

## **Legislating during war: Conflict and politics in Colombia**

Juan S. Morales<sup>1</sup>

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### *Abstract:*

This paper studies how legislators and their constituents respond to political violence using data from Twitter and roll-call votes, and employing both event study and difference-in-differences methods. Tweets from incumbent party legislators and tweets with a "hard-line" language receive higher engagement following rebel attacks. The incumbent party receives higher support in the legislature after attacks, but only when it has a hard-line military policy. In addition, politicians are more responsive to attacks which occur in their electoral district. I identify a set of potentially affected congressional votes, suggesting that these conflict-induced swings in incumbent support can have persistent policy consequences.

**JEL Codes:** D72; D74; H56; O10

**Keywords:** civil conflict; congressional voting; legislatures; political language; social media

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<sup>1</sup> Collegio Carlo Alberto, Piazza Arbarello 8, 10122, Torino, TO, Italy (e-mail: [juan.morales@carloalberto.org](mailto:juan.morales@carloalberto.org)). I am especially grateful to Gustavo Bobonis, Albert Berry, Marco Gonzalez-Navarro and Michel Serafinelli for their guidance and support. I also thank Ana Maria Bejarano, Arthur Blouin, Andrea Di Miceli, Yosh Halberstam, Hector Galindo-Silva, Nicolas Gendron-Carrier, Gianmarco León, Martin Osborne, Jean-William P. Laliberté, Gerard Padró i Miquel, Paola Salardi, James Snyder, seminar participants at the University of Toronto, Brock University, York University, the University of Melbourne, and the Collegio Carlo Alberto, and conference participants at the 2016 CDESG-CEA meeting (University of Ottawa), the 41st SAEe (University of the Basque Country, Bilbao), PacDev 2017 (UC-Riverside), the 2nd Annual IPS conference (UMass-Amherst), MWIEDC 2017 (UW-Madison), the 2017 ESOC Annual Meeting (USIP, Washington D.C.), the 2017 RIDGE/LACEA-PEG Workshop on Political Economy (PUC-Rio) and the HiCN 13th Annual Workshop (Solvay Brussels School) for useful comments and discussions. Financial support from the Tom Easterbrook Graduate Scholarship in Communication and the Mass Media is gratefully acknowledged. All errors are my own.

# 1 Introduction

For many countries, the escape from weak governance and cycles of violence is one of the most difficult steps in their path to prosperity (Besley and Persson, 2010; Blattman and Miguel, 2010). Despite civil conflict being common in electoral democracies around the world (Collier and Rohner, 2008; Collier, 2011), the effects of rebel violence on political processes are not well-understood. While previous work has established that external security threats boost popular support for both incumbent politicians, the *rally 'round the flag* effect, and right-wing parties,<sup>1</sup> these issues remain considerably understudied in developing countries facing internal conflicts.<sup>2</sup> If political violence strengthens the mandate of right-wing governments, it could lead to investments in top-down state building, increased military capacity and expansions of state presence. However, strengthening state capacity in these dimensions may have adverse consequences in the context of developing countries: prolonged conflict, in the presence of perverse electoral incentives (Fergusson et al., 2016); a weakening of local governance (Dell and Querubin, 2017); and government violations of human rights, if judicial institutions are weak (Acemoglu et al., 2016).

This paper investigates the effect of rebel attacks on legislative decision-making in Colombia, an electoral democracy that has suffered from the longest enduring conflict in the Americas.<sup>3</sup> I examine the relationship between attacks by the country's largest rebel group, FARC, and political coalescence in the country's legislature. In particular, I study how vote-alignment with the incumbent party, the *Partido de la U* (PU), changes following rebel attacks. To do this I use roll-call voting records which include around 11,600 congressional votes, and over 780,000 individual votes. The period of study, 2006 to 2015, provides a distinct case study to examine this relationship, as the policy position of the incumbent party shifts when the government starts peace negotiations with the rebel group in 2012. This policy change, from what may be described as a right-wing (hard-line, hawkish) position, to a left-wing (concessionary, dovish) position, allows me to investigate how the effect of rebel attacks on legislative behaviour varies depending on the policy position of the incumbent party.

I exploit variation in the timing of rebel attacks, in an event study which exploits high-casualty events, to examine how vote-alignment with the incumbent party changes just following an attack. The event study framework exploits the quasi-random timing of rebel attacks and the panel structure of the congressional

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<sup>1</sup>There is a well-established literature on the *rally 'round the flag* effect, the finding that incumbent politicians experience a spike in popularity in times of security threats (Oneal and Bryan, 1995; Baker and Oneal, 2001; Berinsky, 2009; Merolla and Zechmeister, 2009), several studies which document that support for right-wing parties increases following terrorist attacks (Berrebi and Klor, 2006; Gould and Klor, 2010; Getmansky and Zeitzoff, 2014; Kibris, 2011), and some work that addresses the interaction of these two effects by taking into account the policy position of the incumbent party (Merolla and Zechmeister, 2013).

<sup>2</sup>One exception is Arce (2003), which examines presidential approval rating polls in Peru. My study complements this work by explicitly analyzing the interactions between the two effects and by directly examining the behaviour of politicians. In addition, Mian, Sufi and Trebbi (2014) presents suggestive evidence of the *rally* effect after large terrorist attacks in a cross-country analysis which includes both developed and developing countries.

<sup>3</sup>See Oquist (1980) for a history of political violence in Colombia and Robinson (2015) for a recent analysis.

voting record (repeated observations for each politician) to study the dynamics of the effect of interest. The analysis reveals that, before the government started negotiations with the rebels (in the *pre-peace process* period), legislator's votes were up to 25 percentage points more likely to be aligned with the position of the incumbent party in the days just following a rebel attack. The effect then dissipates quickly over time and disappears completely after less than two weeks from the dates of the events. In contrast, once the incumbent government has a concessionary policy position, in the *post-peace process* time period, I do not find significant legislator responses. Taken together, the results suggest that both the *rally 'round the flag* and the increased right-wing support effects are important determinants of the responses of politicians. Since the effects act in opposite directions when the policy position of the incumbent government is "left-wing", they tend to offset each other once the peace process starts.

In addition, I exploit variation in the timing and location of rebel attacks in a difference-in-differences strategy, which matches the location of the attacks to politicians' *home department*: their electoral district for local legislators, and their department of greatest political support for nationally elected legislators. This second strategy estimates the differential impact of conflict events on "treated" politicians, whose home department was the location of an attack, relative to "control" politicians (all other). The estimates suggest that the differential effect is positive and significant for "treated" politicians during the pre-peace process period, and negative during the post-peace process period. Before the peace process starts, politicians whose home department was the location of an attack are 7 percentage points more likely to align their votes with the ruling party following an attack, relative to other politicians (who are, according to the event study estimates, also affected). After the peace process starts, "treated" politicians are 4 percentage points less likely to vote with the incumbent party relative to "non-treated" politicians. These results suggest that the impact of conflict on legislative voting is heterogeneous depending on the location of the attack and how electorally relevant these locations are for legislators. More specifically, the increased right-wing support effect is relatively larger than the *rally* effect for "treated" politicians than for the rest.

Though the empirical framework is designed to capture effects at the legislator level, I propose a counterfactual exercise based on a *potential outcomes* framework to map the estimated individual effects to the congressional vote level. I estimate that about 30 percent of votes which result in the outcome opposite to the one preferred by the incumbent party, are sensitive to be "flipped" in favour of the incumbent party by an attack. More specifically, I identify 40 congressional votes that may have been potentially affected to favour the incumbent position as a result of these documented transitory shocks in legislator behaviour. These cover a broad range of issues including the implementation of Colombia's free trade agreement with the United States, pension and social programs, and the functioning of intelligence agencies.

To examine whether constituents themselves react to rebel attacks I use data on follower engagement

from Twitter (likes and re-tweets). I construct a dataset of more than 350,000 tweets published by 305 Colombian politicians between 2010 and 2015. I then create a measure of the political leaning of a tweet by benchmarking its language against that of the two main political leaders, Juan Manuel Santos, the current president, and Álvaro Uribe, the former president and leader of the opposition, both active Twitter users representing polar sides of the political debate regarding the peace negotiations with the rebel group (that is, what I refer to as the "left-wing" and the "right-wing" positions).<sup>4</sup> I find evidence for both the *rally 'round the flag* and the increased right-wing support effects. Following attacks by FARC, engagement for right-leaning tweets and tweets from politicians of the incumbent party (the PU) increase relative to other tweets. Consistent with the observations from the legislative voting responses, these follower responses also tend to dissipate quickly over time (the effects disappear within two weeks of the event).

Identifying a causal relationship between conflict and politics is challenging because politically motivated rebel groups are likely to act strategically in response to their political environment. The empirical strategies described address this challenge by using high-frequency data and "zooming in" in time, using daily variation in measures of political coalescence in congress (from roll-call voting records), political support (from Twitter), and rebel attacks. Identification therefore relies on the assumption that the precise timing of FARC attacks is exogenous to these outcomes in the very short-run (over a two-week period).<sup>5</sup> This assumption is plausible given that the hierarchical structure of FARC is highly decentralized and responds mostly to local conditions.<sup>6</sup> In addition, I show that there are no significant differences in the characteristics of the congressional votes that occur before and after these events. Finally, I analyze the cross-geography covariance matrix of FARC attacks and find limited evidence for coordination.<sup>7</sup>

The analysis is framed using a simple political economy model of legislator behaviour based on Levitt (1996). Legislators choose an optimal policy position in which they weight the preferences of both the incumbent party and their constituents. Rebel attacks affect the weight that legislators assign to the incumbent policy position, the *rally 'round the flag* effect, and the bliss point of their constituents, the increased right-wing support effect. Given these effects, attacks affect the *policy distance* between legislators and the incumbent party, depending on the initial policy position of the incumbent party relative to the voters. In particular, if the policy position of the incumbent government is to the right of the constituents' preferred position, then rebel attacks which induce voter preferences to shift to the right, and *rally* effects which in-

<sup>4</sup>Their Twitter usernames (and link) are @JuanManSantos and @AlvaroUribeVel. Some recent studies that have created novel measures of political polarization using media and language include Azzimonti (2014), Jensen et al. (2012) and Gentzkow, Shapiro and Taddy (2015). My measure of political leaning for tweets is similar to Gentzkow and Shapiro (2010)'s measure of newspaper slant, but I know of no studies which build comparable measures using data from Twitter. Studies in political economy which use data from Twitter include Halberstam and Knight (2016); Acemoglu, Hassan and Tahoun (2017).

<sup>5</sup>Balcells and Torrats-Espinosa (2017) use a similar empirical design, short-run variation in exposure to terrorism, to study how voters in Spain respond to attacks by ETA.

<sup>6</sup>As opposed to, for instance, the structure of the Israeli army, for which such short-run strategic timing has been documented in Durante and Zhuravskaya (2017). In this sense, FARC rebels are closer to Palestinian militants.

<sup>7</sup>An idea explored in Trebbi and Weese (2016) to infer coalition structures in Afghanistan and Pakistan.

crease the weight that legislators place on the policy position of the government, both lead to a decrease in the policy distance between legislators and the incumbent party. On the other hand, if the policy position of the incumbent party is to the left of that of the voters, then the two effects induce opposing legislator responses, and the overall direction of the effect of attacks on policy distance is ambiguous. The predictions from the model are consistent with the empirical results.

The paper contributes to a growing literature in the economics of conflict that studies how civil war affects political behaviour and attitudes. The literature has focused on the long-run effects of civil conflict on victims and combatants (Bellows and Miguel, 2009; Blattman, 2009; Voors et al., 2012);<sup>8</sup> however, no studies (to my knowledge) have examined whether civil conflict affects legislators' decision-making.<sup>9</sup> I find that attacks by the rebel group have an effect on both Twitter users (as a proxy for voters or the general public), and on politicians, who increase their legislative alignment with right-wing incumbents. These effects may, in turn, have important implications for the potential of peace settlements, especially if right-wing governments are both less willing to negotiate and strengthened in the legislature by conflict events.

Though the increased incumbent and right-wing support effects have been widely documented for voters, understanding the extent to which political violence affects the behaviour of politicians in a representative democracy is central to recognizing the mechanisms through which conflict tends to perpetuate itself.<sup>10</sup> If politicians experience transitory shocks in political behaviour as a result of violent attacks, by either "rallying behind" the incumbent government, or by becoming more "right-wing", conflict may have important policy implications. This paper contributes to the study of political processes in conflict settings by directly examining the behaviour of elected legislators.

More generally, by studying the actions of politicians, the paper contributes to a literature in political economy that investigates the determinants of legislators' behaviour which includes Levitt (1996), List and Sturm (2006), Washington (2008) and more recently Conconi, Facchini and Zanardi (2014) and Bouton et al. (2014). The main finding I highlight is that transitory shocks induced by conflict events have short-run but observable effects on the decisions of politicians. Furthermore, I present suggestive evidence that voters can affect policy, as electoral incentives seem to be important determinants of politicians' responses following violent attacks. The relationship I document, and in particular the increased right-wing support effect, is stronger before legislative elections than after legislative elections. This finding contributes to the debate on the role of voters in electoral politics which includes Lee, Moretti and Butler (2004), Albouy (2011) and

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<sup>8</sup>See a recent review in Bauer et al. (2016).

<sup>9</sup>Shayo and Zussman (2011) find an effect of terrorism on judges' decision-making by increasing ingroup bias. The rally 'round the flag effect and the results I present are consistent with these findings, considering the state to be the ingroup and the rebel group to be the outgroup.

<sup>10</sup>Two studies that examine politicians' reactions to terrorism include Indridason (2008), which studies coalition formation, and Chowanietz (2011), which looks for criticism in the media from political elites. However, both of these examine the case of Western democracies' reaction to external security threats in cross-country analyses.

Jones and Walsh (2016).

This paper is also related to studies on the relationship between conflict and politics in Colombia.<sup>11</sup> Acemoglu, Robinson and Santos (2013) documents a relationship between paramilitary influence in legislative elections and legislators voting in favour of policies preferred by these groups in three congressional votes. The analysis I present complements this work and suggests that the impact of armed non-state actor violence on politicians' votes in congress is even broader and more systematic. Fergusson et al. (2016) argues that the *hard-line* government of Uribe (2002-2010) had a comparative advantage in fighting the insurgencies, and thus benefitted electorally from their presence. This article reveals an additional mechanism through which right-leaning politicians benefit from conflict: increased support in the legislature.

The paper is organized as follows. Section 2 discusses the relevant context of the conflict and legislative institutions in Colombia. In section 3 I propose a simple conceptual framework. Section 4 describes the data and presents descriptive evidence. Section 5 discusses the empirical strategy. Section 6 presents the results and section 7 concludes.

## 2 Background

This section provides background on the history of the Colombian conflict for the context of the study, with a special focus on recent political history, as well as a brief discussion of the legislative institutions.

### Historical context

The Colombian civil war is generally described in the media as a decades-long conflict in which an estimated 220,000 people have been killed and more than five million have been displaced.<sup>12</sup> Though such portrayal is, of course, an oversimplification, it concisely captures the graveness and magnitude of the war. The start of the conflict is generally characterized to have been the 1960s, decade in which the country's two main rebel groups, the Revolutionary Armed Forces of Colombia (FARC) and the National Liberation Army (ELN), were founded. The emergence of these left-wing guerrilla groups ended a transition from violence between political parties to one of a subversive nature.<sup>13</sup>

The 1980s saw an expansion of rebel activities and the emergence of right-wing paramilitary groups. The first attempt at a negotiated peace settlement between the Colombian government and the guerrilla

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<sup>11</sup>These include Gallego (2011); Weintraub, Vargas and Flores (2015); Acemoglu, Robinson and Santos (2013); Galindo-Silva (2015); Fergusson et al. (2016, 2017).

<sup>12</sup>See for instance <http://www.bbc.com/news/world-latin-america-34338208>.

<sup>13</sup>The preceding period, starting in the 1940s, is commonly referred to as *La Violencia*. It was an era characterized by violence between the two traditional political parties, the Liberals and the Conservatives, in which as many as 200,000 people are estimated to have died. The transition to the current era of conflict began in 1958 with a power-sharing deal between these two parties known as the National Front (*El Frente Nacional*).

groups also occurred in the 1980s.<sup>14</sup> In addition, most armed groups increased their involvement in drug production and trafficking activities, further contributing to the intensification of the conflict.

Andrés Pastrana was elected president in 1998, year in which he began peace negotiations with FARC once more.<sup>15</sup> An important step of these dialogues was the creation of a "demilitarized zone" in southern Colombia between the departments of Meta and Caquetá. Despite this concession, there was no ceasefire. Instead, the FARC used the demilitarized zone to expand their military capabilities during the peace process (Crandall, 2002; DeShazo, Primiani and McLean, 2007). Following a series of high-profile actions by the FARC, including the hijacking of an airplane, the negotiations ended in February of 2002.

After the negotiations with the FARC broke down, Álvaro Uribe Vélez was elected president in 2002, running on a platform of aggressive military campaigning against the rebel insurgencies. The election was also significant in that it was the first time in the history of Colombia that a candidate not belonging to one of the traditional parties (Liberal or Conservative) would become president.

In 2005, the *Partido de la U* (PU) political party was founded with the objective of uniting Uribe's supporters (the "Uribistas"). During Uribe's eight years as president (having been re-elected in 2006), the army intensified its efforts of combating the guerilla groups. Uribe's "democratic security" policy also received substantial support from the US government in what was denominated "Plan Colombia". Between 2002 and 2010, the government effectively recovered a substantial share of the country's territory that was previously under FARC and ELN control (Spencer, 2011; Delgado, 2015). Despite these efforts, some areas remained without effective state presence at the end of Uribe's mandate (Cortés et al., 2012; Fergusson et al., 2016). In 2010, the then minister of defense, Juan Manuel Santos, was elected president on a campaign platform of continuing the fight against the insurgencies, running for the PU with the support of Uribe.

Soon after being elected, Santos distanced himself from Uribe and his policies, most notably by re-establishing diplomatic relationships with the government of Hugo Chavez in Venezuela.<sup>16,17</sup> In August of 2012 the government of Santos announced the beginning of a new peace process with FARC.<sup>18</sup> This policy shift has been described as an "180-degree turn in the conception that the Colombian state had with respect to war and peace" (Acosta, 2015). Following this shift to the left by the PU, and the rising tensions between

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<sup>14</sup>The peace process initiated by the government of Belisario Betancur, described as a process of "democratic opening", resulted in a signed ceasefire with four rebel groups in 1984 (including the FARC), as well as the creation of the *Unión Patriótica* (UP) political party by FARC leaders (Chernick, 1988). The UP obtained 14 seats in the 1986 congressional elections. Despite the ceasefire, confrontations between the military and the FARC continued. In addition, thousands of UP members were killed in the late 1980s and early 1990s, including several elected officials, in what has been described as a "political genocide" (García-Peña, 2007). Right-wing paramilitaries were involved in many of these deaths.

<sup>15</sup>Pastrana's was the third attempt at peace negotiations with FARC since 1982. See González Posso (2004) for a brief review of these processes.

<sup>16</sup>See <http://www.bbc.com/news/world-latin-america-10926003>.

<sup>17</sup>A new political alliance also emerged with the Liberal party. Santos' government has been described as being politically inclusive as opposed to Uribe's (see <http://razonpublica.com/index.php/politica-y-gobierno-temas-27/1613-santos-la-coalicion-incluyente-y-la-resurreccion-del-liberalismo.html> for an analysis of these political developments.)

<sup>18</sup>An exploratory phase of dialogues had begun in February of the same year.



Uribe and Santos, the *Centro Democrático* (CD) is founded in January of 2013 by Uribe and other right-wing politicians to oppose the PU and Santos' peace negotiations with FARC.

In the legislative elections of March 2014, Uribe is elected senator for the CD. The presidential elections of the same year represented a *de-facto* referendum on Santos' peace process (Weintraub, Vargas and Flores, 2015). In June of 2014, Santos, running again for the PU, was re-elected in run-off elections against Oscar Iván Zuluaga, a former member of the PU who was running for the CD with the support of Uribe, and had come in first place during the first round of elections the previous month.<sup>19</sup>

The peace process was successful in reducing violence and de-escalating the conflict during the four years of negotiations (CERAC, 2016). A bilateral ceasefire between FARC and the government was put in place in August of 2016, when a final accord between the two parts was announced. However, a plebiscite in October on whether the accord would be implemented resulted in the "no" option, supported by Uribe and the CD, winning by a small margin.<sup>20</sup> Following the results from the plebiscite, the government and FARC continued negotiations and announced a revised agreement, which hoped to address some of the criticisms from the opposition. This final accord was ratified by the Colombian congress in November of 2016, and FARC's disarmament process was completed in June of 2017.<sup>21</sup> Further discussion of these events, revisited in light of the framework and the results presented below, can be found in the appendix.

## Legislative institutions

The congress of Colombia consists of two chambers, the Senate, formed by 102 senators, and the House of Representatives, formed by 166 representatives. All members of congress are elected by popular vote for four-year terms (without term limits) through party-lists in proportional representation.<sup>22</sup> The years of these legislative elections coincide with the years of presidential elections, but while legislative elections are held in March, presidential elections are held in May (and runoff elections in June), and government sessions start July 20 (independence day). There are 36 electoral constituencies in the Chamber of Representatives: 32 departments, Bogotá (the capital), Colombians abroad, Indigenous communities and Afro-Colombians. Constituencies in the House of Representatives range from 1 to 18 seats. There are 2 electoral constituencies in the Senate, a single national constituency with 100 seats, and an Indigenous communities constituency for the remaining 2 seats.

Figure A1 shows the distribution of seats by party for each of the governments during the period of

<sup>19</sup>See Weintraub, Vargas and Flores (2015) for a quantitative analysis of these elections.

<sup>20</sup><http://www.nytimes.com/2016/10/03/world/colombia-peace-deal-defeat.html>

<sup>21</sup>See <http://www.nytimes.com/2016/11/13/world/americas/colombia-peace-deal-farc-rebels.html>, <https://www.nytimes.com/2016/11/30/world/americas/colombia-farc-accord-juan-manuel-santos.html> <http://www.bbc.com/news/world-latin-america-40413335>

<sup>22</sup>The way that seats are distributed since 2003 has been using the D'Hondt method. See Taylor (2008) for a discussion of these electoral rules in the context of Colombia.



study. The PU held the most seats throughout the period of study and was the party of the president for all three governments.<sup>23</sup> I treat the PU as the incumbent party for these three governments.<sup>24</sup>

### 3 Conceptual framework

To frame the analysis I present a simple model of legislative behaviour based on the framework of Levitt (1996). The model is simplified to focus on legislators' policy position in relation to that of the incumbent party and the preferred policy of the constituents, but extended to allow civil conflict to affect legislators' value of the incumbent's policy (the *rally 'round the flag* effect), as well as voters preferences (the increased right-wing support effect).

The policy space  $X \in R$  is unidimensional and policy preferences are single-peaked.<sup>25</sup> There are  $J$  legislators each representing a single electoral district. The bliss point of voters in district  $j$  is represented by  $x_{Vj}$ .<sup>26</sup> The incumbent party chooses its preferred policy  $x_I$ , which does not necessarily match the preferences of the electorate.<sup>27</sup> For simplicity, the model reduces Levitt (1996)'s framework such that legislators care only about the policy preferences of the incumbent party and of their constituents. In particular, assume that legislator  $j$  chooses a policy position  $x_j$  to maximize:

$$V_j = -[\omega_I(x_j - x_I)^2 + \omega_V(x_j - x_{Vj})^2]$$

where  $\omega_I$  is the weight that the legislator assigns to the policy position of the incumbent party and  $\omega_V$  is the weight that the legislator places on the bliss point of voters in her district. The legislator cares about these preferences due to political and electoral incentives. The optimization yields the legislator's chosen policy as a weighted average of the two positions she considers:

$$x_j^* = \frac{\omega_I x_I + \omega_V x_{Vj}}{\omega_I + \omega_V}$$

Define the *policy distance* between the legislator's optimal position and the position of the incumbent party

<sup>23</sup>The Liberal party had more seats in the House of Representatives in the 2006-2010 government, but the PU had more seats in the Senate and received more votes at the national level.

