial. Controls: republican, cosponsor, majority, tenure and age. Robust standard errors. Close elections are defined in the interval $(-5,5)$

	(1)	(2)	(3)	(4)	(5)	(6)
	ρ_{ij} - TF-IDF	ρ_{ij} - TF-IDF	ρ_{ij} - TF-IDF	ρ_{ij} - TF-IDF	ρ_{ij} - TF-IDF	ρ_{ij} - TF-IDF
Conventional	0.025*** [0.003]	0.018*** [0.003]	0.012*** [0.003]	0.028*** [0.003]	0.017*** [0.004]	0.022*** [0.006]
Bias-corrected	0.022*** [0.003]	0.020*** [0.003]	0.016*** [0.003]	0.025*** [0.003]	0.014** [0.004]	0.019*** [0.006]
Robust	0.022*** [0.005]	0.020*** [0.005]	0.016*** [0.004]	0.025*** [0.006]	0.014* [0.006]	0.019* [0.008]
Robust 95% CI	[.013 ; .031]	[.01 ; .031]	[.007 ; .024]	[.014 ; .036]	[.003 ; .026]	[.004 ; .033]
Kernel Type	Triangular	Triangular	Triangular	Epanechnikov	Triangular	Epanechnikov
Observations	31195	31195	31195	31195	31195	31195

	(1)	(2)	(3)	(4)	(5)	(6)
	ρ_{ij} - LSA	ρ_{ij} - LSA	ρ_{ij} - LSA	ρ_{ij} - LSA	ρ_{ij} - LSA	ρ_{ij} - LSA
Conventional	0.031*** [0.003]	0.022*** [0.003]	0.014*** [0.004]	0.035*** [0.004]	0.024*** [0.005]	0.029*** [0.007]
Bias-corrected	0.028*** [0.003]	0.025*** [0.003]	0.020*** [0.004]	0.032*** [0.004]	0.022*** [0.005]	0.027*** [0.007]
Robust	0.028*** [0.006]	0.025*** [0.006]	0.020*** [0.005]	0.032*** [0.007]	0.022** [0.007]	0.027** [0.009]
Robust 95% CI	[.018 ; .039]	[.014 ; .037]	[.011 ; .03]	[.019 ; .046]	[.009 ; .035]	[.01 ; .045]
Kernel Type	Triangular	Triangular	Triangular	Epanechnikov	Triangular	Epanechnikov
Observations	31195	31195	31195	31195	31195	31195

Table 3: Robust RDD

Notes: RDD implemented with `rdrubust` package. In column (1) We explicitly include a 5 bandwidth to construct the RD point estimator. In column (2) We explicitly include a 10 bandwidth to construct the RD point estimator. In column (3) We explicitly include a 15 bandwidth to construct the RD point estimator. In column (4) We explicitly ask for 5 bandwidth and Epanechnikov kernel. In column (5) We explicitly ask for 5 bandwidth and quadratic polynomial. In column (6) We explicitly ask for 5 bandwidth, quadratic polynomial and Epanechnikov kernel. Controls: republican, cosponsor, majority, tenure and age. Robust standard errors clustered at individual-congress level.

	(1)	(2)
	ρ_{ij} - TF-IDF	ρ_{ij} - LSA
$D_i = \text{Populist}$	-0.148**	-0.143
	(0.0688)	(0.0909)
Republican \times Cosponsor	0	0
	(.)	(.)
N	120	120
	0.907	0.876
State FE	Yes	Yes
Congress FE	Yes	Yes
Law FE	Yes	Yes
Subsample	Cosponsored	Cosponsored
Mean of Dep Var	0.0394	0.0433

Table 4: RDD result: cosponsored subsample

Notes: RDD implemented with OLS. We include 3rd order polynomial. Controls: republican, cosponsor, majority, tenure and age. Robust standard errors. Close elections are defined in the interval (-5,5)