<sup>24</sup>Note however that the ruling coalition changes. In 2006-2010, the coalition excluded the Liberal party and included the Conservative party. In 2010-2014, the coalition included both traditional parties. In 2014-2018, the coalition excludes the Conservative party and includes the Liberal party. These shifts in coalitions are consistent with the overall policy shift of the PU described in the previous subsection.

<sup>25</sup>See Osborne (1995) for a review of this type of spatial models.

<sup>26</sup>Such that  $x_{Vj}$  could be the bliss point of the median voter in  $j$ .

<sup>27</sup>I do not explicitly model the process by which the incumbent party chooses its policy position, but consider for instance a citizen-candidate model in which the elected leader (or party) implements his (or their) preferred policy (Osborne and Slivinski, 1996; Besley and Coate, 1997).

as  $D_j^* \equiv |x_I - x_j^*|$ , which results in:

$$D_j^* = \left| \frac{\omega_V(x_I - x_{Vj})}{\omega_I + \omega_V} \right|$$

and we are interested in how this object changes with increased violence.

### 3.1 Effect of civil conflict on policy distance

Consider the effect that rebel attacks have on the chosen policy position of a legislator. The analysis allows both the weight that legislators assign to the incumbent party and the preferred policy position of voters to change in response to the level of violent conflict. In particular, define  $\omega_I(c)$  as the weight assigned to the policy position of the incumbent party and  $x_{Vj}(c)$  as the preferred policy position of the voters associated with violent conflict level  $c$ . Assume that  $\frac{\partial \omega_I}{\partial c} > 0$ , the *rally 'round the flag* effect, and that  $\frac{\partial x_{Vj}}{\partial c} > 0$ , the increased right-wing support effect. What is  $\partial D_j^* / \partial c$ ?

If the incumbent party has a policy position which is relatively right-wing (it is to the right of that preferred by voters in  $j$ ), as conflict  $c$  increases from its initial level ( $c_0$ ), the chosen policy position gets closer to that of the incumbent, and  $D_j^*$  decreases. That is,  $\partial D_j^* / \partial c < 0$ . Intuitively, both of the effects move the direction of the chosen policy  $x_j^*$  to the right, closer to  $x_I$ , as conflict increases. Specifically:

*Proposition 1: Right-wing incumbent.* Let  $x_I^R$  be a right-wing incumbent position, such that  $x_I^R > x_{Vj}(c_0)$ , then  $\partial D_j^{*R} / \partial c < 0$ .

See appendix for formal proof.

Consider now what happens when the policy position is relatively left-wing (to the left of the voters' initial bliss point). In this case, the two effects move  $x_j^*$  in opposite directions. The *rally 'round the flag* effect pulls  $x_j^*$  closer to  $x_I$  as  $c$  increases (to the left). On the other hand, increased right-wing support pushes  $x_j^*$  to the right, towards  $x_{Vj}$ . Thus, we have:

*Proposition 2: Left-wing incumbent.* If  $x_I^L < x_{Vj}(c_0)$ , then  $\partial D_j^{*L} / \partial c$  is ambiguous. However,  $\partial D_j^{*L} / \partial c > \partial D_j^{*R} / \partial c$  for similarly extreme positions, ie. if  $|x_I^L - x_{Vj}(c_0)| \leq |x_I^R - x_{Vj}(c_0)|$ .

See appendix for formal proof and discussion.

Consider now the case where conflict varies across districts, such that  $\frac{\partial x_{Vk}}{\partial c} > \frac{\partial x_{Vj}}{\partial c}$ . For instance, if district  $k$  is the location of where rebel attacks takes place.<sup>28</sup> If the incumbent's position is relatively right-

<sup>28</sup> Alternatively,  $c_j$  is the level of conflict in district  $j$ ,  $c_k > c_j$  and  $c = \sum_{j \in J} c_j$ . Voters preferred policy depends on the level of conflict

wing, then legislator  $k$  gets closer to the incumbent position  $x_I$  because voters in her district become more right-wing relative to voters in  $j$ . Alternatively, if the incumbent's position is relatively left-wing, then, for the same reason, legislator  $k$  chooses a position further from  $x_I$  than  $j$ 's.

*Proposition 3: Localized effects.* If  $\frac{\partial x_{Vj}}{\partial c} > \frac{\partial x_{Vk}}{\partial c}$  and  $x_{Vk}(c_0) = x_{Vj}(c_0)$  then:

1. If  $x_I^R > x_{Vj}(c_0)$ ,  $\partial D_k^{*R} / \partial c < \partial D_j^{*R} / \partial c < 0$ , and
2. If  $x_I^L < x_{Vj}(c_0)$ ,  $\partial D_k^{*L} / \partial c > \partial D_j^{*L} / \partial c$

See appendix for formal proof.

I evaluate propositions 1 and 2 empirically using an event study framework which looks at the aggregate effect of conflict events on vote-alignment with the incumbent party. I evaluate proposition 3 using a difference-in-differences specification which exploits the location of the attacks and evaluates whether politicians from these electoral districts react differentially to these attacks, such that "treated" politicians are those representing location  $k$ , and "control" politicians those representing  $j$ .

## 4 Data and descriptive statistics

Three main sources of data were used for this study: data on rebel attacks from the Global Terrorism Database, compiled by the [START](#) program at the University of Maryland; a dataset of congressional votes collected from [Congreso Visible](#) at the University of the Andes in Colombia; and politicians' tweets and network structure from [Twitter](#). This section describes each of these in turn and provides descriptive statistics.

### Conflict data

The main explanatory variable uses data on attacks by FARC from the Global Terrorism Database ([START, 2015](#)). There were a total of 881 attacks by FARC between 2006 and 2015. The frequency of attacks (on average one attack every four days) presents an empirical challenge for estimating the effect of interest. Throughout the main analysis I restrict the sample to attacks with at least three casualties (91 events). Statistics for different casualty thresholds are summarized in Table [A1](#). Other than fatalities and injuries, there do not seem to be large systematic differences between the categories of attacks. In particular, there are no apparent differences in the timing of these attacks across categories.

Figure [1](#) shows attacks by FARC across time. Each point indicates a single attack, with the number of fatalities on the y-axis and the date of the attack on the x-axis. There are three periods of interest coinciding

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in their district,  $x_{Vj}(c_j)$ .

with each of the governments in power. In addition, the start of the peace process is labeled with a red line. The number of attacks (and in particular attacks with three or more fatalities) decreases just after the election of president Santos, and just after the beginning of the peace process.

The map in figure 2 shows attacks by FARC across space. The map shows the number of events with at least three fatalities in each of Colombia's departments.<sup>29</sup> FARC's presence is most salient in the southwest of the country, the departments of Cauca (17 attacks with at least 3 fatalities), Caquetá (9) and Nariño (9) are amongst the most violent. The department of Antioquia in the center/north-west, where ex-president Uribe is from, is the sixth department with most events (5 attacks with at least three fatalities).

## Twitter data

Of the 650 politician profiles available from Congreso Visible, 305 of them have an active Twitter account. I collect tweets for these politicians, as well as for the two main political leaders during the period of study, Juan Manuel Santos (@JuanManSantos) and Álvaro Uribe (@AlvaroUribeVel). The final dataset I use for the analysis contains approximately 365,000 tweets (shown across time in A5).

For each tweet I have data on date and time of publication, user (politician), the text of the tweet, and the number of likes (or hearts) and re-tweets. I use these last two variables to measure follower engagement. In particular, I define  $tweetEngagement = \log(likes + retweets + 1)$  for each tweet. Twitter users sometimes re-tweet a message they disapprove of, but this is usually prefixed by a comment. The twitter platform does not count tweets prefixed by a comment as a re-tweet. Thus, I interpret re-tweets as a form of approval or endorsement for the message in the tweet. Figure 3 plots the average approval rating of Juan Manuel Santos across four polls, and follower engagement for @JuanManSantos, across time.<sup>30,31</sup> The two variables are positively and significantly correlated, indicating that tweet engagement is likely a good proxy for popular support.<sup>32</sup>

I use a linear regression based on the most used words of the two leaders (Santos and Uribe) to measure the political leaning of tweets.<sup>33</sup> Figure 4 shows the histogram of the estimated political language for the tweets of the leaders. A clear separation is visible between the distributions of the two politicians, indicating that i) the language they use on Twitter is distinct from each other, and that ii) the procedure employed is able to capture these differences. Figure 5 plots the monthly average political language index of their tweets,

<sup>29</sup>Departments are an administrative division equivalent to states in the US. The maps for all events and other thresholds (more than one/five casualties), are available upon request.

<sup>30</sup>Follower engagement at the monthly level is measured by regressing  $tweetEngagement$  on a set of year-month dummies.

<sup>31</sup>Polls source: <http://colombiareports.com/santos-approval-rating-at-44-says-colombias-most-optimistic-pollster/>

<sup>32</sup>The relationship between the polls average and the follower engagement index is statistically significant at the 90% confidence level. The relationship between the polls average and the lag of the follower engagement index is statistically significant at the 95% confidence level. The sample has monthly observations from 2012 to 2015.

<sup>33</sup>See data appendix for details.

along with the 10th and 90th percentile. The political transition that Santos underwent, discussed in section 2, is apparent in the language of his tweets. Before he is first elected, the language of the two leaders is very similar. However, their political language index starts to diverge soon after his first election, through the start of the peace process, and by his second mandate, the two leaders employ clearly distinct language. In the empirical analysis below, I examine whether tweets at the top-right end of the political leaning distribution, which use a language most similar to that of Alvaro Uribe, receive higher follower engagement following attacks by the rebel group.

## Congressional votes

The main dependent variable measures politicians' alignment with the incumbent (or ruling) party in the Colombian congress, as a proxy for the *policy distance* between legislators and the incumbent party. Using the website [congresovisible.org](http://congresovisible.org), which contains information on congressional votes, I compiled datasets for congressional votes occurring between 2006 and 2015.<sup>34</sup>

Table A2 lists some of the summary statistics for each of these roughly 11,600 votes. The variables include the share of politicians who voted to approve, reject or abstain from a vote, as well as dummy indicators for the type of vote ("Votación"), keywords that the description of the vote contains, and the party of the politician who proposed the vote (PP) if available. Figure A2 shows the share of congress members who voted to approve each of the votes on the y-axis and the date of the vote on the x-axis. The dark points represent monthly averages. In chronological order, the vertical lines indicate the start of the second Uribe government, the start of the first Santos government, the official start of the peace process, and the start of the second Santos government. The data on the aggregate votes shows, for instance, that many votes were approved near the end of the Uribe government, but that this share has decreased over time since Santos came into power. I also collect data on individual votes, at the politician-congressional vote level: voted to approve, voted to reject, or abstained from voting in each congressional vote. The data consists of over 780,000 individual votes representing more than 650 politicians. The *Partido de la U* (Uribe's former and Santos's current party) is defined as the incumbent party throughout the period of study (recall figure A1). I define the following variables to quantify these votes: i) *voteValue* is defined as 1 if approve, 0 if abstained, -1 if reject; and ii) *voteWithX* is defined as 1 if the vote matched the majority of X votes, and 0 otherwise, where X is a subset of all politicians. I consider an abstention to be a negative vote in this case.<sup>35</sup>

In particular, I define this as:

<sup>34</sup>Most of the votes available through Congreso Visible occur starting with the second Uribe government in 2006. The only votes removed by this restriction are 28 votes that occurred in 2002 and 2003, and there is no data available for 2004 and 2005.

<sup>35</sup>Defining an abstention as supporting or rejecting a vote depending on the position of politicians' own party yields similar results.

$$\begin{aligned}
voteWithX_{iv} = & \mathbb{1}(voteValue_{iv} \leq 0) * \mathbb{1}\left(\frac{\sum_{j \in X_v} voteValue_{vj}}{|X_v|} \leq 0\right) + \\
& \mathbb{1}(voteValue_{iv} > 0) * \mathbb{1}\left(\frac{\sum_{j \in X_v} voteValue_j}{|X_v|} > 0\right)
\end{aligned}$$

For individual vote  $i$  and congressional vote  $v$ . Summary statistics at the individual vote level are shown in table A3. The main outcome of interest will be alignment with the incumbent party,  $voteWithPU$ .<sup>36</sup> Figure A3 shows the average number of votes which are aligned with the incumbent party, by party, and figure A4 shows the average of this alignment across time. The *Polo Democratico* party (yellow), is an "extreme left" party which generally does not vote with the ruling party, as observed. After the legislative elections of 2014, the *Centro Democratico* (Uribe's new party and an "extreme right" party), also tends to vote against the ruling party.

## 5 Empirical strategy

### Event study design

To study the effect of rebel attacks on politicians' votes in congress, I first use an event study framework which exploits the frequency of the voting data and the quasi-random timing of the rebel attacks (I discuss the timing of attacks below). Estimating these effects is challenging given that there are many attacks throughout the period of study (recall figure 1), and that FARC may, to a certain extent, plan attacks in response to government policy decisions. Due to these challenges, I will only be able to recover the short-run effect of these attacks, by comparing the behaviour of politicians just before, with that just after the attack. In particular, I estimate the following regression:

$$\begin{aligned}
voteWithPU_{ipuv} = & \alpha + \sum_{t=-12, -9, \dots}^{15} \beta_t daysSinceAttack_t + \\
& \gamma_p + \delta^t F(t) + \delta^u T_u + \delta^v X_v + \varepsilon_{iptuv}
\end{aligned} \tag{1}$$

for individual vote  $i$ , politician  $p$ , political party  $u$ , congressional vote  $v$ , on day  $t$ .

The data is inherently noisy due to the nature of the voting process: votes do not occur every day, congressional votes across days may pertain different issues, and not all politicians vote on every congressional vote. To alleviate some of these issues and obtain more precise estimates, the coefficients of interest,  $\beta_t$ , are estimated in grouped three-day bins such that  $t = i$  includes days  $i$ ,  $i + 1$  and  $i + 2$ . The event-time dummy

<sup>36</sup>In the appendix I extend the main analysis by breaking up this definition and looking directly at  $voteValue$  as a dependent variable.

variable  $daysSinceAttack_t$  is equal to one if the vote occurred during the three-day  $t$  period, and zero otherwise. The  $\beta_t$  coefficients capture the mean change in politicians' vote-alignment with the incumbent party in the days after an attack, controlling for other determinants of vote-alignment. The regression captures the causal effects of interest as long as the error term ( $\varepsilon_{iptuv}$ ) is uncorrelated with the regressors of interest ( $daysSinceAttack_t$ ). Given that FARC's military operations are highly decentralized, it is unlikely that the precise timing of the attacks are correlated with the error term. I expand on this argument in a following subsection. In the main specification, I set  $\beta_{-3}$  as the excluded coefficient ( $\beta_{-3} = 0$ ), such that subsequent coefficients may be interpreted as the treatment effect of the event.

The regression includes politician fixed effects; a function of time  $F(t)$  which includes year fixed effects, month fixed effects, day of the week fixed effects, and calendar day (linearly); and party specific linear trends,  $T_u$ . Some specifications also use a vector of vote-level controls  $X_v$  which includes dummies for the type of vote (policy vs. procedural), keywords (conflict or non-conflict related votes), and for whether the vote was proposed by a PU member or by a member of the politician's own party.<sup>37</sup> The outcome of interest is alignment with the ruling party (the PU), as defined in section 3.

I do the analysis separately for the pre and post peace process time periods, as this marks the most significant policy shift for the PU. Due to the frequency of attacks and because politicians may be more likely to react to events with more casualties (which are more salient), I limit the analysis throughout to high-casualty events, those with at least three fatalities. In addition, the main analysis is restricted to votes which occur in the event window of a single event.<sup>38</sup> Since votes which occur near two events will appear in more than one bin, and likely in bins both in the pre-attack and the post-attack period, they have the potential to bias the coefficients of interest towards zero. These votes are excluded from the main analysis (around twelve percent of votes). Standard errors are two-way clustered at the politician and the week level to allow for non-nested correlation in these dimensions (Cameron, Gelbach and Miller, 2012).

## Difference-in-differences

The event study framework presented above exploits the timing of the attacks to estimate the effect of interest. However, there may be concerns about the exogeneity of the attacks with respect to the timing of the votes, as well as other time-shocks which could be potentially correlated with both the attacks and voting behaviour in congress. An alternative strategy exploits both the timing and the location of the attacks in order to control for potential confounders across time. I match the location of the attacks to the politicians *home department*, the location which they either i) directly represent, for Representatives, or ii) got most votes

<sup>37</sup>These congressional vote level controls may be *bad controls*, in the sense that the types of votes presented to the floor may endogenously change in response to the attacks. I discuss this possibility further in the results section.

<sup>38</sup>That is, votes which have more than one "event dummy" equal to one are dropped.



from in the legislative elections, for Senators.<sup>39</sup> The strategy examines whether politicians react differentially to attacks which occur in their *home department*. I estimate the following equation:

$$\begin{aligned} voteWithPU_{iptuv} = & \alpha + \beta postAttackinHD_{pt} + \delta^{pt} attackWindowinHD_{pt} + \\ & \gamma_p + \gamma_t + \delta^u T_u + \delta^{vu} X_{vu} + \varepsilon_{iptuv} \end{aligned} \quad (2)$$

for individual vote  $i$ , politician  $p$ , political party  $u$ , congressional vote  $v$ , on day  $t$ .

The regression includes politician fixed effects, day fixed effects and party specific linear trends. I define  $postAttackinHD_{pt}$  as an indicator variable equal to one if the vote occurred during the week following an attack in the politicians home department,<sup>40</sup> and zero otherwise. The variable  $attackWindowinHD_{pt}$  is an indicator variable equal to one if the vote occurred within two weeks of an attack in the politicians home department,<sup>41</sup> and zero otherwise. By including the  $attackWindowinHD_{pt}$  dummy, the  $\beta$  coefficient captures the difference in vote alignment in the week just following the attack to that in the week just before the attack, and can therefore be thought of as the treatment effect of the event. In some specifications I include a set of congressional vote level controls,  $X_{vu}$ , these include the same controls as in the event study as well as a variable capturing the average vote alignment with the ruling party for other members of the politician's party.<sup>42</sup>

This empirical strategy estimates the differential effect of an attack occurring in a politician's *home department*, over the potential reaction of all politicians (which will be captured by the day fixed effects). The analysis again uses events with at least three fatalities and observations with overlapping events are excluded (however, because the analysis is now disaggregated at the department level, only less than one percent of votes are affected by this restriction). Standard errors are clustered at the politician level.<sup>43</sup>

## Threats to identification

The empirical strategies presented assume that, conditional on the sets of controls, the timing of attacks by FARC are not correlated with unobserved factors which affect the patterns of voting in the Colombian congress in the short-run (when the effects are identified). In particular, I treat the specific timing of the attacks as random with respect to vote-alignment with the incumbent party in the legislature. Two specific concerns would be that i) FARC attacks occur in anticipation of congressional voting patterns, or ii) that

<sup>39</sup>The location matches the place of birth in more than 90 percent of cases.

<sup>40</sup>More specifically,  $postAttackinHD_{pt}$  is equal to one if the vote occurs on days 0 to 6, where 0 is the day of the attack and days 1-6 are the days following the attack.

<sup>41</sup>That is,  $attackWindowinHD_{pt}$  is equal to one if the vote occurs on days -7 to 6.

<sup>42</sup>To be precise, this is equal to  $\sum_{k \in u, k \neq p} voteWithPU_{iktu} / (n_{uv} - 1)$ , where  $n_{uv}$  are the total number of politicians from party  $u$  who took part in congressional vote  $v$ .

<sup>43</sup>Unlike the event study design, the diff-in-diff methodology uses time fixed effects which will absorb within-time clustering. See Cameron and Miller (2015) for a discussion of these issues.

FARC plan attacks in order to *influence* voting in congress (which could lead to biased results).

Though FARC's general strategy and direction are dictated from the top of the organization, the precise planning and carrying out of specific attacks respond mostly to local economic factors (Angrist and Kugler, 2008; Dube and Vargas, 2013; Wright, 2016) and military opportunities (Spencer, 2011). The latter is especially true of the period of study, in which Uribe's aggressive campaign against the group, including the modernization of the military and the implementation of new strategies, forced FARC to adopt more defensive military tactics, retreating deeper into the jungle and relying on refuge in Venezuela and Ecuador (Spencer, 2011; Delgado, 2015; Martínez, 2017). FARC's intelligence is also highly decentralized:

"The bloc mounts attacks if leaders determine that they are feasible at minimal risk. FARC 'campaigns' thus are sums of decentralized tactical actions, not integrated operations. They reflect only very general strategic goals. The intelligence required correspondingly also is mainly tactical military in nature." (Gentry and Spencer, 2010, p.458)

These considerations suggest that the *precise timing* of FARC attacks is unlikely to be related to events in the Colombian legislature.

Note also that the results (to be shown in detail below) suggest that attacks by FARC increase support for the right-wing government when in power. It could be the case that the FARC aims to influence policy and succeeds (it wants to increase right-wing support). However, such a strategy is not consistent with the group's military and political goals (Spencer, 2011; Zambrano and Zuleta, 2017). Furthermore, rogue units are extremely rare (Spencer, 2011). In addition, it is not clear that FARC's military and organizational capabilities would allow for such a strategy to be as sustained as to produce the statistical patterns I present, much less a strategy as perplexing as the one described. Overall, these considerations suggest that the exact timing of the attacks is unlikely to be correlated to events in congress in the short-run.

In addition to this qualitative evidence, I perform two quantitative exercises to further the argument presented here. First, as a balance test, in table 1 I show mean differences in outcomes between congressional votes which occurred the week prior to attacks relative to the week following attacks. Specifically, I run regressions of the form:

$$Y_{vt} = \alpha + \beta_1 preAttack_{vt} + \beta_2 postAttack_{vt} + \varepsilon_{vt} \quad (3)$$

where  $Y_{vt}$  is a congressional-vote level characteristic, and  $preAttack_{vt}$  and  $postAttack_{vt}$  are dummy variables indicating whether the vote took place the week before or the week after an attack with at least three casualties (a restriction consistent with the main empirical analysis). This analysis is done at the congressional-vote level (N=11,666). Column 7 of table 1 tests for differences between the corresponding two coefficients. I find statistically significant differences in only 3 out of 51 outcomes.

There are three possible interpretations for these differences: i) type I errors, ii) differences due to deliberate timing of attacks by FARC, and iii) differences due to strategic manipulation of the legislative agenda by politicians. If ii) was the case, these differences would be likely to persist regardless of the casualty threshold restriction, however, these differences are not significant for FARC attacks with at least one casualty,<sup>44</sup> suggesting that these congressional-vote characteristics are not systematically correlated with FARC actions. Interpretation i) is very plausible given the number of tests.<sup>46</sup> I further discuss interpretation iii) in the results section.

Finally, in the appendix I discuss and evaluate the possibility that FARC coordinate attacks across locations by examining the covariance matrix of events (based on [Trebbi and Weese, 2016](#)) and do not find strong evidence of this. These findings are consistent with the idea that FARC intelligence is highly decentralized and again suggests that their actions are uncorrelated to events in the Colombian congress in the short-run.

## 6 Results

### Effect of rebel attacks on tweet engagement

Before investigating whether attacks by the rebel group affect politicians' voting behaviour in congress, I investigate whether Twitter users respond to these attacks. I study this relationship in light of previous work that has documented both *rally 'round the flag effects* and increased support for right-wing parties following terrorist attacks. One could argue that the rise of Uribe in the 2002 presidential elections, after the failure of the 1998-2002 peace process, and his re-election in 2006, following an increase in rebel violence, reveal a pattern consistent with these effects. However, no *quantitative* studies have documented similar casual relationships for Colombia (to the extent of my knowledge).<sup>47</sup> I examine these relationships in the very short-run, by analyzing the effect of high-casualty attacks by the rebel group (more than three fatalities) on tweet engagement, for tweets from incumbent politicians (PU), and for right-leaning tweets. I estimate an

<sup>44</sup>The p-values are 0.41, 0.41 and 0.12 for "Fifth commission in the senate",<sup>45</sup> "Law project" and "Legislative acts" respectively. Using instead a five-casualty threshold, the p-values are 0.22, 0.57 and 0.1 respectively.

<sup>46</sup>None of the differences would be statistically significant using the Bonferroni correction for multiple comparisons.

<sup>47</sup>[Weintraub, Vargas and Flores \(2015\)](#) documents an inverted-U-shaped relationship between violence and support for Santos in 2014, which is partially consistent with the studies above. However, the study presents a relationship between voting and historical violence (over a period of more than 20 years). [Gallego \(2011\)](#) examines a related question, but the main outcome of interest is voter turnout. The author also investigates changes in third-party vote share (versus traditional parties), but these parties are not classified into a left-right spectrum, or by incumbency status.

event study regression similar to the one outlined in equation (1):

$$\text{tweetEngagement}_{ipt} = \alpha + \sum_{t=-12, -9, \dots}^{15} \beta_t \text{daysSinceAttack}_t + \gamma_p + \delta^t F(t) + \delta^u T_u + \delta \text{polLeaning}_i + \varepsilon_{ipt} \quad (4)$$

for tweet  $i$ , politician  $p$ , on day  $t$ . The regression includes politician fixed effects and a flexible function of time to capture non-linear trends in Twitter activity.

The results of these regressions are shown in figure 6. The coefficients estimated suggest that tweets from PU members receive about 12 percent more engagement (top), and right-leaning tweets receive about 30 percent more engagement (middle) in the three days after an attack by FARC, relative to the three days before the attack occurred.<sup>48</sup> An analogous regression on all other (non-PU, non-"right-wing") tweets reveals no overall spike in activity (bottom). The response of Twitter users suggests that support for both the incumbent party and for right-leaning messages increases following attacks by the rebel group.<sup>49</sup> Furthermore, the strong initial reaction seems to dissipate quite rapidly.

A similar analysis which compares engagement the week before attacks to the week after attacks is presented in table 2.<sup>50</sup> The results suggest that in the week following a rebel attack, politicians from the PU received 7 percent more engagement (column 2), the most right-leaning tweets received about 21 percent more engagement (column 3), and tweets from PU members which were in the top most right-leaning tweets received about 26 percent more engagement (column 4), following attacks by the rebels. In addition, I estimate a difference-in-differences regression analogous to that in equation (2) with *tweetEngagement* as the outcome variable. Though imprecisely measured (columns 5-8), the direction of the coefficients suggests that engagement for right-leaning tweets from "treated" politicians, whose home department was the location of a rebel attack, may differentially increase after these events (column 7).

## Effect of rebel attacks on vote alignment with the ruling party

Data on tweet engagement suggests that both incumbent and right-leaning politicians may experience a short-run boost in support following attacks by the rebel group. However, it is not clear whether politicians themselves change their behaviour as a response, and in particular, whether the attacks affect the behaviour

<sup>48</sup>I also find a positive but small and insignificant effect on *polLeaning*, that is, following FARC attacks politicians' language becomes (slightly) more "right-wing" (not shown).

<sup>49</sup>To some extent, the public itself may respond to these attacks due to influence from their representatives. Carlsson, Dahl and Rooth (2016) presents evidence of public attitudes changing in the years following elections depending on the politicians elected to office. However, given the very short-run nature of the analysis I present (over days), the extent to which these responses may be driven by influence from politicians is likely to be limited.

<sup>50</sup>More precisely:  $\text{tweetEngagement}_{ipt} = \alpha + \beta_0 \text{attackWindow}_t + \beta_1 \text{postAttack}_t + \gamma_p + \delta^t F(t) + \delta \text{polLeaning}_i + \varepsilon_{ipt}$ . Where the dummy *attackWindow* is equal to one if the tweet was published within a two-week window of the attack (one week before, one week after), and the *postAttack* dummy is equal to one if the tweet was published the week after an attack.

of legislators voting in congress.

### Event study design

Figure 7 shows the results from the event study specification outlined in section 5 (equation 1). A clear pattern is evident in these specifications. Before the peace process starts (top figure), vote alignment with the ruling party increases by around 25 percentage points in the three days following an attack, relative to the three days before. The effect then weakens progressively. In the post-peace process period (middle figure), however, the coefficients are considerably smaller and most are not statistically different from zero. Finally, I run a specification which pools all pre and post votes and test for the difference in coefficients by interacting the event-time dummies with a post-peace process dummy (equal to one when the policy position of the incumbent party is left-leaning). The differences in the coefficients (bottom figure) show that there is a statistically significant difference in the short-run reaction from these attacks.<sup>51</sup>

Table A4 further studies the dynamics of this relationship by defining: the contemporaneous effect (the first three-day bin), the short-run effect (which groups bins 1-3, or days 0-8), the long(er)-run effect (bins 4-6, or days 9 to 17), and the average effect (all post bins). Note that in the long(er) run the effect is not statistically significant for the pre-peace process period, suggesting that the effect is very short lived. Furthermore, the average effect for the post-peace process period is marginally significant, though about half the size of that for the pre-peace process period.

An alternative specification does not define the event-time dummies, but simply compares vote alignment after and before attacks. I do this in table A5 for a one week window around the events (equivalent to that of footnote 50). Columns 1 and 5 include no controls. Columns 3 and 7 present the preferred specification (used in the analysis above). Columns 4 and 8 include congressional vote level controls, which may be important depending on the desired interpretation of these results. The attacks may lead to a change in the type of votes which go on the floor (policy versus procedural votes, conflict-related, or who proposes the bills, etc; as perhaps suggested by table 1). This change in the composition of votes is part of the effect estimated in the main specification. However, one may wish to assess whether, *conditional* on the type of vote, vote alignment increases. This issue is further discussed in the robustness checks section. The results from the preferred specification suggest that following attacks by FARC, politicians vote in congress are 11 percentage points more likely to be aligned with the incumbent party in the week following the attack. Once the peace process starts, the effect remains positive (7 percentage points), but becomes statistically insignificant.

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<sup>51</sup>Based on the conceptual framework, the difference in these coefficients can be interpreted as capturing (two times) the magnitude of the right-wing effect. I estimate the relative size of the two effects in the appendix.

The results of this section suggest that, following attacks by the rebel group, the *rally 'round the flag* effect shapes legislator behaviour, as observed by increased alignment with the ruling party. The fact that the effect weakens considerably in the post-peace process period is not surprising given the shift in the policy position of the government, from a *hard-line* right-leaning position, to a *concessionary* left-leaning position. The post-peace process results suggest that the increased right-wing support effect reduces the overall effect after the incumbent government changes policy position. Depending on the magnitude of the *rally* effect relative to the right-wing support effect, one might even expect the overall effect to become negative. In addition, the right-wing effect may be particularly important for politicians whose home department was the location of the attack, an issue that I study in the next section.

### Difference-in-differences

Table 3 shows the main results from the difference-in-differences specification, which accounts for time-shocks that could be potentially correlated with both voting patterns and the timing of rebel attacks. The columns which do not include day fixed effects (1,2,5,6) include a *post-attack dummy* (equal to one if the vote took place within one week following an event), such that the coefficient for the *post-attack in home department* variable can be interpreted as a differential effect in all specifications. These first two specifications suggest that politicians from the department where an attack takes place indeed react differentially to these events.

The preferred specification (columns 3 and 7) includes day fixed effects and party-specific linear trends. Column 3 indicates that before the peace process starts, politicians who are "treated" (the attack occurred in their home department), are 7 percentage points more likely to align their votes with the ruling party in the week following the event, relative to both "control" politicians and to the week prior to the event. However, after the negotiations with FARC start, politicians are 4 percentage points less likely to align their votes with the PU during the week following attacks in their home department (column 7). Columns 4 and 8 suggest that even after controlling for both observed characteristics of the congressional votes, and the average vote alignment of other members of the "treated" politicians' party, the effect remains statistically significant.

The evidence suggests that the transitory shocks in preferences induced by conflict events have observable effects on the behaviour of elected politicians. In particular, the results in this section suggest that politicians from departments where an attack occurs respond differentially to these events, and that they do so in the direction of the increased right-wing support effect. Before the peace process starts these "treated" politicians are more likely to align their votes with the *hard-line* incumbent government, relative to "control" politicians. After the peace process starts "treated" politicians are less likely to align their votes with the *concessionary* incumbent government, again relative to "control" politicians.

## Additional analysis

### Timing of elections

I have shown that politicians respond to attacks from the rebel group. The evidence from the difference-in-differences strategy suggests that politicians care differentially about attacks which occur in the departments from which they draw the most political support, suggesting that electoral incentives, coupled with a rightward shift in voter preferences, determine how legislators react to these events. An alternative hypothesis is that the preferences of politicians themselves shift to the right following the attacks, and that they do not, in fact, respond to the change in preferences of their constituents.<sup>52</sup> I try to disentangle these hypotheses by exploiting the timing of the attacks relative to the timing of legislative elections.

Legislative elections in Colombia occur in March (of 2010 and 2014 in my dataset), however, legislators are in office until July. This *lame duck* period presents a good opportunity to differentiate between the two alternative hypotheses proposed. If legislators react due to a shift in their own preferences, the increased right-wing effect during the post-election period should be similar to the effect in the pre-election period. However, if they do so because of electoral incentives, then the effect may be stronger in the pre-election period. I define the post-election period as that between the election date (March 14th in 2010, and March 9th in 2014) and the date of the change in government (July 20th). I define the pre-election period as the period of the same length of days, preceding the election.<sup>53</sup>

Table 6 shows the results from this analysis. The positive effect previously documented for the pre-peace process period is present and strong in the period preceding the 2010 legislative elections (columns 1 and 2). However, for the post-election period, the effect is statistically insignificant (columns 3 and 4). Before the 2014 elections, attacks by FARC have no overall effect (column 5), but reduce support by 23 percentage points for the now pro-peace ruling party from politicians whose *home department* was the location of an attack (column 6). After the 2014 elections, the estimates suggest that attacks increase support for the ruling party (despite their pro-peace policy position) and have no differential effect when occurring in a politicians' *home department*. Given that there were very few relevant events around the 2014 elections, these particular estimates should be viewed with caution.<sup>54</sup>

The results from this analysis provide suggestive evidence that electoral incentives may be an important determinant of legislator behaviour. In particular, the results are consistent with the increased right-wing

<sup>52</sup>In the context of the conceptual framework presented, an alternative model would be one in which legislators weight their own views and those of the incumbent government.

<sup>53</sup>Since congress is closed in January and February most of the pre-election votes happen in November and December.

<sup>54</sup>Lower FARC activity around these elections is consistent with the idea that attacks may draw support for the right-wing candidate, which would be detrimental to the peace process and arguably inimical to FARC's objectives. Based on an economic framework and observed FARC actions, [Zambrano and Zuleta \(2017\)](#) argue that the rebel group was indeed invested in a positive outcome for the peace process.



support effect having more weight before the legislative elections than after the elections. On the other hand, the results indicate that the *rally 'round the flag* effect seems to persist even after the elections have taken place (positive estimates in columns 3 and 7).

### Policy implications

The empirical framework I have presented is designed to measure the causal effect of FARC attacks on politician behaviour at the individual level. The documented effect on policymaking is likely to have both observable and unobservable implications on actual policy. The direct implications that can be observed at the congressional vote level are somewhat limited by the political process that determines whether bills or propositions are voted on in the first place. Figure A10 shows the kernel density of the share of approve votes for each congressional vote. As observed, the outcome of most votes is approval by a vast majority. More importantly, the percentage of congressional votes which are close is very small (less than four percent of votes had share approved between 0.4 and 0.6). It seems to be the case that the outcome of many votes is predetermined even before the votes are on the floor, thus restricting the direct impact that the short-run effects measured here could have. Finally, only about 3.3 percent of congressional votes resulted in the outcome not preferred by the incumbent party, further limiting the potential policy implications of the increased incumbent support effects documented.

I propose a *potential outcomes* framework (as introduced in Rubin, 1974) that maps the estimated causal effect of attacks on individual votes to outcomes at the congressional vote level. For each congressional vote, assume two potential outcomes (indexed by 0 and 1): a no-attack, or "non-treated", outcome and an attack, or "treated", outcome. For each treated congressional vote (occurring in the days following an attack with at least three casualties), a share of politicians were induced to align their legislative individual votes with the incumbent party as a result of the event (as documented here). I then compute counterfactual outcomes for all congressional votes.

Define a congressional vote occurring  $t$  days from an event and treated by an attack as  $V_{1t} = \{Y_{1t}, N_{1t}, A_{1t}\}$ , and an untreated vote as  $V_{0t} = \{Y_{0t}, N_{0t}, A_{0t}\}$ , where  $Y$  is the number of aligned individual votes,  $N$  is the number of non-aligned individual votes, and  $A$  is the number of abstentions. The treated vote  $V_{1t}$  is a function of the untreated vote  $V_{0t}$  and the estimated individual effect  $\beta_t$ , where  $\beta_t$  corresponds to the estimated coefficient from the event study analysis (see figure 7, panel A). In particular, the treated vote can be defined as:

$$V_{1t} = \{Y_{0t} + \beta_t N_{0t} + \beta_t A_{0t}, (1 - \beta_t) N_{0t}, (1 - \beta_t) A_{0t}\} \quad (5)$$

That is, a share of politicians  $\beta_t$  was induced to align their vote with the incumbent party as a result of the

event.<sup>55</sup>

For the empirical exercise, I limit the sample to the pre-peace process period (when the attacks have statistically significant effects). With this framework in place, I estimate the counterfactual vote outcome for each congressional vote. For votes occurring 0-11 days after an attack, I estimate  $V_{0t}$ , and for votes outside of the event window I estimate  $V_{1a}$ , and define  $\beta_a$  as the average of  $\beta_t$  for days 0-11. I then compute the counterfactual result *share of approve votes*<sub>vt</sub> =  $Y_{vt} / (Y_{vt} + N_{vt})$ .<sup>56</sup> Of particular interest are two types of votes, those that were *potentially affected*, votes that occurred in the days just after an event for which the result (pass/fail) changed as a consequence, and those that were *potentially vulnerable*, votes that occurred outside of the event window but had an event occurred in the previous days (assuming the average size effects), the result of the congressional vote would have changed.<sup>57</sup>

The results of the exercise are summarized in table 7. There were a total of 7015 congressional votes in the pre-peace process time period. Of these, 1778 occurred in the event window (0-11 days after an attack). During the event window, only 1.7 percent of votes resulted against the position of the incumbent party, but the exercise suggests that the PU would have lost 3.9 percent of votes otherwise; outside of the event window, 3.1 percent of votes were lost by the PU, but had an event occurred in the days before, the incumbent party would have lost only 1.9 percent. Combined, the exercise suggests that about 30 percent of all votes that result in an outcome against the incumbent position have the potential to be flipped in favour of the incumbent by an attack.

The exercise identifies 40 congressional votes potentially affected. The list of potentially affected votes is in table A6. They cover a broad range of policy issues including the implementation of Colombia's free trade agreement with the United States, pension and social programs, and the functioning of intelligence agencies. I repeat the exercise outlined above using the estimated upper and lower bounds of the 95 percent confidence intervals of the estimated coefficients  $\beta_t$ , and find 26 congressional votes potentially affected at the lower bound, and 129 at the upper bound.

In addition to these estimated direct policy consequences, there are likely to be other indirect effects. I have restricted my analysis to short-run effects from high-casualty attacks in order to be able to credibly estimate these causal relationships. However, the impact of conflict on politics is certainly likely to extend beyond the results I present. Studying how the content of the bills themselves may be endogenously affected by conflict in the longer-run remains outside of the scope of this paper, but may be an important avenue for future research to further understand the scope of these effects.

<sup>55</sup>The non-treated outcome can be defined as a function of the treated outcome and the individual coefficients as  $V_{0t} = \{Y_{1t} - \beta_t N_{1t} / (1 - \beta_t) - \beta_t A_{1t} / (1 - \beta_t), N_{1t} / (1 - \beta_t), A_{1t} / (1 - \beta_t)\}$ .

<sup>56</sup>I round the estimated outcomes to the nearest integer.

<sup>57</sup>Formally, these are defined as congressional votes such that the "treated" and the "untreated" potential outcomes are different, ie. i) *share of approve votes*<sub>1v</sub>  $\geq 0.5$  and *share of approve votes*<sub>0v</sub>  $< 0.5$ , or ii) *share of approve votes*<sub>1v</sub>  $< 0.5$  and *share of approve votes*<sub>0v</sub>  $\geq 0.5$ .

## Duration and dynamics of the effects

The dynamics of the effects suggested by the event-study, both on Twitter and in congress (pre-peace process), tend to be relatively consistent. The study shows a sharp spike of support (for the incumbent party in congress pre-peace process, and for both the incumbent and right-wing tweets on Twitter) in the days just after the events, which dissipates quickly thereafter and returns to the pre-event levels in less than two weeks. I use data from Google Trends to examine whether these dynamics are consistent with public reactions to terrorist attacks in other settings. Figure A11 shows Google search volume for one major FARC attack in Colombia (Cauca 2015), and three other events (London 2005, Paris 2015 and Orlando 2016).<sup>58</sup> The dynamics of public interest for these events are consistent with the effects I document for Colombian Twitter users and Colombian legislators: a sharp spike which quickly dissipates and lasts in total less than two weeks. To the best of my knowledge, these dynamics have not been formally documented in other studies.<sup>59</sup>

## Robustness checks

### Congressional-vote controls

As discussed earlier, there is some weak evidence that the composition of votes may be different before attacks than after attacks. In particular, table 1 suggests a substitution away from "Legislative Acts" and towards "Law Projects" following the events. If this is a deliberate strategy from the government to take advantage of the effects documented, then the interpretation of the coefficients estimated should be slightly different. The coefficients I estimate, without controlling for the type of congressional-vote, can be thought of as the "equilibrium" outcome of two distinct effects: i) the "vote-composition effect", the type of vote changing as a strategic response of politicians, and ii) the "vote-alignment effect", the vote-alignment of individual politicians shifting (regardless of the type of vote being presented). Credibly identifying the "vote-composition effect" is difficult due to issues of statistical power (there are 11,000 congressional votes, whereas there are 700,000 individual votes). Table A5, column 4, controls for a series of congressional-vote characteristics and suggests that the effects do not change significantly as a result. In figure A12, I repeat the main event-study analysis controlling for whether the vote was a "Law Project" or a "Legislative Act" (as dummy variables). The analysis suggests that the extent to which the "vote-composition" effect can drive the main results is limited, and the generally observed patterns are the same (the coefficient on the first

<sup>58</sup>Google Trends data is normalized around the date of highest search volume (set at 100). I restrict the search criteria to the month of each event. See <https://trends.google.com/trends/>.

<sup>59</sup>Willer (2004) studies the duration of the effect of government-issued terror warnings on approval ratings and finds suggestive evidence that the effects are "of relatively short duration", but that in general they do not persist for more than two weeks, consistent with my findings.

treated bin - days 0-2 post-attack - is smaller, 0.22, relative to 0.25, but not statistically different).

### Other sample restrictions

I evaluate the robustness of the main results by re-running the main analyses, for the preferred specifications, with four specific restrictions. First, I use vote keywords, provided by *congreso visible*, to categorize votes on "conflict-related" issues. I define conflict-related votes as those which include the words "military", "justice", "peace", "terrorist", "penitentiary" and "justice".<sup>60</sup> We may expect votes on these particular issues to be particularly sensitive to the effect of rebel attacks on political behaviour. I exclude these votes from the analysis to evaluate this hypothesis. Second, I exclude votes which were proposed by members of the ruling party, the PU. Third, I exclude politicians who are members of the PU. Finally, I exclude politicians from the three most violent departments (Cauca, Caquetá and Nariño).

Table A7, panel A, shows the resulting estimates from these sample restrictions on the time-series analysis. The coefficients are fairly robust across these subsamples. In particular, the pre-peace process effect remains positive and significant, but the effect breaks down for the post-peace process time period. Interestingly, once PU-proposed votes are excluded, the post-peace process effect becomes a precisely estimated zero (column 6), suggesting that attacks may draw an incumbency advantage effect on these votes in particular.

Table A7, panel B, shows the results from these sample restrictions on the difference-in-differences specification. Two important results arise. The positive effect of rebel attacks on vote alignment with the ruling party, documented in the pre-peace process period, is largely driven by conflict-related votes. The coefficient estimated (column 1) suggests that the effect remains positive but becomes statistically insignificant ( $p\text{-value} = 0.11$ ). Second, the negative effect documented in the post-peace process period is driven by politicians in the most violent departments. Attacks from these departments constitute more than 50% of events in the post-peace process period. There are 27 events in this period, and 14 of these occurred in the three departments excluded.

## 7 Conclusion

This paper studies the relationship between civil conflict and policymaking in Colombia. I first show that following rebel attacks with a high number of casualties, both tweets from incumbent politicians, as well as tweets that use right-wing language, receive more follower engagement relative to other tweets. This evidence is consistent with effects previously documented by studies examining the relationship between

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<sup>60</sup>In Spanish, "militar", "justicia", "paz", "terrorista", "penitenciario" and "justicia".

political violence and voter behaviour, the *rally 'round the flag* and the increased right-wing support effects. Perhaps more interestingly, the effects I find dissipate quickly and disappear completely before two weeks after the date of the attacks.

I then examine whether, not just voters, but politicians themselves react to these attacks. I analyze the process of policymaking by using data from politicians' roll-call votes in congress from the last three governments (2006-2015), and studying whether politicians were more likely to vote together with legislators of the incumbent party after conflict events. The government of Juan Manuel Santos started peace negotiations with FARC in 2012, but rebel attacks continued as the talks progressed. Before this, and especially when Álvaro Uribe was in power, the government had a hard-line policy position which aimed at defeating the rebel group militarily. I separate my analysis into two time periods, pre-peace process and post-peace process. Before the peace process started, FARC attacks made politicians more likely to align their votes with the incumbent party (by up to 25 percentage points), in the days just after the event. As for voters, the effect on politicians dissipated quickly and disappeared around two weeks after the date of the events. After the peace process started, there is no significant effect of attacks on politicians' behaviour.

In an additional empirical analysis, I match politicians to their electoral districts and discover that the effects are different when the attacks affect these locations. Politicians are more responsive to attacks which occur in their electoral district. Additionally, I find that the effects are stronger before legislative elections than after legislative elections. These results suggest that electoral incentives can, to some extent, explain the reactions of these politicians.

The results are rationalized by a political economy model of legislative behaviour in which conflict generates both increased support for right-wing (or hard-line) policy positions and *rally 'round the flag* effects. When the incumbent government has a policy position that is right-wing (in the pre-peace process period), that is, to the right of voters' preferences, conflict shocks which move voters' preferences to the right, and *rally* effects which increase the strength of the incumbent position, both generate increased support for the incumbent party in the legislature. On the other hand, if the incumbent government has a left-wing position (in the post-peace process period), conflict shocks which move voters' preferences to the right, and *rally* effects which increase the strength of the incumbent position, generate opposing forces.

Finally, to consider the direct policy implications of these effects, I identify a set of 40 potentially affected congressional votes. These votes occurred in the pre-peace process period, days following a violent event, and had results in favour of the incumbent party by a relatively small margin. The votes cover a broad range of policy issues and may have been altered by the effects documented, and in particular, "flipped" in favour of the incumbent position.

Colombia is a country currently undergoing a fundamental transition in the process of development,

the resolution of internal conflict. After more than fifty years since its inception, the largest insurgency in the Americas, the Revolutionary Armed Forces of Colombia (FARC), has put down their weapons. The circumstances that led to this event spanned multiple governments, involved a delicate balance between hard-line and concessionary policies and have polarized public opinion across the country. There will be many lessons drawn from these events for developing countries as they come across similar challenges. The results I have presented shed new light on policymaking processes, reveal some of the incentives politicians face when making legislative decisions, and highlight a specific mechanism through which conflict can have persistent policy implications.

## References

- Acemoglu, Daron, James A Robinson, and Rafael J Santos.** 2013. "The monopoly of violence: Evidence from Colombia." *Journal of the European Economic Association*, 11(s1): 5–44.
- Acemoglu, Daron, Leopoldo Fergusson, James A Robinson, Dario Romero, and Juan F Vargas.** 2016. "The perils of top-down state building: Evidence from Colombia's false positives." *NBER Working Paper*.
- Acemoglu, Daron, Tarek A Hassan, and Ahmed Tahoun.** 2017. "The power of the street: Evidence from Egypt's Arab spring." *Review of Financial Studies*, forthcoming.
- Acosta, Amylkar.** 2015. "Conflicto, conflictividad y posconflicto." In *El posconflicto: una mirada desde la academia.*, ed. Fabio Giraldo and Édgar Revéz, 46–52. Bogotá, Colombia: Academia Colombiana de Ciencias Económicas.
- Albouy, David.** 2011. "Do voters affect or elect policies? A new perspective, with evidence from the US Senate." *Electoral Studies*, 30(1): 162–173.
- Angrist, Joshua D, and Adriana D Kugler.** 2008. "Rural windfall or a new resource curse? Coca, income, and civil conflict in Colombia." *The Review of Economics and Statistics*, 90(2): 191–215.
- Arce, Moisés.** 2003. "Political violence and presidential approval in Peru." *Journal of Politics*, 65(2): 572–583.
- Azzimonti, Marina.** 2014. "Partisan conflict." *Working Paper*.
- Baker, William D, and John R Oneal.** 2001. "Patriotism or opinion leadership? The nature and origins of the 'rally' round the flag" effect." *Journal of Conflict Resolution*, 45(5): 661–687.
- Balcells, Laia, and Gerard Torrats-Espinosa.** 2017. "The political consequences of terrorism. A quasi-experimental approach." *Working Paper*.

- Barberá, Pablo.** 2015. "Birds of the same feather tweet together: Bayesian ideal point estimation using Twitter data." *Political Analysis*, 23(1): 76–91.
- Bauer, Michal, Christopher Blattman, Julie Chytilová, Joseph Henrich, Edward Miguel, and Tamar Mitts.** 2016. "Can war foster cooperation?" *The Journal of Economic Perspectives*, 30(3): 249–274.
- Bellows, John, and Edward Miguel.** 2009. "War and local collective action in Sierra Leone." *Journal of Public Economics*, 93(11): 1144–1157.
- Berinsky, Adam J.** 2009. *In time of war: Understanding American public opinion from World War II to Iraq*. University of Chicago Press.
- Berrebi, Claude, and Esteban F Klor.** 2006. "On terrorism and electoral outcomes: Theory and evidence from the Israeli-Palestinian conflict." *Journal of Conflict Resolution*, 50(6): 899–925.
- Besley, Timothy, and Stephen Coate.** 1997. "An economic model of representative democracy." *Quarterly Journal of Economics*, 85–114.
- Besley, Timothy, and Torsten Persson.** 2010. "State capacity, conflict, and development." *Econometrica*, 78(1): 1–34.
- Blattman, Christopher.** 2009. "From violence to voting: War and political participation in Uganda." *American Political Science Review*, 103(02): 231–247.
- Blattman, Christopher, and Edward Miguel.** 2010. "Civil war." *Journal of Economic Literature*, 48(1): 3–57.
- Bouton, Laurent, Paola Conconi, Francisco Pino, and Maurizio Zanardi.** 2014. "Guns and votes." *NBER Working Paper*.
- Cameron, A Colin, and Douglas L Miller.** 2015. "A practitioner's guide to cluster-robust inference." *Journal of Human Resources*, 50(2): 317–372.
- Cameron, A Colin, Jonah B Gelbach, and Douglas L Miller.** 2012. "Robust inference with multiway clustering." *Journal of Business & Economic Statistics*.
- Carlsson, Magnus, Gordon B Dahl, and Dan-Olof Rooth.** 2016. "Do politicians change public attitudes?" *NBER Working Paper*.
- CERAC.** 2016. "Ocho meses de desescalamiento: cese el fuego de hecho, que resalta la criminalidad." [http://blog.cerac.org.co/wp-content/uploads/2016/03/ReporteCERAC\\_Evaluacion8MesesDeDesescalamiento.pdf](http://blog.cerac.org.co/wp-content/uploads/2016/03/ReporteCERAC_Evaluacion8MesesDeDesescalamiento.pdf), accessed 21/04/2016.



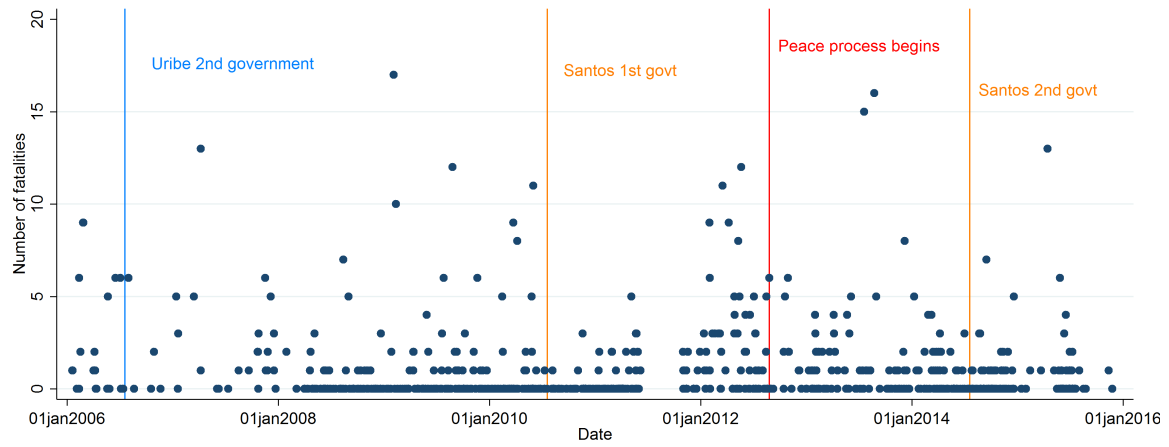
- Chernick, Marc W.** 1988. "Negotiated settlement to armed conflict: lessons from the Colombian peace process." *Journal of Interamerican Studies and World Affairs*, 30(4): 53–88.
- Chowanietz, Christophe.** 2011. "Rallying around the flag or railing against the government? Political parties' reactions to terrorist acts." *Party Politics*, 17(51): 673–698.
- Collier, Paul.** 2011. *Wars, guns and votes: Democracy in dangerous places*. Harper Perennial.
- Collier, Paul, and Dominic Rohner.** 2008. "Democracy, development, and conflict." *Journal of the European Economic Association*, 6(2-3): 531–540.
- Conconi, Paola, Giovanni Facchini, and Maurizio Zanardi.** 2014. "Policymakers' horizon and trade reforms: The protectionist effect of elections." *Journal of International Economics*, 94(1): 102–118.
- Cortés, Darwin, Juan F Vargas, Laura Hincapié, and María del Rosario Franco.** 2012. "Seguridad Democrática, presencia de la policía y conflicto en Colombia." *Desarrollo y Sociedad*, 69: 11–33.
- Crandall, Russell.** 2002. "Clinton, Bush and Plan Colombia." *Survival*, 44(1): 159–172.
- Delgado, Jorge E.** 2015. "Colombian military thinking and the fight against the FARC-EP Insurgency, 2002–2014." *Journal of Strategic Studies*, 38(6): 826–851.
- Dell, Melissa, and Pablo Querubin.** 2017. "Nation building through foreign intervention: Evidence from discontinuities in military strategies." *Quarterly Journal of Economics*, forthcoming.
- DeShazo, Peter, Tanya Primiani, and Phillip McLean.** 2007. *Back from the brink: Evaluating Progress in Colombia, 1999-2007*. Center for Strategic and International Studies.
- Dube, Oeindrila, and Juan F Vargas.** 2013. "Commodity price shocks and civil conflict: Evidence from Colombia." *The Review of Economic Studies*, 80(4): 1384–1421.
- Durante, Ruben, and Ekaterina Zhuravskaya.** 2017. "Attack when the World is not watching? U.S. Media and the Israeli-Palestinian Conflict." *Journal of Political Economy*, forthcoming.
- Fergusson, Leopoldo, James A Robinson, Ragnar Torvik, and Juan F Vargas.** 2016. "The need for enemies." *The Economic Journal*, 126(593): 1018–1054.
- Fergusson, Leopoldo, Pablo Querubin, Nelson A Ruiz, and Juan F Vargas.** 2017. "The real winner's curse." *Working Paper*.
- Fruchterman, Thomas MJ, and Edward M Reingold.** 1991. "Graph drawing by force-directed placement." *Software: Practice and Experience*, 21(11): 1129–1164.

- Galindo-Silva, Hector.** 2015. "Political representation and armed conflict: evidence from local councils in Colombia." *Working Paper*.
- Gallego, Jorge A.** 2011. "Civil conflict and voting behavior: Evidence from Colombia." *Available at SSRN* 1911983.
- Garcia-Peña, Daniel.** 2007. "Colombia: In search of a new model for conflict resolution." In *Peace, Democracy, and Human Rights in Colombia*, ed. Christopher Welna and Gustavo Gallón, 91–131. Notre Dame, Ind: University of Notre Dame Press.
- Gentry, John A, and David E Spencer.** 2010. "Colombia's FARC: A portrait of insurgent intelligence." *Intelligence and National Security*, 25(4): 453–478.
- Gentzkow, Matthew, and Jesse M Shapiro.** 2010. "What drives media slant? Evidence from US daily newspapers." *Econometrica*, 78(1): 35–71.
- Gentzkow, Matthew, Jesse M Shapiro, and Matt Taddy.** 2015. "Measuring polarization in high-dimensional data: Method and application to congressional speech." *Working Paper*.
- Getmansky, Anna, and Thomas Zeitzoff.** 2014. "Terrorism and voting: The effect of rocket threat on voting in Israeli elections." *American Political Science Review*, 108(03): 588–604.
- González Posso, Camilo.** 2004. "Negotiations with FARC: 1982-2002." In *Alternatives to war: Colombia's peace processes*, ed. Celia McKeon and Mauricio García-Durán, 18–22. Conciliation Resources.
- Gould, Eric D, and Esteban F Klor.** 2010. "Does terrorism work?" *Quarterly Journal of Economics*, 125(4).
- Halberstam, Yosh, and Brian Knight.** 2016. "Homophily, group size, and the diffusion of political information in social networks: Evidence from Twitter." *Journal of Public Economics*, 143: 73–88.
- Indridason, Indridi H.** 2008. "Does terrorism influence domestic politics? Coalition formation and terrorist incidents." *Journal of Peace Research*, 45(2): 241–259.
- Jensen, Jacob, Suresh Naidu, Ethan Kaplan, and Laurence Wilse-Samson.** 2012. "Political polarization and the dynamics of political language: Evidence from 130 years of partisan speech." *Brookings Papers on Economic Activity*, 1–81.
- Jones, Daniel B, and Randall Walsh.** 2016. "How do voters matter? Evidence from US congressional redistricting." *NBER Working Paper*.

- Kibris, Arzu.** 2011. "Funerals and elections: The effects of terrorism on voting behavior in Turkey." *The Journal of Conflict Resolution*, 220–247.
- Lee, David S, Enrico Moretti, and Matthew J Butler.** 2004. "Do voters affect or elect policies? Evidence from the US House." *Quarterly Journal of Economics*, 807–859.
- Levitt, Steven D.** 1996. "How do senators vote? Disentangling the role of voter preferences, party affiliation, and senator ideology." *American Economic Review*, 425–441.
- List, John A, and Daniel M Sturm.** 2006. "How elections matter: Theory and evidence from environmental policy." *Quarterly Journal of Economics*, 121(4): 1249–1281.
- Martínez, Luis R.** 2017. "Transnational insurgents: Evidence from Colombia's FARC at the border with Chávez's Venezuela." *Journal of Development Economics*, 126: 138–153.
- Merolla, Jennifer L, and Elizabeth J Zechmeister.** 2009. *Democracy at risk: How terrorist threats affect the public*. University of Chicago Press.
- Merolla, Jennifer L, and Elizabeth J Zechmeister.** 2013. "Evaluating political leaders in times of terror and economic threat: The conditioning influence of politician partisanship." *The Journal of Politics*, 75(03): 599–612.
- Mian, Atif, Amir Sufi, and Francesco Trebbi.** 2014. "Resolving debt overhang: political constraints in the aftermath of financial crises." *American Economic Journal: Macroeconomics*, 6(2): 1–28.
- Oneal, John R, and Anna Lillian Bryan.** 1995. "The rally 'round the flag effect in US foreign policy crises, 1950–1985." *Political Behavior*, 17(4): 379–401.
- Oquist, Paul.** 1980. *Violence, conflict, and politics in Colombia*. Academic Press.
- Osborne, Martin J.** 1995. "Spatial models of political competition under plurality rule: A survey of some explanations of the number of candidates and the positions they take." *Canadian Journal of Economics*, 261–301.
- Osborne, Martin J, and Al Slivinski.** 1996. "A model of political competition with citizen-candidates." *Quarterly Journal of Economics*, 65–96.
- Robinson, James A.** 2015. "La miseria en Colombia." *Desarrollo y Sociedad*, , (76): 9–90.
- Rubin, Donald B.** 1974. "Estimating causal effects of treatments in randomized and nonrandomized studies." *Journal of educational Psychology*, 66(5): 688.

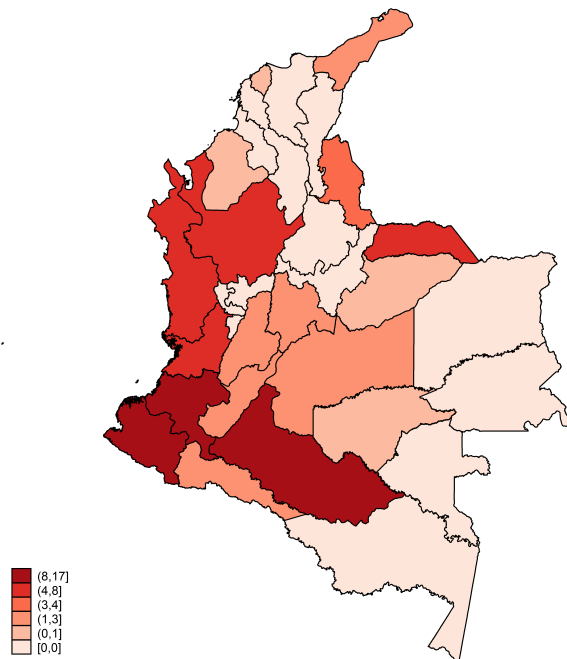
- Shayo, Moses, and Asaf Zussman.** 2011. "Judicial ingroup bias in the shadow of terrorism." *Quarterly Journal of Economics*, 126(3): 1447–1484.
- Spencer, David.** 2011. "The evolution and implementation of FARC strategy: Insights from its internal documents." *Security and Defense Studies Review*, 12: 73–99.
- START.** 2015. "National Consortium for the Study of Terrorism and Responses to Terrorism (START). Global Terrorism Database [Data file]." <http://www.start.umd.edu/>.
- Taylor, Steven L.** 2008. *Voting amid violence: electoral democracy in Colombia*. Lebanon, NH, Northeastern University Press.
- Trebbi, Francesco, and Eric Weese.** 2016. "Insurgency and small wars: Estimation of unobserved coalition structures." *Working Paper*.
- Voors, Maarten J, Eleonora EM Nillesen, Philip Verwimp, Erwin H Bulte, Robert Lensink, and Daan P Van Soest.** 2012. "Violent conflict and behavior: a field experiment in Burundi." *American Economic Review*, 102(2): 941–964.
- Washington, Ebonya L.** 2008. "Female socialization: How daughters affect their legislator fathers' voting on women's issues." *American Economic Review*, 311–332.
- Weintraub, Michael, Juan F Vargas, and Thomas E Flores.** 2015. "Vote choice and legacies of violence: Evidence from the 2014 Colombian presidential elections." *Research & Politics*, 2(2).
- Willer, Robb.** 2004. "The effects of government-issued terror warnings on presidential approval ratings." *Current research in social psychology*, 10(1): 1–12.
- Wright, Austin L.** 2016. "Economic shocks and rebel tactics." *HiCN Working Paper* 232.
- Zambrano, Andrés, and Hernando Zuleta.** 2017. "Goal and Strategies of an Insurgent Group: Violent and Non-violent Actions." *Peace Economics, Peace Science and Public Policy*, 23(2).

Figure 1: Attacks by FARC across time by number of fatalities



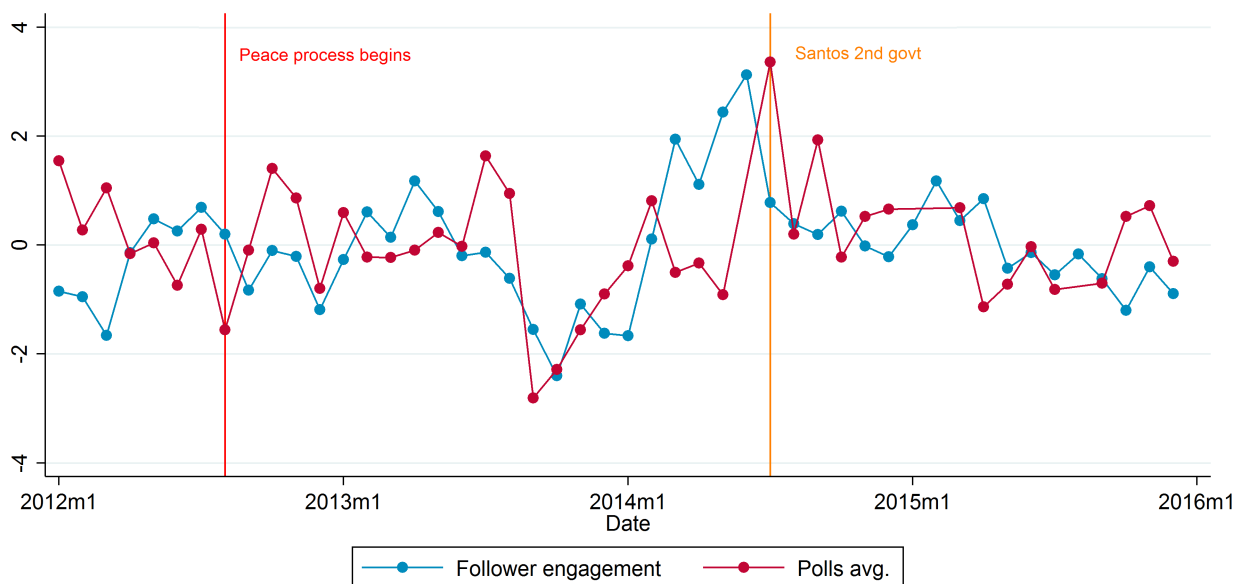
Notes: The figure shows all events classified as attacks by FARC between 2006 and 2015 by the Global Terrorism Database (START, 2015). The y-axis shows the number of fatalities of a particular event, and the x-axis shows the date of the event. The vertical lines indicate the start of the second Uribe government, the first Santos government, the official start of the peace process with FARC, and the start of the second Santos government, respectively.

Figure 2: Attacks by FARC with at least three fatalities across departments



Notes: The map shows all attacks by FARC with at least three fatalities between 2006 and 2015 across Colombian departments, using data from the Global Terrorism Database (START, 2015).

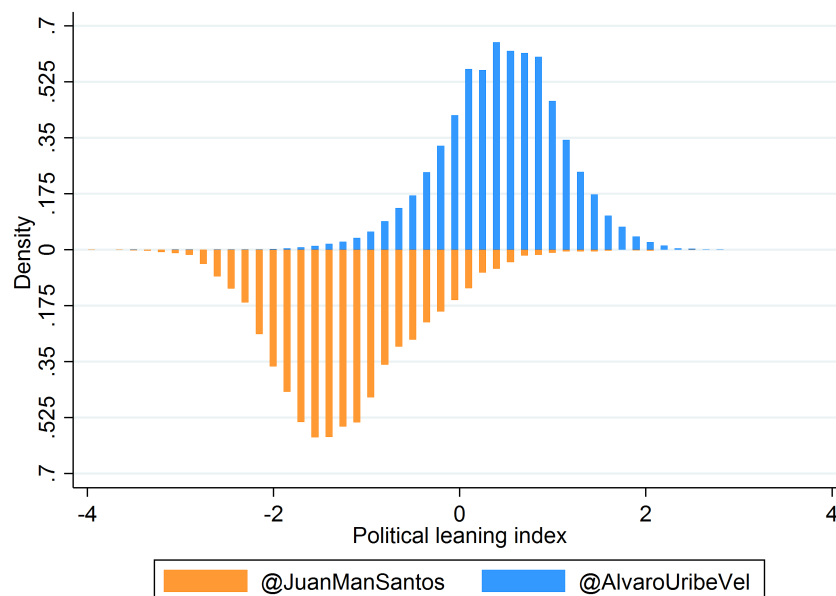
Figure 3: Tweet engagement and approval rating for @JuanManSantos across time



Notes: The plot shows a time-series graph of tweet engagement and the average approval rating of Juan Manuel Santos across four polls, after de-trending (using a square time trend) and standardizing. The vertical lines indicate the official start of the peace process with FARC, and the start of the second Santos government.

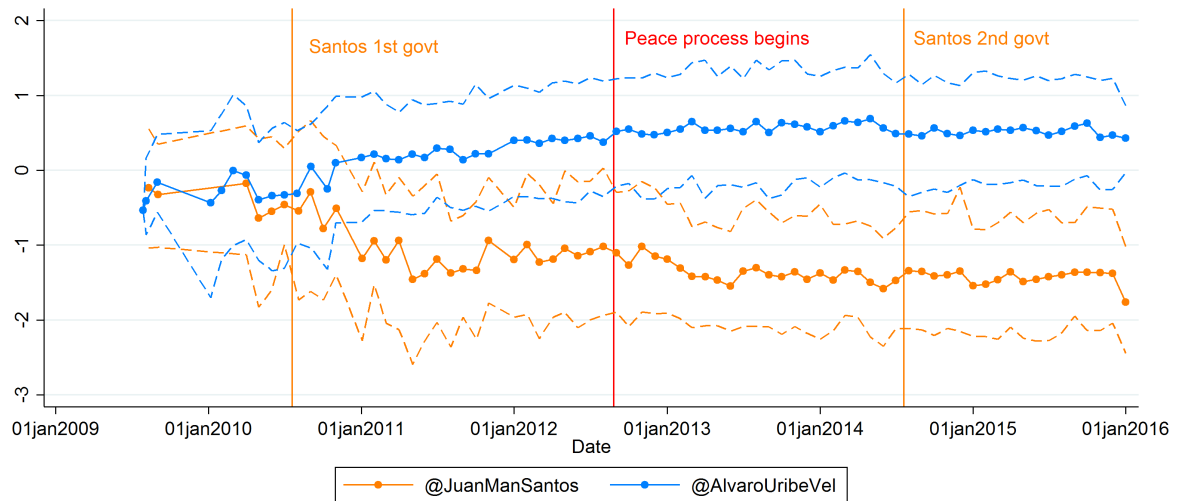
Polls source: <http://colombiareports.com/santos-approval-rating-at-44-says-colombias-most-optimistic-pollster/>

Figure 4: Distribution of the political language index of leaders



Notes: The histogram shows the distribution of tweets by political language for each of the two main leaders in the period of study.

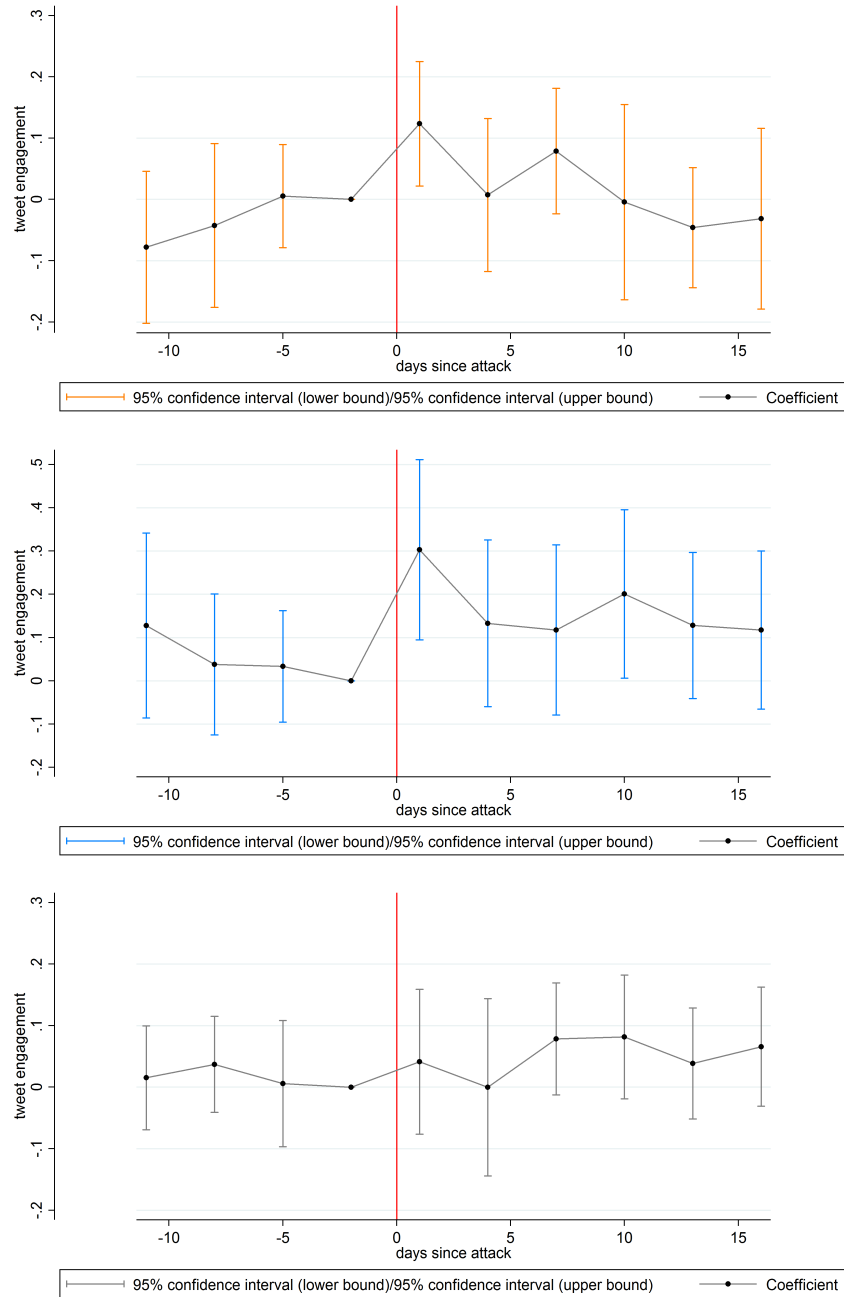
Figure 5: Political language index of leaders across time



Notes: The graph shows the monthly average political language index for each leader across time, as well as the 90th and 10th percentile value for each month. The vertical lines indicate the start of the first Santos government, the official start of the peace process with FARC, and the start of the second Santos government, respectively.

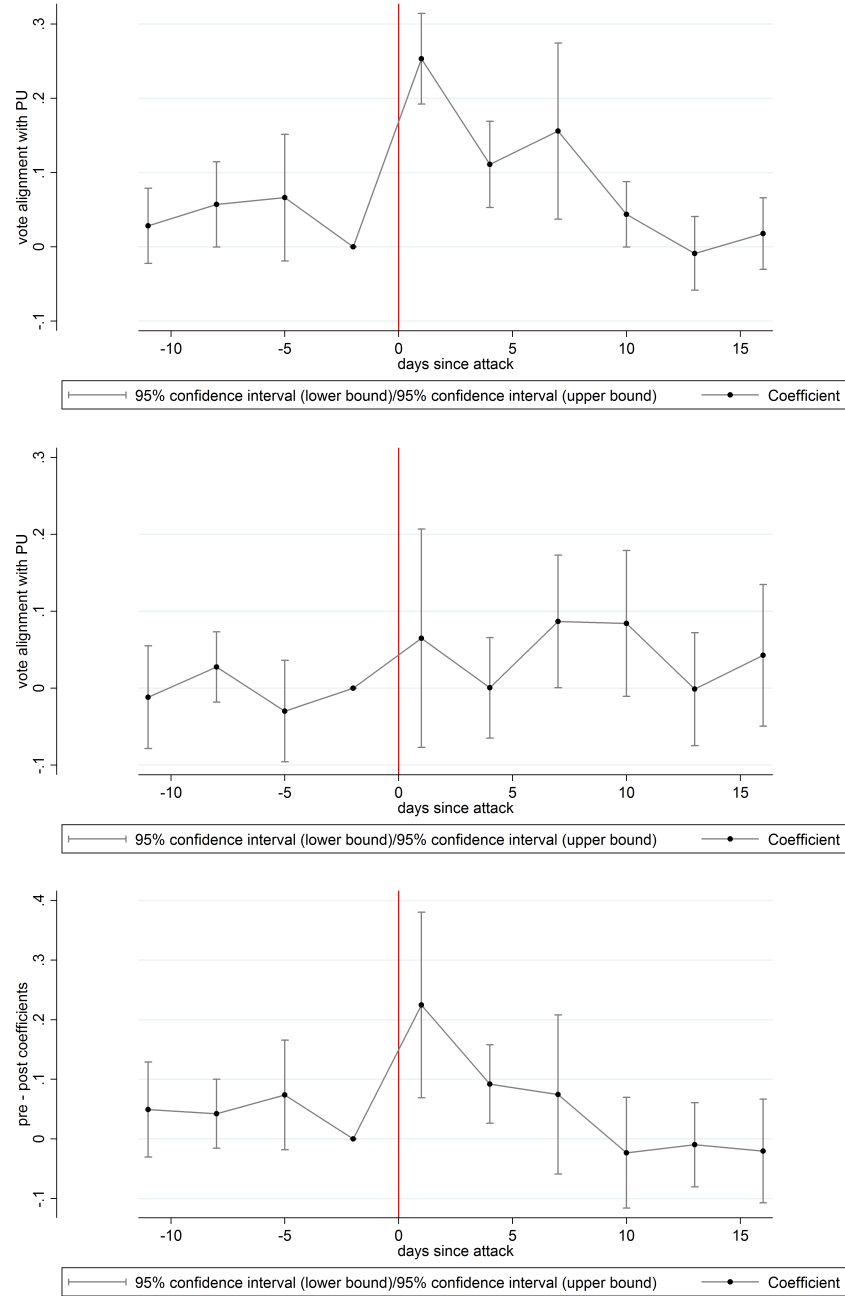


Figure 6: Event study: Effect of FARC attacks on tweet engagement



Notes: The figure illustrates the resulting coefficients from the event study design specification for tweets from the incumbent party (top), the 10 percent most right-leaning tweets (middle) and all other tweets (bottom). The regression includes politician fixed effects, a function of time as outlined in section 4, and tweet political leaning as a control. Coefficients are estimated in three-day bins. Events include all FARC attacks with at least three casualties, and the sample is restricted to tweets which occur only within the event window of at most one attack. Standard errors are two-way clustered at the politician and week level.

Figure 7: Event study: Effect of FARC attacks on vote alignment with the ruling party



Notes: The figure illustrates the resulting coefficients from the event study design specification for the pre-peace process period (top) and the post-peace process period (middle). The regression includes politician fixed effects and a function of time as outlined in section 5. Coefficients are estimated in three-day bins. Events include all FARC attacks with at least three casualties, and the sample is restricted to votes which occur only within the event window of at most one attack. The bottom figure shows the difference between the post-peace process and pre-peace process coefficients, computed by running a pooled regression and interacting the three-day bins with a post-peace process dummy. Standard errors are two-way clustered at the politician and week level, 95% confidence intervals shown.

Table 1: Congressional-vote characteristics

	$cons$	$se_{cons}$	$\beta_{preAttack}$	$se_{preAttack}$	$\beta_{postAttack}$	$se_{preAttack}$	p-value ( $\beta_{preAttack} - \beta_{postAttack}$ )
<i>Vote group/committee</i>							
Vote in Senate	0.2307	(0.0230)	-0.0069	(0.0446)	-0.0906	(0.0426)	0.189
Vote in Chamber of Reps	0.2765	(0.0206)	0.0051	(0.0468)	0.0095	(0.0560)	0.954
Primera de Senado	0.0927	(0.0136)	0.0835	(0.0523)	0.0262	(0.0313)	0.380
Segunda de Senado	0.0418	(0.0063)	-0.0170	(0.0111)	-0.0022	(0.0124)	0.394
Tercera de Senado	0.0211	(0.0036)	-0.0087	(0.0070)	0.0097	(0.0128)	0.255
Cuarta de Senado	0.0158	(0.0043)	-0.0124	(0.0038)	-0.0119	(0.0041)	0.817
Quinta de Senado	0.0279	(0.0073)	-0.0232	(0.0077)	0.0061	(0.0132)	0.054*
Sexta de Senado	0.0374	(0.0068)	-0.0070	(0.0119)	0.0066	(0.0195)	0.548
Séptima de Senado	0.0348	(0.0149)	-0.0117	(0.0183)	0.0149	(0.0327)	0.493
Primera de Cámara	0.1136	(0.0142)	0.0560	(0.0525)	-0.0297	(0.0284)	0.195
Segunda de Cámara	0.0430	(0.0065)	-0.0270	(0.0093)	0.0039	(0.0153)	0.107
Tercera de Cámara	0.0354	(0.0053)	-0.0007	(0.0131)	-0.0065	(0.0142)	0.786
Cuarta de Cámara	0.0211	(0.0041)	-0.0215	(0.0050)	0.0059	(0.0174)	0.184
Quinta de Cámara	0.0241	(0.0068)	0.0082	(0.0207)	0.0173	(0.0219)	0.782
Sexta de Cámara	0.0348	(0.0072)	-0.0025	(0.0226)	0.0243	(0.0236)	0.467
Séptima de Cámara	0.0416	(0.0092)	-0.0145	(0.0156)	0.0104	(0.0295)	0.500
<i>Vote statistics</i>							
Number of Votes	44.5853	(2.3146)	0.0706	(4.2694)	-7.0187	(3.8431)	0.190
Number of Abstentions	27.2763	(1.6806)	-1.3528	(2.9459)	-4.8212	(2.9862)	0.399
Percent of Abstentions	0.3218	(0.0064)	-0.0030	(0.0131)	-0.0172	(0.0152)	0.505
<i>Vote type</i>							
Votación Proyecto de Ley	0.4072	(0.0260)	-0.0799	(0.0352)	0.0311	(0.0502)	0.061*
Votación Acto Legislativo	0.0778	(0.0126)	0.0692	(0.0429)	-0.0328	(0.0218)	0.036**
Votación Proposiciones	0.2008	(0.0195)	-0.0227	(0.0334)	-0.0550	(0.0285)	0.417
Votación Impedimentos	0.1384	(0.0160)	0.0679	(0.0394)	0.0554	(0.0516)	0.852
Votación Orden del Día	0.0559	(0.0073)	-0.0249	(0.0107)	-0.0180	(0.0110)	0.633
Votación Otros Asuntos	0.0269	(0.0049)	-0.0127	(0.0054)	-0.0076	(0.0063)	0.421
Votación Sesión Permanente	0.0121	(0.0034)	-0.0044	(0.0052)	-0.0034	(0.0045)	0.877
<i>Vote keywords</i>							
Keyword Militar	0.0286	(0.0127)	0.0370	(0.0459)	-0.0136	(0.0168)	0.357
Keyword Salud	0.0573	(0.0203)	-0.0499	(0.0197)	0.0021	(0.0362)	0.186
Keyword Paz	0.0127	(0.0041)	0.0018	(0.0075)	-0.0057	(0.0055)	0.276
Keyword TLC	0.0036	(0.0012)	0.0093	(0.0088)	0.0211	(0.0167)	0.590
Keyword Justicia	0.0422	(0.0115)	0.0583	(0.0451)	-0.0106	(0.0210)	0.173
Keyword Víctimas	0.0100	(0.0052)	0.0011	(0.0090)	0.0130	(0.0178)	0.576
Keyword Infraestructura	0.0080	(0.0037)	-0.0028	(0.0045)	-0.0039	(0.0042)	0.831
Keyword Tributaria	0.0424	(0.0269)	-0.0298	(0.0226)	-0.0372	(0.0232)	0.279
Keyword Empleo	0.0057	(0.0043)	-0.0051	(0.0036)	-0.0036	(0.0038)	0.278
Keyword Educación	0.0051	(0.0018)	0.0074	(0.0082)	0.0052	(0.0062)	0.849
Keyword Terrorista	0.0040	(0.0019)	-0.0034	(0.0016)	-0.0034	(0.0016)	0.838
Keyword Social	0.0075	(0.0032)	-0.0022	(0.0035)	0.0064	(0.0066)	0.245
Keyword Corrupción	0.0102	(0.0033)	0.0063	(0.0109)	-0.0021	(0.0093)	0.604
Keyword Transporte	0.0047	(0.0016)	0.0021	(0.0042)	0.0016	(0.0037)	0.947
Keyword Televisión	0.0080	(0.0039)	-0.0034	(0.0046)	-0.0074	(0.0034)	0.307
Keyword Servicios	0.0065	(0.0017)	0.0039	(0.0043)	-0.0041	(0.0023)	0.116
Keyword Equilibrio	0.0640	(0.0197)	-0.0116	(0.0334)	-0.0332	(0.0270)	0.616
Keyword Penitenciario	0.0031	(0.0016)	0.0072	(0.0075)	0.0000	(0.0037)	0.388
<i>Vote proposer (by party)</i>							
Partido Liberal	0.0740	(0.0070)	0.0250	(0.0201)	0.0043	(0.0189)	0.495
Partido Cambio Radical	0.0313	(0.0047)	-0.0025	(0.0085)	0.0187	(0.0177)	0.335
Partido Conservador	0.0689	(0.0075)	-0.0092	(0.0109)	-0.0024	(0.0132)	0.694
Partido de la U	0.0828	(0.0071)	-0.0031	(0.0200)	0.0645	(0.0392)	0.164
Polo Democrático Alternativo	0.0406	(0.0048)	0.0178	(0.0198)	-0.0131	(0.0092)	0.199
Centro Democrático	0.0244	(0.0056)	0.0052	(0.0099)	0.0004	(0.0100)	0.742
No proposer	0.6783	(0.0211)	-0.0331	(0.0424)	-0.0781	(0.0575)	0.552

Notes: The table shows the conditional correlations of vote characteristics and timing of events. Each row corresponds to a regression of vote characteristic as an outcome, on week-before and week-after dummy variables (columns 3 and 5). N=11,666 for all regressions except *Vote statistics*, see Table 1.

Table 2: Effect of FARC attacks on tweet engagement

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-attack, 3+ caslts.	0.0480 (0.0429)	0.0731* (0.0371)	0.210*** (0.0661)	0.263*** (0.0578)				
Post-attack in HD, 3+ caslts.					0.0628 (0.0856)	-0.0499 (0.0937)	0.201 (0.214)	0.0276 (0.260)
N	299542	55218	30694	3184	277108	53408	29814	2861
N. politicians	300	65	261	57	277	61	239	49
PU tweets	no	yes	no	yes	no	yes	no	yes
Top 10% right-leaning	no	no	yes	yes	no	no	yes	yes
Politician FE	yes	yes	yes	yes	yes	yes	yes	yes
Time function	yes	yes	yes	yes	no	no	no	no
Day FE	no	no	no	no	yes	yes	yes	yes

Notes: Columns (1) and (5) include all tweets. Columns (2) and (6) use only tweets by the incumbent party. Columns (3) and (7) use only tweets in the top 10 percentile of the political leaning index (most "right-wing" tweets). Columns (4) and (8) use only tweets by the incumbent party which are in the top ten percentile of the political leaning index. Two-way clustered standard errors at the politician and week level in parentheses for time-series analysis (columns 1-4). Standard errors clustered at the politician level for the diff-in-diff analysis (columns 5-8). Significance levels \*p<0.10, \*\* p<0.05, \*\*\*p<0.01.

Table 3: Effect of FARC attacks on vote alignment with ruling party, diff-in-diff, one week after the attack

	(1) pre-PP	(2) pre-PP	(3) pre-PP	(4) pre-PP	(5) post-PP	(6) post-PP	(7) post-PP	(8) post-PP
Post-attack in HD, 3+ caslts.	0.0998*** (0.0320)	0.117*** (0.0262)	0.0693*** (0.0268)	0.0661** (0.0257)	-0.0469* (0.0272)	-0.0549** (0.0252)	-0.0430* (0.0238)	-0.0423* (0.0250)
N	432414	432167	432167	405235	348662	348662	348662	334963
N. politicians	517	516	516	503	421	421	421	416
Post dummy	yes	yes	no	no	yes	yes	no	no
Politician FE	no	yes	yes	yes	no	yes	yes	yes
Day FE	no	no	yes	yes	no	no	yes	yes
Attack window dummy	no	yes	yes	yes	no	yes	yes	yes
Exclude overlap	no	yes	yes	yes	no	yes	yes	yes
Time function	no	yes	no	no	no	yes	no	no
Party trends	no	yes	yes	yes	no	yes	yes	yes
Vote controls	no	no	no	yes	no	no	no	yes

Notes: Estimates from diff-in-diff specification where the dependent variable is alignment with the ruling party. Columns 1-4 show regressions for the pre-peace process period, and columns 5-8 for the post-peace process period. Columns 1 and 5 include no controls or fixed effects. Columns 2 and 6 use the time-series specification. Columns 3 and 7 include politician fixed effects, day fixed effects and party specific linear trends. Columns 4 and 8 include congressional vote level controls including dummies for the type of vote (policy vs. procedural), keywords (conflict or non-conflict related votes), whether the vote was proposed by a PU member or by a member of the politician's own party, and the average alignment for other members of the party. Clustered standard errors at the politician level in parentheses.

Table 4: Effect of FARC attacks on vote value, by ruling party position, time-series

Panel A: Pre-peace process						
	(1) reject	(2) abstain	(3) approve	(4) reject	(5) abstain	(6) approve
Post-attack, 3+ caslts.	0.00419 (0.00882)	-0.0501** (0.0248)	0.0459* (0.0255)	0.0382 (0.0421)	-0.0203 (0.0287)	-0.0179 (0.0303)
N	284625	284625	284625	89242	89242	89242
N. politicians	513	513	513	511	511	511
Panel B: Post-peace process						
Post-attack, 3+ caslts.	0.0272** (0.0117)	0.0125 (0.0248)	-0.0397 (0.0249)	0.0512* (0.0305)	0.00287 (0.0283)	-0.0541** (0.0216)
N	165480	165480	165480	135984	135984	135984
N. politicians	421	421	421	418	418	418
Politician FE	yes	yes	yes	yes	yes	yes
Day FE	no	no	no	no	no	no
Attack window dummy	yes	yes	yes	yes	yes	yes
Exclude overlap	yes	yes	yes	yes	yes	yes
Time function	yes	yes	yes	yes	yes	yes
Party trends	yes	yes	yes	yes	yes	yes
avg. PU vote	appr (>0)	appr (>0)	appr (>0)	rejt (<=0)	rejt (<=0)	rejt (<=0)

Notes: Estimates using the main time-series specification (politician fixed effects, time function, party linear trends) where the dependent variables are indicator variables for whether politicians reject, abstain from, or approve a congressional vote. Columns 1-3 include only votes which the ruling party voted to approve and columns 4-6 includes only votes which the ruling party rejected. Two-way clustered standard errors at the politician and week level in parentheses. Significance levels shown below \*p<0.10, \*\* p<0.05, \*\*\*p<0.01.

Table 5: Effect of FARC attacks on vote value, by ruling party position, diff-in-diff

Panel A: Pre-peace process						
	(1) reject	(2) abstain	(3) approve	(4) reject	(5) abstain	(6) approve
Post-attack in HD, 3+ caslts.	-0.00531 (0.0107)	-0.0843** (0.0363)	0.0896** (0.0353)	0.0577 (0.0455)	-0.0804 (0.0491)	0.0227 (0.0297)
N	328247	328247	328247	104026	104026	104026
N. politicians	516	516	516	515	515	515
Panel B: Post-peace process						
Post-attack in HD, 3+ caslts.	0.0170 (0.0190)	0.0693** (0.0276)	-0.0863*** (0.0304)	0.00274 (0.0521)	0.0344 (0.0475)	-0.0372 (0.0262)
N	195249	195249	195249	153427	153427	153427
N. politicians	420	420	420	420	420	420
Politician FE	yes	yes	yes	yes	yes	yes
Day FE	yes	yes	yes	yes	yes	yes
Attack window dummy	yes	yes	yes	yes	yes	yes
Exclude overlap	yes	yes	yes	yes	yes	yes
Time function	no	no	no	no	no	no
Party trends	yes	yes	yes	yes	yes	yes
avg. PU vote	appr (>0)	appr (>0)	appr (>0)	rejt (<=0)	rejt (<=0)	rejt (<=0)

Notes: Estimates using the main diff-in-diff specification (politician and day fixed effects, party linear trends) where the dependent variables are indicator variables for whether politicians reject, abstain from, or approve a congressional vote. Columns 1-3 include only votes which the ruling party voted to approve and columns 4-6 includes only votes which the ruling party rejected. Clustered standard errors at the politician level in parentheses. Significance levels shown below \*p<0.10, \*\* p<0.05, \*\*\*p<0.01.

Table 6: Effect of FARC attacks on vote alignment with ruling party close to legislative elections, one week after the attack

	(1) 2010 elec	(2) 2010 elec	(3) 2010 elec	(4) 2010 elec	(5) 2014 elec	(6) 2014 elec	(7) 2014 elec	(8) 2014 elec
Post-attack, 3+ caslts.	0.158*** (0.0107)		0.103 (0.155)		-0.00734 (0.0251)		0.0931*** (0.0238)	
Post-attack in HD, 3+ caslts.		0.0638** (0.0253)		-0.0365 (0.0796)		-0.234*** (0.0497)		0.0186 (0.0346)
N	43813	43784	24326	35592	17514	17514	7701	7701
N. politicians	281	281	291	291	263	263	261	261
N. Events	12	12	15	15	2	2	1	1
Politician FE	yes	yes	yes	yes	yes	yes	yes	yes
Day FE	no	yes	no	yes	no	yes	no	yes
Attack window dummy	yes	yes	yes	yes	yes	yes	yes	yes
Exclude overlap	yes	yes	yes	yes	yes	yes	yes	yes
Time function	yes	no	yes	no	yes	no	yes	no
Party trends	yes	yes	yes	yes	yes	yes	yes	yes
Vote controls	no	no	no	no	no	no	no	no
pre/post elections	pre	pre	post	post	pre	pre	post	post

Notes: Estimates from diff-in-diff specification where the dependent variable is alignment with the ruling party. Columns 1-4 show regressions for the pre-peace process period, and columns 5-8 for the post-peace process period. Columns 1 and 5 include no controls or fixed effects. Columns 2 and 6 use the time-series specification. Columns 3 and 7 include politician fixed effects, day fixed effects and party specific linear trends. Columns 4 and 8 include congressional vote level controls including dummies for the type of vote (policy vs. procedural), keywords (conflict or non-conflict related votes), whether the vote was proposed by a PU member or by a member of the politician's own party, and the average alignment for other members of the party. Two-way clustered standard errors at the politician and week level in parentheses. Significance levels shown below \* $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\* $p < 0.01$ .

Table 7: Policy implications

	Post-attack (0-11 days)	Not post-attack
Number of congressional votes	1778	5237
Votes against PU, attack/treated outcome	31	102
Potentially affected votes	40	
Potentially vulnerable votes		63
Votes against PU, no-attack/untreated outcome	71	165
Share votes against PU, attack/treated outcome	1.744%	1.948%
Share votes against PU, no-attack/untreated outcome	3.993%	3.151%

Notes: The table summarizes the results of the counterfactual exercise which studies the policy implications of the effects in terms of congressional vote outcomes for the pre-peace process period. Numbers in *italics* are unobserved and estimated in the counterfactual analysis. See section 6 for details.

## 8 For Online Publication

### Data appendix

#### Congressional votes and party alignment

In Table A9, I regress *voteValue* (-1 if reject, 0 if abstain, 1 if approve) on a set of dummy variables which indicate the party of the politician who proposed the congressional vote, as an additional descriptive statistic for these data.<sup>61</sup> I run this analysis separately for each party. Unsurprisingly, politicians are much more likely to vote in favour of proposals by members of their own party (see the highlighted coefficients diagonally). Proposals by the more extreme parties (Polo Democrático to the left, and Centro Democrático to the right) tend to be less favoured by other politicians. Also, proposals which are associated with a certain author (or party) are much less favoured than proposals with no proposer attached to them.

#### Twitter data and the political language index

I collect tweets for 305 politicians in the Congreso Visible database which have a linked Twitter account, through the Twitter API, with the limitation that only the last 3,200 tweets can be accessed for each politician. However, this limit is binding for only around 5% of politicians. The tweet collection process was executed twice, first in July of 2015, and again in January of 2016. In addition, an extended tweet collection process which involved scraping the Twitter mobile site was employed to collect older tweets from the two main political leaders, Juan Manuel Santos (@JuanManSantos) and Álvaro Uribe (@AlvaroUribeVel). The final dataset I use for the analysis contains around 365,000 tweets (shown across time in A5).

Figure A6 maps connections on Twitter between politicians in a network graph. Some features of the network are worth noting. First, it appears as though politicians from right-leaning parties (Centro Democrático and Conservador) and those from left-leaning parties (Partido de la U, Liberal, and most other) tend to cluster together (consistent with evidence in Barberá, 2015; Halberstam and Knight, 2016). Second, politicians from the ruling party (PU), appear closer to the center of the graph. Finally, both @JuanManSantos and @AlvaroUribeVel, highlighted as larger nodes, take central positions in the network. I use the tweets of these two leaders to measure political language.

I measure the political leaning of these tweets through text analysis. For each tweet, I create a vector  $X_i$  of dummy variables such that  $x_{ij}$  is equal to one if tweet  $i$  contains word or phrase  $j$ , zero otherwise. To

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<sup>61</sup>I extract information on the identity of the politician who proposed the vote from its description. The description of the congressional vote looks something like this: "Votación Proposiciones: Aprobación de proposición aditiva presentada por el Representante *Simón Gaviria* al artículo 1 del Proyecto Acto Legislativo número 169 de ...". I match the name of the proposer to the names in the list of politicians (and their party). Doing this I am able to match 3,408 out of the 11,666 votes in the data to their proposer (or proposers).

reduce the dimension of the vector, I use only the most frequently used 1,000 words by each of the leaders (after removing common stopwords), and the most used 500 two-word phrases. I use tweets by @Juan-ManSantos, the incumbent president, and @AlvaroUribeVel, the ex-president and leader of the opposition, after the start of the peace process (once Santos's political stance regarding FARC is stable), and estimate the following regression equation:

$$aUribe_i = \alpha + \beta X_i + \varepsilon_i$$

where  $aUribe_i$  is an indicator variable equal to one if tweet  $i$  was written by Uribe. This estimation results in  $\hat{\beta}$ , a vector of coefficients of dimension  $J$ . Note that if word  $j$  is more frequently used by Uribe relative to Santos, the estimated  $\hat{\beta}_j$  coefficient will be positive, and vice versa. I then define the political leaning index for *each* tweet in the database as:

$$polLanguage_i = \hat{\alpha} + \hat{\beta} X_i$$

such that if tweet  $i$  uses language similar to Uribe's,  $polLanguage_i$  will tend to be positive, and if tweet  $i$  uses language similar to Santos', it will be negative. The index is standardized to have mean zero and standard deviation one. A clear separation exists between the language used by the two leaders which is apparent in both the cross-section (figure 4) and the time-series (figure 5) plots previously discussed.

In order to further evaluate the validity of this measure, I define the political language index of each politician,  $polLanguage_p$ , by taking the average political language over all of his or her tweets. The distribution of the politicians' language by party is shown in Figure A8 (excluding Santos and Uribe).<sup>62</sup> The figure shows that, out of all the parties, politicians in the Centro Democrático use language which is closest to that of Uribe, as expected. Finally, figure A7 shows the correlation between  $polLanguage_p$  and the average vote alignment of politicians with the PU after the peace process starts (ie. the main dependent variable averaged at the politician level). There is a statistically significant negative correlation between the two variables. In particular, a one standard deviation increase in the political language index (closer to Uribe) is associated with a 4.2 percentage point decrease in alignment with the Santos' ruling party. As a robustness check, I also employ a more sophisticated text classification procedure using machine learning methods, discussed below.

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<sup>62</sup> Alternatively, one could show the distribution across all tweets. The approach I take weights each politician equally, regardless of their tweeting intensity.



## Additional empirical exercises

### Estimating the two effects

In this section I estimate the magnitudes of the right-wing and the *rally 'round the flag* effects. This exercise is based on the observations from the conceptual framework that i) the estimated coefficient for the pre-peace process period represents the addition of the *rally* and the right-wing effects (because the incumbent policy position is right-wing), and that ii) the estimated coefficient for the post-peace process period represents the subtraction of the right-wing effect from the *rally* effect (because the incumbent policy position is left-wing). Given these observations, and under the assumption that the effects are homogeneous across the two periods,<sup>63</sup> the magnitude of the two effects can be easily estimated using the coefficients from the previous section.<sup>64</sup> Figure A9 shows the results. Both of the effects are positive, but the estimates suggest that the *rally* effect is stronger and lasts longer (12 days) than the right-wing effect (6 days).

### Disentangling the dependent variable

The dependent variable *voteWithPU* summarizes vote alignment by comparing the politicians' votes with those of the ruling party. Tables A10 and A11 break apart the main regressions across the different components of the *voteWithPU* variable. Columns 1-3 include only votes which the ruling party voted to approve, that is, the average *voteValue* for members of the PU is positive, and columns 4-6 includes only votes which the ruling party rejected, or the average *voteValue* was less than or equal to zero (recall *voteValue* is equal to 1, 0 or -1 if politicians approve, abstain, or reject, respectively). The dependent variables in this analysis are indicator variables for whether politicians rejected (columns 1 and 4), abstained (columns 2 and 5) or approved (columns 3 and 6) a congressional vote.

Note that the time-series results rely on changes of both *voteValue*, how politicians vote individually, and *voteWithPU*, how incumbent politicians vote as a group. Thus, the effect may be partly driven by *co-movements* in voting for all politicians, and not necessarily a deliberate individual decision to support (or not) the ruling party. By splitting the sample by incumbent party position, the analysis limits the extent to which these *co-movements* drive the estimated effects. The extended analysis asks, given only votes which the incumbent party approved (or rejected) - as well as politician fixed effects, party-specific time trends and a function of time - is there a change in individual behaviour (approve, abstain or reject)?

The analysis for the time-series specification (table A10) suggests that the overall effect weakens when

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<sup>63</sup>Note that to the extent that the *rally* effect itself may depend on the policy-position of the incumbent, then this assumption is likely to be too strong. Depending on the nature of the heterogeneity, one of the effects will be larger than estimated, while the other effect will be smaller than estimated.

<sup>64</sup>By solving the two unknowns (*rally*, *rightwing*) in the two equations: i)  $precoefficient = rally + rightwing$  and ii)  $postcoefficient = rally - rightwing$

the sample is split across incumbent government positions (approve or reject). Before the peace process, the positive effect is driven by politicians changing their votes from an abstention to an approval, on votes which the ruling party voted to approve. After the peace process starts, we see increased rejection of both votes which the incumbent party supported and not - leading to the overall null effect measured in the main results. The results suggest that attacks increase rejections overall, regardless of the position of the incumbent party on the vote.

The analysis for the difference-in-differences strategy (table A11) reveals two interesting patterns underlying these results. First, the effect on vote alignment is mostly concentrated on votes which the ruling party voted to approve, both in the pre and the post-peace process periods. Second, the effect comes from politicians changing their votes from an abstention to an approval, in the pre-peace process period, and from an approval to an abstention in the post-peace process period. After an attack in their home department, politicians are around 8 percentage points less likely to abstain from and 9 percentage points more likely to approve a vote which the PU supported, before the policy shift. Once the peace process starts, attacks have an opposite effect (around 9 percentage points less likely to approve, 7 percentage points more likely to abstain, and 2 percentage points more likely to reject). That is, the effect of attacks by the rebel group is reversed when the policy position of the ruling party shifts. The pattern suggests that it is politicians on the margin between an abstention and an approve vote who tend to react to the attacks.

## Additional robustness checks

### Removing potentially coordinated attacks

I examine the covariance structure of attacks across Colombian departments to evaluate the possibility that these actions may be centrally coordinated by FARC for strategic purposes, one of which may be to influence congressional decisions. This empirical exercise is based on the idea that we can infer features about insurgent group structures by evaluating whether attacks in two different locations, on the same days, occur with higher frequency than that expected by random chance (as in Trebbi and Weese, 2016).<sup>65</sup> I restrict the analysis to departments with at least 10 attacks by FARC between 2006 and 2015. The cross-department covariance matrix of FARC attacks for the period of study reveals four pairs of departments with higher than random frequency of same-day events (out of 136 possible pairs, Table A8). These correspond to attacks on 22 different days which may have been potentially coordinated by FARC.<sup>66</sup> I then remove observations within the event window of these identified event-days from the sample and re-run the main analysis. The

<sup>65</sup>I do not replicate the complete analysis in Trebbi and Weese (2016) but instead use the matrix to identify potentially coordinated events.

<sup>66</sup>In total, around five percent of all attacks occur on these days, providing additional evidence that FARC intelligence and actions are largely decentralized, as previously discussed.

results are nearly identical (figure A13).

## Text analysis

I use a linear regression based on the most used words of the two leaders (Santos and Uribe) to measure the political leaning of tweets. This methodology is simple and intuitive to most social scientists. In this section, results are presented from using an alternative and more sophisticated approach which uses machine learning methods to classify these tweets. In particular, I estimate a multinomial naive Bayes model, using the post-peace process tweets of the leaders as the training set. These tweets are categorized into right-leaning (Uribe) and left-leaning (Santos), tokenized (ie. a vector of word frequencies is created for each, similar to the base methodology), and then used by the classifier to "learn" what a right-leaning or a left-leaning tweet is (or more precisely, to estimate the parameters of the model). The classifier then fits the model to the rest of the data (all other tweets) to estimate a probability that these are right-leaning or left-leaning.<sup>67</sup>

The correlation between the political leaning estimated by the linear regression methodology and the multinomial naive Bayes probability is 0.62 at the tweet level. Note that the linear model political leaning index for tweets ranges from around -5 to 5. In contrast, the multinomial naive Bayes probability is by construction (and definition) bounded between 0 and 1. If the measures are averaged at the politician level, the correlation between the two indexes is 0.87. The tweet engagement event study using the alternative measure yields very similar results as those from using the base measure. The scatter plots for these two relationships and the alternative event study plot are all shown in figure A14.

## 8.1 Theoretical appendix

Recall the two main assumptions 1)  $\frac{\partial \omega_I}{\partial c} > 0$  (the *rally 'round the flag* effect) and 2)  $\frac{\partial x_{Vj}}{\partial c} > 0$  (the increased right-wing support effect). And recall the definition of the *distance* between the policy positions of the legislator and the incumbent government:

$$D_j^* = \left| \frac{\omega_V(x_I - x_{Vj})}{\omega_I + \omega_V} \right|$$

Depending on the relative position of the incumbent government  $x_I$  and the bliss point of voters at location  $x_{Vj}$ , let us define two cases to eliminate the absolute value operation:

if  $x_I > x_{Vj}$ , then

$$D_j^{*R} = \frac{\omega_V(x_I - x_{Vj})}{\omega_I + \omega_V}$$

---

<sup>67</sup>The process is implemented using the scikit-learn Python package, see [scikit-learn.org](https://scikit-learn.org) for more details.

otherwise, if  $x_I < x_{Vj}$ , then

$$D_j^{*L} = \frac{\omega_V(x_{Vj} - x_I)}{\omega_I + \omega_V}$$

now, with these two cases we can proceed to the proofs.

*Proposition 1: Right-wing incumbent.* Let  $x_I^R$  be a right-wing incumbent position, such that  $x_I^R > x_{Vj}(c_0)$ , then  $\partial D_j^{*R} / \partial c < 0$ .

*Proof 1:*

$$\begin{aligned} \frac{\partial D_j^{*R}}{\partial c} &= \frac{\partial D_j^{*R}}{\partial \omega_I} \cdot \frac{\partial \omega_I}{\partial c} + \frac{\partial D_j^{*R}}{\partial x_{Vj}} \cdot \frac{\partial x_{Vj}}{\partial c} \\ &= \underbrace{-\frac{\omega_V(x_I - x_{Vj})}{(\omega_I + \omega_V)^2} \cdot \frac{\partial \omega_I}{\partial c}}_{\text{rally effect}} - \underbrace{\frac{\omega_V}{(\omega_I + \omega_V)} \cdot \frac{\partial x_{Vj}}{\partial c}}_{\text{right-wing effect}} \end{aligned} \quad (6)$$

Given assumptions 1,  $\frac{\partial \omega_I}{\partial c} > 0$ , and 2,  $\frac{\partial x_{Vj}}{\partial c} > 0$  it follows that  $\partial D_j^{*R} / \partial c < 0$

■

Note that both the *rally* and the *right-wing* effects are negative in equation (1). That is, both of these effects *reduce* the distance between the incumbent position and the legislator position.

*Proposition 2: Left-wing incumbent.* If  $x_I^L < x_{Vj}(c_0)$ , then  $\partial D_j^{*L} / \partial c$  is ambiguous. However,  $\partial D_j^{*L} / \partial c > \partial D_j^{*R} / \partial c$  if  $|x_I^L - x_{Vj}(c_0)| \leq |x_I^R - x_{Vj}(c_0)|$ .

*Proof 2.1:*

The proof for the first part of the proposition is similar to that of proposition 1.

$$\begin{aligned} \frac{\partial D_j^{*L}}{\partial c} &= \frac{\partial D_j^{*L}}{\partial \omega_I} \cdot \frac{\partial \omega_I}{\partial c} + \frac{\partial D_j^{*L}}{\partial x_{Vj}} \cdot \frac{\partial x_{Vj}}{\partial c} \\ &= \underbrace{-\frac{\omega_V(x_{Vj} - x_I)}{(\omega_I + \omega_V)^2} \cdot \frac{\partial \omega_I}{\partial c}}_{\text{rally effect}} + \underbrace{\frac{\omega_V}{(\omega_I + \omega_V)} \cdot \frac{\partial x_{Vj}}{\partial c}}_{\text{right-wing effect}} \end{aligned} \quad (7)$$

Given assumptions 1,  $\frac{\partial \omega_I}{\partial c} > 0$ , and 2,  $\frac{\partial x_{Vj}}{\partial c} > 0$  it follows that the sign of  $\partial D_j^{*L} / \partial c$  is ambiguous.

*Proof 2.2:*

If it is the case that  $|x_I^L - x_{Vj}(c_0)| \leq |x_I^R - x_{Vj}(c_0)|$ , then we can use equations (1) and (2) to prove the second part of the proposition:

$$\begin{aligned}
& |x_I^L - x_{Vj}(c_0)| \leq |x_I^R - x_{Vj}(c_0)| \\
& x_{Vj} - x_I^L \leq x_I^R - x_{Vj} \\
& -\frac{\omega_V(x_{Vj} - x_I^L)}{(\omega_I + \omega_V)^2} \cdot \frac{\partial \omega_I}{\partial c} \geq -\frac{\omega_V(x_I^R - x_{Vj})}{(\omega_I + \omega_V)^2} \cdot \frac{\partial \omega_I}{\partial c} \\
& -\frac{\omega_V(x_{Vj} - x_I^L)}{(\omega_I + \omega_V)^2} \cdot \frac{\partial \omega_I}{\partial c} + \frac{\omega_V}{(\omega_I + \omega_V)} \cdot \frac{\partial x_{Vj}}{\partial c} > -\frac{\omega_V(x_I^R - x_{Vj})}{(\omega_I + \omega_V)^2} \cdot \frac{\partial \omega_I}{\partial c} - \frac{\omega_V}{(\omega_I + \omega_V)} \cdot \frac{\partial x_{Vj}}{\partial c} \\
& \partial D_j^{*L} / \partial c > \partial D_j^{*R} / \partial c
\end{aligned}$$

■

In fact, as observed from the second last step here, the assumption  $|x_I^L - x_{Vj}(c_0)| < |x_I^R - x_{Vj}(c_0)|$  is in fact too strong and could be relaxed further. However, the main point of the proposition is clear. For two "similarly extreme" incumbent governments, conflict will benefit the right-wing government more than the left-wing government - in terms of legislator convergence towards the incumbent's platform. The intuition is similarly straightforward. The *rally* effect will pull the legislator's position closer to the position of the incumbent for both governments, but while the right-wing effect will also pull the legislator's position closer to the right-wing incumbent's position, it will push the legislator's position further from that of the left-wing incumbent.

*Proposition 3: Localized effects.* If  $\frac{\partial x_{Vj}}{\partial c} > \frac{\partial x_{Vj}}{\partial c}$  and  $x_{Vj}(c_0) = x_{Vj}(c_0)$  then:

1. If  $x_I^R > x_{Vj}(c_0)$ ,  $\partial D_k^{*R} / \partial c < \partial D_j^{*R} / \partial c < 0$ , and
2. If  $x_I^L < x_{Vj}(c_0)$ ,  $\partial D_k^{*L} / \partial c > \partial D_j^{*L} / \partial c$ .

*Proof 3.1:*

The first part of the proof follows from the assumption and equation (1):

$$\begin{aligned}
& \frac{\partial x_{Vk}}{\partial c} > \frac{\partial x_{Vj}}{\partial c} \\
& -\frac{\omega_V}{(\omega_I + \omega_V)} \cdot \frac{\partial x_{Vk}}{\partial c} < -\frac{\omega_V}{(\omega_I + \omega_V)} \cdot \frac{\partial x_{Vj}}{\partial c} \\
& -\frac{\omega_V(x_I - x_{Vk})}{(\omega_I + \omega_V)^2} \cdot \frac{\partial \omega_I}{\partial c} - \frac{\omega_V}{(\omega_I + \omega_V)} \cdot \frac{\partial x_{Vk}}{\partial c} < -\frac{\omega_V(x_I - x_{Vj})}{(\omega_I + \omega_V)^2} \cdot \frac{\partial \omega_I}{\partial c} - \frac{\omega_V}{(\omega_I + \omega_V)} \cdot \frac{\partial x_{Vj}}{\partial c} \\
& \partial D_k^{*R} / \partial c < \partial D_j^{*R} / \partial c
\end{aligned}$$

The *rally* effect is the same size for both  $k$  and  $j$ , however, because legislator  $k$ 's voters respond more to conflict, the right-wing effect is larger, resulting in an overall larger reduction of the policy distance in this case. Note that both  $D_k^{*R} / \partial c < 0$  and  $\partial D_j^{*R} / \partial c < 0$  follow from proposition 1.

*Proof 3.2:*

The second part of the proof is analogous to 3.1, it follows from the assumption and equation (2):

$$\begin{aligned}
& \frac{\partial x_{Vk}}{\partial c} > \frac{\partial x_{Vj}}{\partial c} \\
& \frac{\omega_V}{(\omega_I + \omega_V)} \cdot \frac{\partial x_{Vk}}{\partial c} > \frac{\omega_V}{(\omega_I + \omega_V)} \cdot \frac{\partial x_{Vj}}{\partial c} \\
& -\frac{\omega_V(x_{Vk} - x_I)}{(\omega_I + \omega_V)^2} \cdot \frac{\partial \omega_I}{\partial c} + \frac{\omega_V}{(\omega_I + \omega_V)} \cdot \frac{\partial x_{Vk}}{\partial c} > -\frac{\omega_V(x_{Vj} - x_I)}{(\omega_I + \omega_V)^2} \cdot \frac{\partial \omega_I}{\partial c} + \frac{\omega_V}{(\omega_I + \omega_V)} \cdot \frac{\partial x_{Vj}}{\partial c} \\
& \partial D_k^{*L} / \partial c > \partial D_j^{*L} / \partial c
\end{aligned}$$

■

As in 3.1, the *rally* effect is the same size for both  $k$  and  $j$ , however, because legislator  $k$ 's voters respond more to conflict, the right-wing effect pushes  $k$  further from the left-wing incumbent, resulting in an overall larger policy distance in this case.

## 8.2 Discussion on the Colombian conflict

This section provides a speculative discussion regarding the particularities of the Colombian context viewed through the lens of the results I present. The following are some observations that may be drawn with the model and results in mind.

Violent attacks by the rebel group increased politicians' support in congress for the right-leaning, hard-line government while it was in power. His continued public support allowed the Uribe government to pursue a strong military campaign against the FARC and to effectively recover the monopoly of violence over many parts of Colombia, while reducing the rebels' military capabilities. Conflict with the rebel groups strengthened the mandate of Uribe: the constitution was reformed to allow re-election, a controversial demobilization process with paramilitary groups took place, and Santos was elected with his support.

Facing a weakened FARC, the Santos government begins peace negotiations with the group in 2012, yet negotiating without an effective ceasefire. In the post-peace process period, the relationship between rebel attacks and increased support in congress subsides. Though the government's policy shift resulted in it no longer benefitting from the increased right-wing support, *rally* effects seem to have persisted, allowing the incumbent government to pursue its new policy of achieving a peace settlement with the rebels. *Rally* effects are likely to have allowed Santos to pursue the peace process without a ceasefire: in the absence of this incumbent advantage, attacks by the rebel group would have weakened the government (as suggested by the diff-in-diff results) and potentially jeopardized the negotiations.

FARC's actions reveal that it is i) aware of these effects and ii) invested in the peace process.<sup>68</sup> Note first that there were fewer attacks before the 2014 elections relative to the 2010 elections, which was important if, as I have argued, the right-wing effect is stronger closer to elections. As the public's patience for the negotiations dwindled and the approval rating of Santos fell (as well as presumably the strength of the *rally* effect), a unilateral ceasefire announced by the rebels in 2015 was an important step in the process.

When the ceasefire broke in April of 2015, Santos quickly retreated to his old *hard-line* self by re-instating bombardments against FARC camps, allowing him to minimize the damage of these events to his public image.<sup>69</sup> In addition, FARC attacks were particularly concentrated on infrastructure during this break in the ceasefire. Had there been more attacks with casualties (for which I have documented the effect), the peace process is more likely to have failed.

Finally, despite the bilateral ceasefire and the efforts of the government, what was supposed to be the final agreement between the two parties was turned down by Colombians in a popular vote in October of 2016. Analysts have pointed out that citizens in places that had been hardest hit by the FARC were more likely to vote 'yes' to the agreement,<sup>70</sup> suggesting that the increased right-wing support effect does not last forever.<sup>71</sup>

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<sup>68</sup>The endogeneity of FARC actions is what makes the effects hard to identify in the long-run, and why I focus instead on short-run effects.

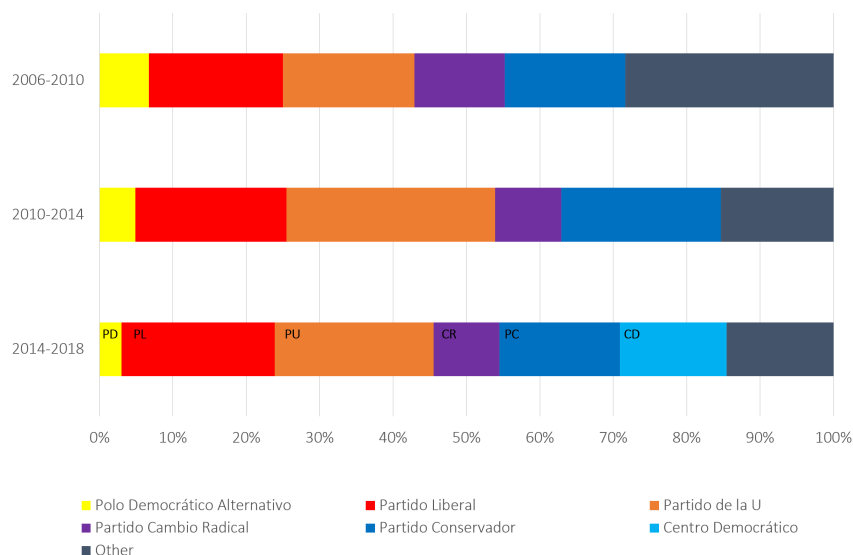
<sup>69</sup>See for instance (links): [tweet 1](#) and [tweet 2](#)

<sup>70</sup>See <http://lasillavacia.com/hagame-el-cruce/asi-es-el-pais-que-voto-no-58201> and <https://sites.google.com/site/miscelaneadelapaz/datos>

<sup>71</sup>And that it in fact may become "negative" in the very long-run. There are likely to be interesting parallels to work in the political psychology literature that address the dynamics of these effects of conflict, but these remain out of the scope of this paper.

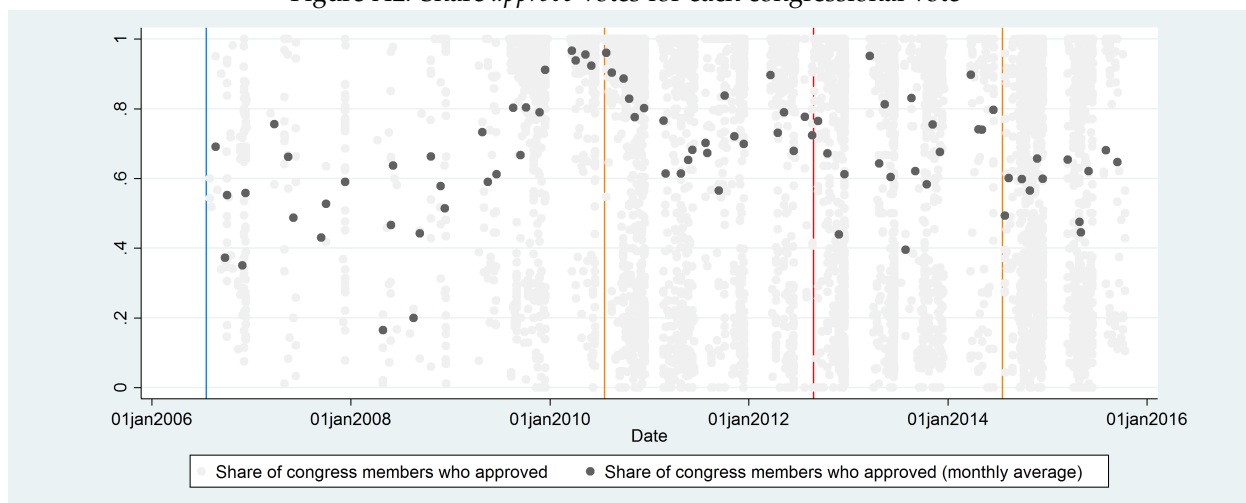
### 8.3 Appendix figures and tables

Figure A1: Distribution of seats in congress by political party



Notes: The figure shows the share of seats in congress held by each of the main political parties for each of the governments in the period of study. The Partido de la U is the ruling party across the study.

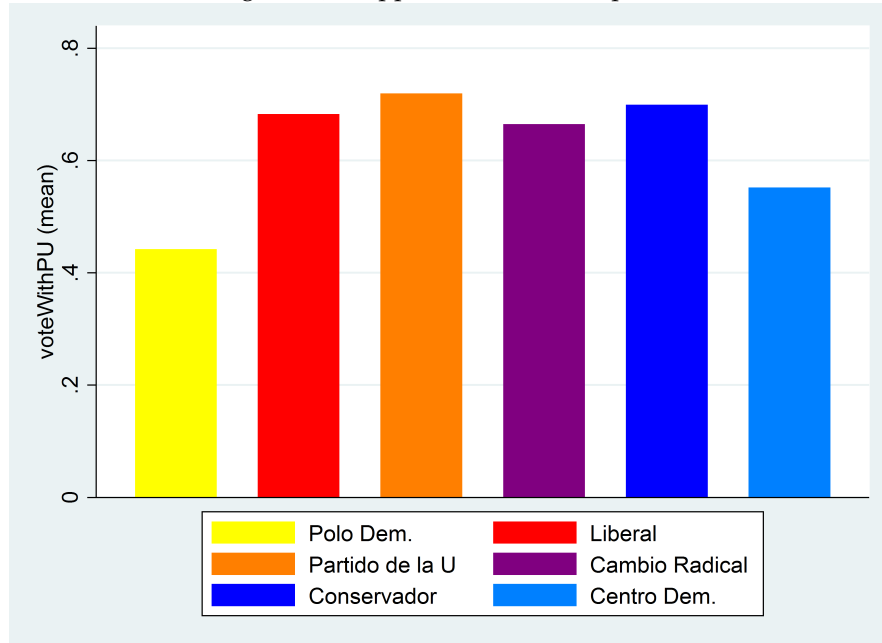
Figure A2: Share *approve* votes for each congressional vote



Notes: The figure shows congressional votes between 2006 and 2015. The y-axis shows the number of politicians who voted to approve a particular vote, and the x-axis shows the date of the vote. The vertical lines indicate the start of the first Santos government, the official start of the peace process with FARC, and the start of the second Santos government, respectively.

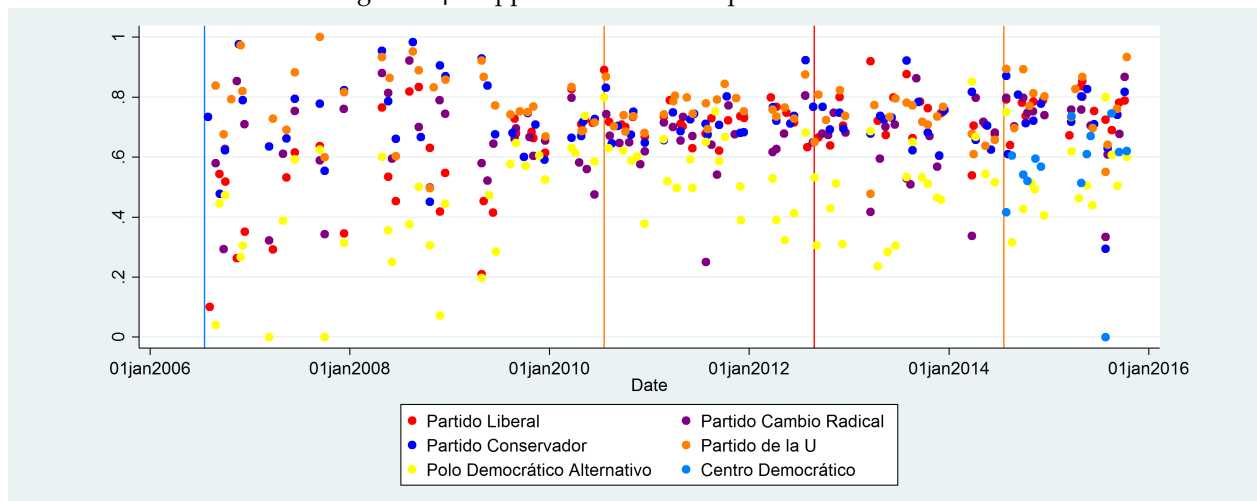


Figure A3: Support for PU across parties



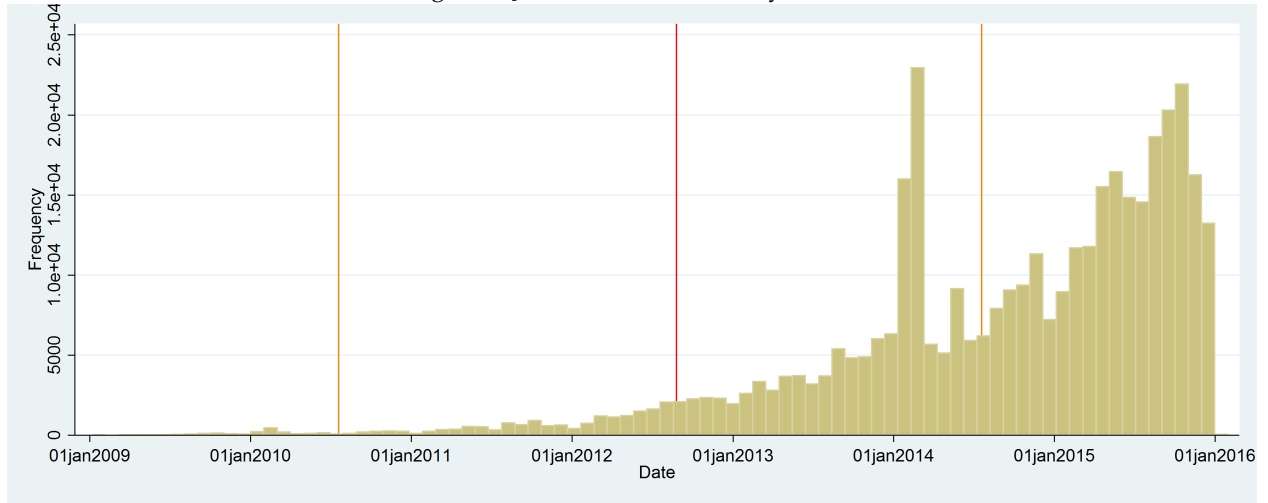
Notes: The figure shows the average vote alignment with the PU across parties for all individual votes.

Figure A4: Support for PU across parties and time



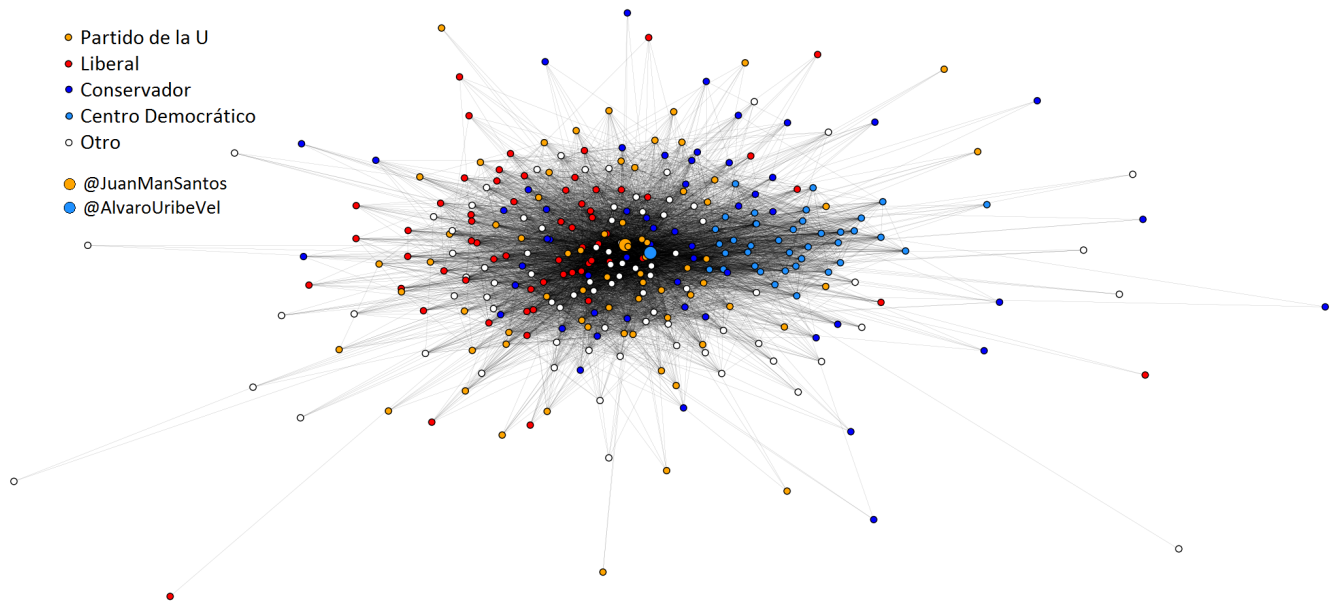
Notes: The figure shows the average vote alignment with the PU across parties and time. Each point is a party-month observation. The y-axis shows the average vote alignment with the PU (*voteWithPU*) of all individual votes, and the x-axis shows the date.

Figure A5: Number of tweets by date



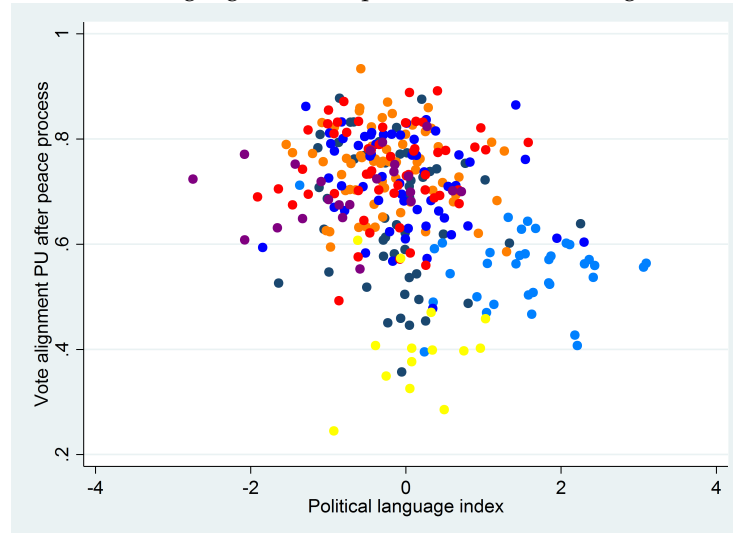
Notes: The histogram shows the number of tweets in the database by date. The vertical lines indicate the start of the first Santos government, the official start of the peace process with FARC, and the start of the second Santos government, respectively. The spike in activity in 2014 corresponds to campaign time for both legislative and presidential elections.

Figure A6: Network of politicians on Twitter



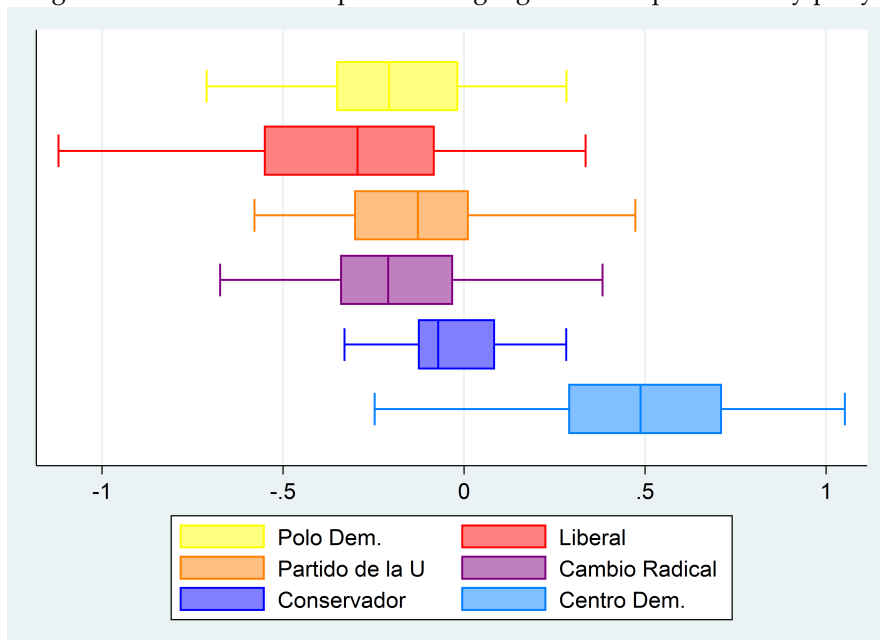
Notes: The figure illustrates the network of politicians on Twitter as an undirected graph. Each node represents a politician, colour-coded by political party, and an edge is drawn between two nodes if either of the politicians follows the other. The graph is drawn using a force-directed algorithm (Fruchterman and Reingold, 1991) which results in nodes being clustered around their connections, and roughly organized by centrality (more connected nodes closer to the center). @JuanManSantos (in orange) and @AlvaroUribeVel (in light blue) are highlighted as larger nodes.

Figure A7: Political language index of politicians and vote alignment in congress



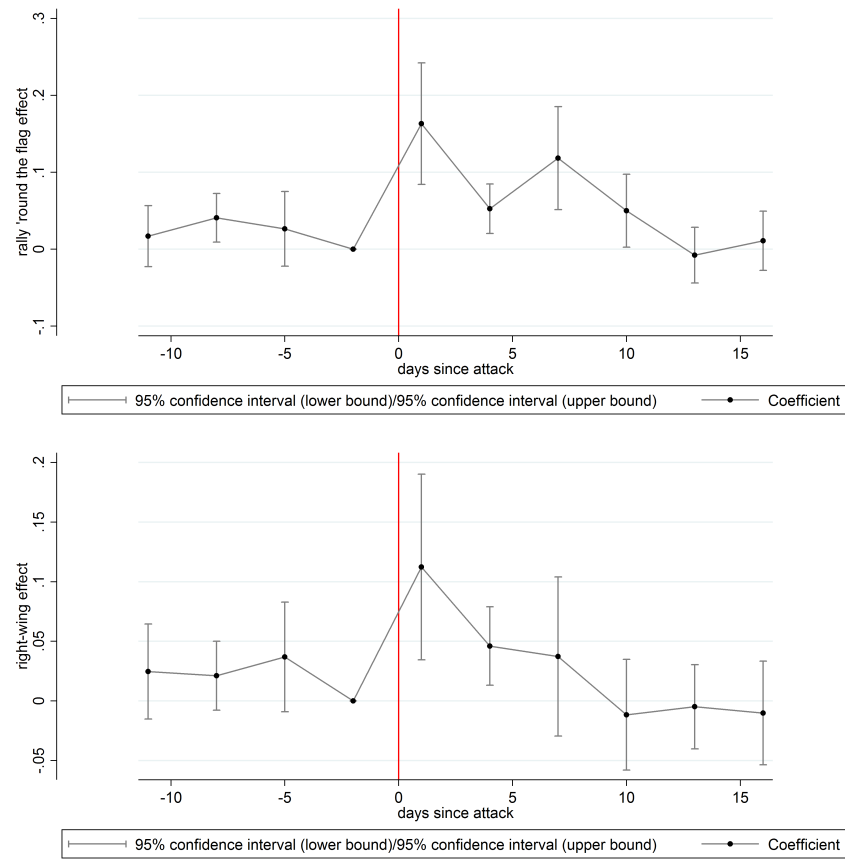
Notes: The graph shows the relationship between the *polLanguage* index and the average vote alignment of politicians after the peace process starts. The colors indicate the party of the politician as in previous figures. The relationship is negative ( $\beta = -0.042$ ) and statistically significant ( $t\text{-stat} = -5.37$ ).

Figure A8: Distribution of political language index of politicians by party



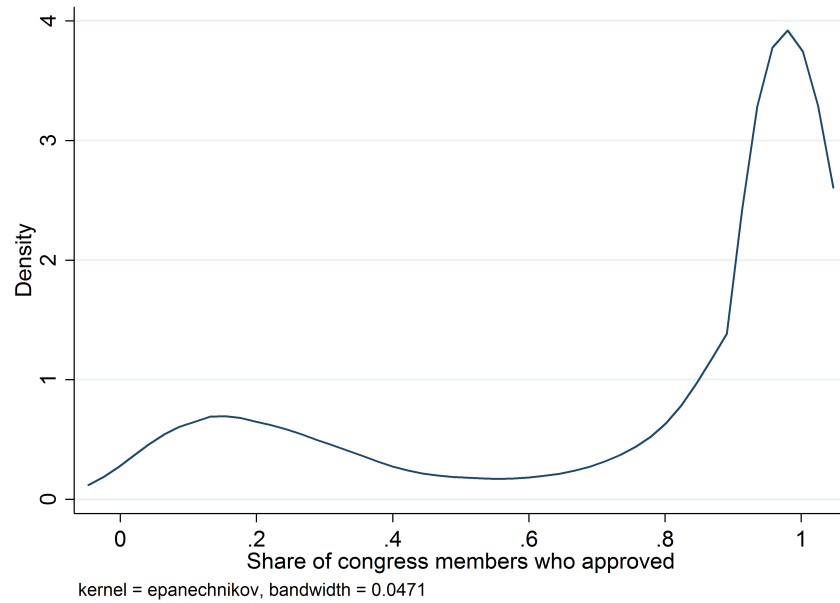
Notes: The graph shows the distribution of the political language index for all politicians across the main parties.

Figure A9: Estimated *rally 'round the flag* and right-wing effects based on event study specification



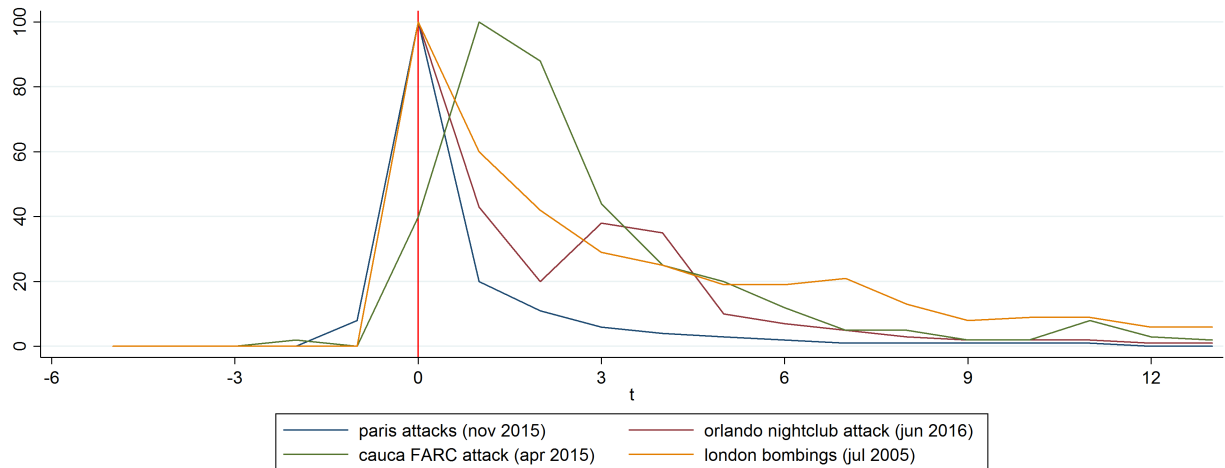
Notes: The figure shows the estimated rally and right-wing effects, computed by running a pooled regression and interacting the three-day bins with a post-peace process dummy, and then estimating the effects by solving the two unknowns (*rally*, *rightwing*) in the two equations: i)  $precoefficient = rally + rightwing$  and ii)  $postcoefficient = rally - rightwing$ . Standard errors are two-way clustered at the politician and week level.

Figure A10: Kernel density of approval rate for congressional votes



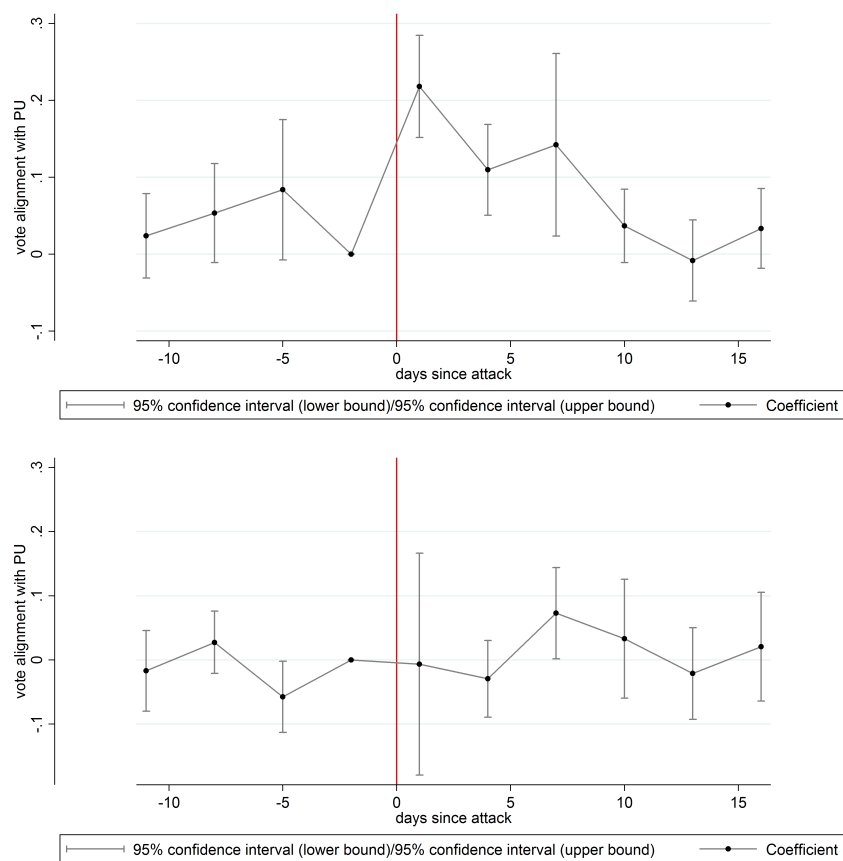
Notes: The figure shows the estimated kernel density of the approval rate ( $numVotesApprove_v / numVotes_v$ ) for all congressional votes.

Figure A11: Dynamics of public interest: google trends and attacks



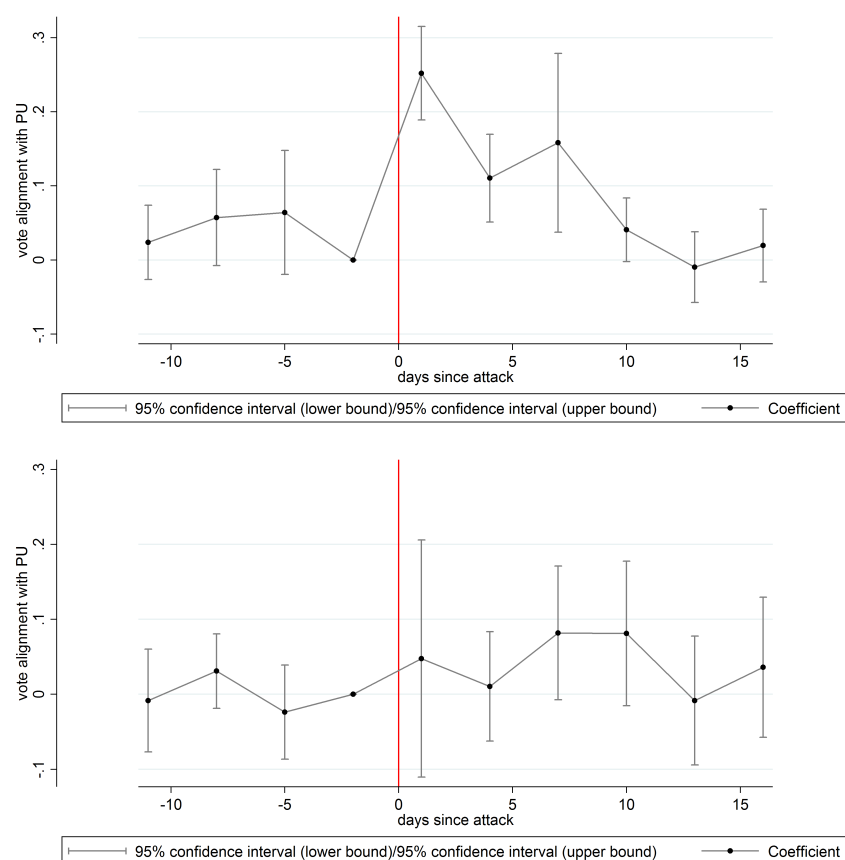
Notes: The figure shows Google search volume for one major FARC attack in Colombia (Cauca 2015), and three other terrorist attacks (London 2005, Paris 2015 and Orlando 2016). Google trends data is normalized around the date of highest search volume (set at 100). I restrict the search criteria to the month of each event. See <https://trends.google.com/trends/>.

Figure A12: Event study: Effect of FARC attacks on vote alignment with the ruling party, controlling for vote type (Law Project and Legislative Act)



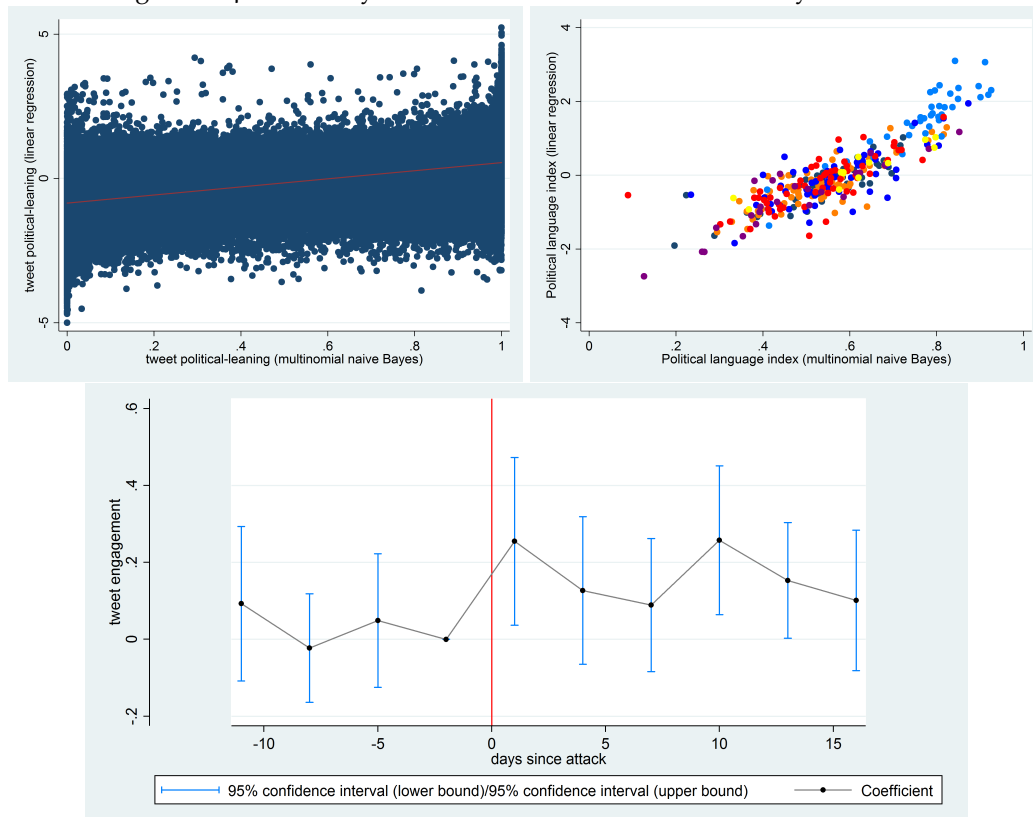
Notes: The figure illustrates the resulting coefficients from the event study design specification for the pre-peace process period (top) and the post-peace process period (bottom). The regression includes politician fixed effects and a function of time as outlined in section 5. Coefficients are estimated in three-day bins. Events include all FARC attacks with at least three casualties, and the regression includes vote-type controls (Law Project and Legislative Act dummies). Standard errors are two-way clustered at the politician and week level, 95% confidence intervals shown.

Figure A13: Event study: Effect of FARC attacks on vote alignment with the ruling party, excluding "potentially coordinated" events



Notes: The figure illustrates the resulting coefficients from the event study design specification for the pre-peace process period (top) and the post-peace process period (bottom). The regression includes politician fixed effects and a function of time as outlined in section 5. Coefficients are estimated in three-day bins. Events include all FARC attacks with at least three casualties, and the sample is restricted to votes which occur only within the event window of at most one attack. The sample excludes observations within the event windows of "potentially coordinated" attacks, as outlined in section 6. Standard errors are two-way clustered at the politician and week level, 95% confidence intervals shown.

Figure A14: Text analysis alternative: multinomial naive Bayes classifier



Notes: The figure illustrates the results from the alternative machine learning text analysis procedure which uses multinomial naive Bayes to compute the political leaning of tweets. Top-left shows the correlation between the base measure and the alternative measure at the tweet level. Top-right shows the correlation between the two measures at the politician level. Bottom shows the event study procedure for the top ten percent most right-leaning tweets as classified by the alternative methodology.



Table A1: Summary statistics for FARC attacks

	(1) All events mean/sd	(2) 1+ fatalities mean/sd	(3) 3+ fatalities mean/sd	(4) 5+ fatalities mean/sd
Year	2011.27 (2.54)	2011.29 (2.67)	2010.93 (2.70)	2010.34 (2.83)
Month (1-12)	6.44 (3.32)	6.14 (3.43)	5.59 (3.07)	5.75 (3.19)
Calendar day	15.70 (8.80)	14.86 (8.88)	15.42 (8.93)	15.09 (8.97)
Day of the week (0-6)	3.00 (2.01)	2.96 (1.99)	3.10 (2.11)	3.17 (2.08)
Latitude	4.17 (2.71)	4.03 (2.53)	4.15 (2.70)	4.40 (2.56)
Longitude	-75.35 (1.84)	-75.52 (1.84)	-75.44 (1.99)	-75.53 (2.06)
No. Fatalities	0.84 (1.97)	2.67 (2.75)	5.67 (3.25)	7.58 (3.24)
No. Injured	1.87 (5.65)	4.28 (9.01)	7.38 (12.75)	10.21 (16.11)
Observations	881	279	91	53

Notes: Summary statistics for FARC attacks: all events, events with at least one fatality, at least three fatalities and at least five fatalities, in columns 1-4 respectively. Standard errors in parentheses.

Table A2: Summary statistics for congressional votes

Variable	Mean	Std. Dev.	Min.	Max.	N
Year	2011.438	2.013	2006	2015	11666
Month (1-12)	8.513	2.924	2	12	11666
Calendar day	15.385	8.442	1	31	11666
Day of the week (0-6)	2.555	0.837	1	7	11666
Number of Votes	43.649	35.138	0	223	11149
Number of Approve votes	30.679	30.572	0	223	11149
Number of Reject votes	12.97	22.819	0	119	11149
Share that approved	0.758	0.334	0	1	10667
Number of Abstentions	26.422	26.683	0	152	11149
Percent of abstentions	0.319	0.131	0	1	10669
Vote Passed	0.747	0.435	0	1	11666
Votación Proyecto de Ley	0.401	0.49	0	1	11666
Votación Propositiones	0.19	0.392	0	1	11666
Votación Impedimentos	0.155	0.362	0	1	11666
Votación Orden del Día	0.05	0.218	0	1	11666
Votación Otros Asuntos	0.024	0.154	0	1	11666
Votación Acto Legislativo	0.082	0.275	0	1	11666
Keyword Militar	0.032	0.175	0	1	11666
Keyword Salud	0.051	0.22	0	1	11666
Keyword Paz	0.012	0.11	0	1	11666
Keyword TLC	0.008	0.088	0	1	11666
Keyword Justicia	0.048	0.215	0	1	11666
Keyword Víctimas	0.012	0.109	0	1	11666
Keyword Infraestructura	0.007	0.084	0	1	11666
Keyword Tributaria	0.033	0.179	0	1	11666
Keyword Empleo	0.005	0.067	0	1	11666
Keyword Educación	0.007	0.083	0	1	11666
Keyword Terrorista	0.003	0.055	0	1	11666
Keyword Social	0.008	0.089	0	1	11666
Keyword Corrupción	0.011	0.103	0	1	11666
Keyword Transporte	0.005	0.072	0	1	11666
Keyword Televisión	0.007	0.08	0	1	11666
Keyword Servicios	0.006	0.08	0	1	11666
Keyword Equilibrio	0.058	0.233	0	1	11666
Keyword Penitenciario	0.004	0.063	0	1	11666
Law Project	0.483	0.5	0	1	11666
Policy vote	0.673	0.469	0	1	11666
Procedural vote	0.229	0.421	0	1	11666
Permanent Session	0.011	0.105	0	1	11666
PP is Partido Liberal	0.078	0.268	0	1	11666
PP is Partido Cambio Radical	0.034	0.18	0	1	11666
PP is Partido Conservador	0.067	0.251	0	1	11666
PP is Partido de la U	0.091	0.288	0	1	11666
PP is Polo Democrático Alternativo	0.041	0.199	0	1	11666
PP is Centro Democrático	0.025	0.156	0	1	11666
No vote proposer identified	0.663	0.473	0	1	11666

Notes: The table shows the summary statistics for congressional votes. The variables include the share of politicians who voted to approve, reject or abstain from a vote, as well as dummy indicators for the type of vote (Votación), keywords that the description of the vote contains, and the party of the politician who proposed the vote (PP) if available.

Table A3: Summary statistics for individual votes

Variable	Mean	Std. Dev.	Min.	Max.	N
Vote value (approve, abstain or reject)	0.252	0.748	-1	1	781247
Vote with ruling party (Partido de la U)	0.677	0.468	0	1	780971
Vote with majority	0.676	0.468	0	1	783451
Vote with own party	0.731	0.443	0	1	783451

Notes: The table shows the summary statistics for individual votes. The variables include the voteValue: voted to approve (1), abstain (0) or to reject (-1) a congressional vote, as well as alignment with the majority, own party, or ruling party (PU).

Table A4: Effect of FARC attacks on vote alignment with ruling party

	(1) Contemporaneous	(2) Short-run	(3) Long(er)-run	(4) Average
Pre-peace process	.2533*** (.031)	.1735*** (.0293)	.0177 (.022)	.0956*** (.0232)
Post-peace process	.065 (.0724)	.0508 (.0319)	.042 (.0305)	.0464* (.0256)

Notes: Estimates from time-series specification where the dependent variable is alignment with the ruling party. Short-run effects refer to the average of the coefficients in bins  $t = 0-2, 3-5$ , and  $6-8$ . Long-run effects refer to the average of the coefficients in periods  $t = 9-11, 12-14$ , and  $15-17$ . Average effect refers to the average of coefficients in all of the post-attack bins. Two-way clustered standard errors at the politician and week level in parentheses. Significance levels shown below \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

Table A5: Effect of FARC attacks on vote alignment with ruling party, time-series, one week after the attack

	(1) pre-PP	(2) pre-PP	(3) pre-PP	(4) pre-PP	(5) post-PP	(6) post-PP	(7) post-PP	(8) post-PP
Post-attack, 3+ caslts.	0.0587*** (0.0182)	0.0883*** (0.0313)	0.111*** (0.0325)	0.0996*** (0.0300)	0.0232 (0.0228)	0.0642 (0.0566)	0.0717 (0.0454)	0.0503 (0.0308)
N	432414	373761	373761	373761	348662	301453	301453	301453
N. politicians	517	513	513	513	421	421	421	421
Politician FE	no	no	yes	yes	no	no	yes	yes
Attack window dummy	no	yes	yes	yes	no	yes	yes	yes
Exclude overlap	no	yes	yes	yes	no	yes	yes	yes
Time function	no	no	yes	yes	no	no	yes	yes
Party trends	no	no	yes	yes	no	no	yes	yes
Vote controls	no	no	no	yes	no	no	no	yes

Notes: Estimates from time-series specification where the dependent variable is alignment with the ruling party. Columns 1-4 show regressions for the pre-peace process period, and columns 5-8 for the post-peace process period. Columns 1 and 5 include no controls or fixed effects. Columns 2 and 6 include a dummy for the two-week window around the event and restricts to votes which occur within the window of only one event. Columns 3 and 7 include politician fixed effects and a function of time as outlined in section 4. Columns 4 and 8 include congressional vote level controls including dummies for the type of vote (policy vs. procedural), keywords (conflict or non-conflict related votes), whether the vote was proposed by a PU member or by a member of the politician's own party. Two-way clustered standard errors at the politician and week level in parentheses. Significance levels shown below \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

Table A6: Potentially affected votes

Link	Date	Days since attack	House	Incumbent position	Share approved	Counterfactual share appr	Type of vote	Keywords
<a href="#">1408</a>	Aug 08/2006	6	c	For	0.52	0.42	Otros Asuntos	n/a
<a href="#">1547</a>	Dec 11/2007	5	R	Against	0.45	0.53	Acto Legislativo	n/a
<a href="#">1540</a>	Dec 11/2007	5	S	Against	0.48	0.57	Proyecto de Ley	Concursos carrera administrativa
<a href="#">1578</a>	May 13/2008	7	R	Against	0.46	0.61	Otros Asuntos	n/a
<a href="#">1822</a>	Sep 01/2009	6	R	Against	0.39	0.53	Impedimentos	n/a
<a href="#">1833</a>	Sep 01/2009	6	R	Against	0.47	0.64	Impedimentos	n/a
<a href="#">1764</a>	Nov 24/2009	4	R	Against	0.42	0.51	Impedimentos	n/a
<a href="#">2486</a>	Apr 14/2010	7	c	Against	0.38	0.50	Otros Asuntos	n/a
<a href="#">7149</a>	Jun 02/2010	1	c	Against	0.38	0.58	Proposiciones	n/a
<a href="#">3322</a>	Jun 08/2010	7	c	Against	0.37	0.50	Orden del Día	n/a
<a href="#">4772</a>	Nov 23/2010	4	c	Against	0.47	0.53	Acto Legislativo	Ley de sostenibilidad fiscal
<a href="#">4447</a>	Nov 24/2010	5	c	For	0.5	0.44	Acto Legislativo	Ley de sostenibilidad fiscal
<a href="#">4444</a>	Nov 24/2010	5	c	For	0.53	0.47	Acto Legislativo	Ley de sostenibilidad fiscal
<a href="#">4785</a>	Nov 25/2010	6	c	For	0.53	0.44	Acto Legislativo	Ley de sostenibilidad fiscal
<a href="#">4784</a>	Nov 25/2010	6	c	For	0.53	0.44	Acto Legislativo	Ley de sostenibilidad fiscal
<a href="#">5564</a>	May 11/2011	4	R	Against	0.40	0.51	Ley Estatutaria	Marco jurídico inteligencia y contrainteligencia
<a href="#">5736</a>	May 24/2011	2	R	Against	0.43	0.82	Impedimentos	Estatuto de Seguridad Ciudadana
<a href="#">7253</a>	May 24/2011	2	c	Against	0.28	0.54	Impedimentos	Edad de retiro forzoso para Magistrados
<a href="#">7258</a>	May 24/2011	2	c	Against	0.26	0.50	Impedimentos	Edad de retiro forzoso para Magistrados
<a href="#">5702</a>	May 24/2011	2	S	Against	0.39	0.65	Proyecto de Ley	Ley de víctimas, restitución de tierras
<a href="#">7257</a>	May 24/2011	2	c	Against	0.29	0.58	Impedimentos	Edad de retiro forzoso para Magistrados
<a href="#">7029</a>	May 25/2011	0	c	Against	0.30	0.57	Proposiciones	Creación del Sistema Nacional de Migraciones
<a href="#">6687</a>	May 25/2011	0	c	Against	0.47	0.63	Proposiciones	Sistema Ncnl de Voluntarios de Primera Respuesta
<a href="#">6907</a>	May 25/2011	0	c	For	0.58	0.38	Proyecto de Ley	Ley General de Bomberos
<a href="#">6969</a>	Jun 01/2011	7	c	Against	0.42	0.55	Proyecto de Ley	Pensión de vejez
<a href="#">7698</a>	Apr 10/2012	3	R	Against	0.40	0.50	Proposiciones	Implementación del TLC con Estados Unidos
<a href="#">7853</a>	Apr 17/2012	10	c	For	0.5	0.47	Acto Legislativo	Salud como derecho fundamental
<a href="#">7720</a>	May 08/2012	0	R	Against	0.35	0.61	Impedimentos	Régimen distrital
<a href="#">7721</a>	May 08/2012	0	R	For	0.78	0.56	Impedimentos	Régimen distrital
<a href="#">8026</a>	May 09/2012	1	S	Against	0.36	0.24	Proyecto de Ley	Derecho a no padecer hambre
<a href="#">8153</a>	May 15/2012	0	c	Against	0.39	0.60	Proposiciones	n/a
<a href="#">8152</a>	May 15/2012	0	c	For	0.55	0.32	Proposiciones	n/a
<a href="#">8384</a>	May 16/2012	1	c	Against	0.42	0.58	Otros Asuntos	Pago del combustible de funcionarios del Estado
<a href="#">8028</a>	May 16/2012	1	S	Against	0.40	0.82	Acto Legislativo	Derecho a no padecer hambre
<a href="#">8384</a>	May 16/2012	1	c	For	0.5	0.33	Otros Asuntos	Pago del combustible de funcionarios del Estado
<a href="#">9094</a>	May 23/2012	2	c	For	0.64	0.44	Proposiciones	Promoción del turismo
<a href="#">8298</a>	Jun 05/2012	1	S	Against	0.43	0.78	Proposiciones	Vivienda de interés social
<a href="#">7906</a>	Jun 12/2012	8	R	Against	0.40	0.53	Proyecto de Ley	Vivienda de interés social
<a href="#">8613</a>	Aug 22/2012	6	S	Against	0.41	0.54	Proposiciones	Garantías mobiliarias
<a href="#">8593</a>	Aug 22/2012	6	S	Against	0.42	0.55	Proposiciones	Garantías mobiliarias

Notes: The table lists congressional votes potentially affected by FARC attacks. House indicates "S" if the vote occurred in the Senate, "R" if it occurred in the House of Representatives and "c" if it occurred in one of the smaller legislative commissions. These are votes which occurred soon after an event and which resulted in a close outcome in favour of the incumbent party. For more details on each vote, a link to the relevant [congresovisible.org](http://congresovisible.org) page is provided. See section 6 for details.

Table A7: Effect of FARC attacks on vote alignment with ruling party, robustness checks

Panel A: Time-series

	(1) pre-PP	(2) pre-PP	(3) pre-PP	(4) pre-PP	(5) post-PP	(6) post-PP	(7) post-PP	(8) post-PP
Post-attack, 3+ caslts.	0.115*** (0.0316)	0.108*** (0.0278)	0.110*** (0.0317)	0.115*** (0.0315)	0.0690* (0.0402)	0.0734 (0.0534)	0.0694 (0.0475)	0.0796* (0.0452)
N	344763	349031	274447	343141	260603	263979	226898	278632
N. politicians	516	516	411	481	421	421	326	396

Panel B: Diff-in-diff

Post-attack in HD, 3+ caslts.	0.0399 (0.0249)	0.0734*** (0.0273)	0.106*** (0.0315)	0.0652** (0.0331)	-0.0487** (0.0193)	-0.0615** (0.0283)	-0.0475* (0.0285)	-0.0109 (0.0578)
N	386673	403463	317275	396645	297422	304497	262523	322181
N. politicians	516	516	411	481	421	421	326	396
Excludes conflict votes	yes	no	no	no	yes	no	no	no
Excludes PU-proposed votes	no	yes	no	no	no	yes	no	no
Excludes PU politicians	no	no	yes	no	no	no	yes	no
Exc. most violent depts	no	no	no	yes	no	no	no	yes

Notes: The table shows the results from the main analyses with various sample restrictions as outlined in section. Two-way clustered standard errors at the politician and week level in parentheses for time-series analysis. Standard errors clustered at the politician level for the diff-in-diff analysis. Significance levels \*p<0.10, \*\*p<0.05, \*\*\*p<0.01.

Table A8: Cross-department covariance matrix of FARC attacks

	Valle	Guajira	Tolima	Santander	Putumayo	NdeSantan-r	Narino	Meta	Huila	Guaviare	Cundinama-a	Choco	Cauca	Caqueta	Boyaca	Arauca	Antioquia
Antioquia	1																
Arauca	0.0031	1															
Boyaca	-0.0043	-0.003	1														
Caqueta	0.0132	0.0099	-0.0035	1													
Cauca	<b>0.1078*</b>	-0.0066	-0.0058	0.0473	1												
Choco	-0.0115	-0.0079	-0.0022	0.0209	0.0225	1											
Cundinama-a	0.0071	-0.0095	-0.0026	-0.0112	0.0133	-0.007	1										
Guaviare	-0.0083	-0.0057	-0.0016	-0.0068	-0.0111	-0.0042	-0.0051	1									
Huila	0.0469	0.0049	-0.0041	-0.0008	0.0545	-0.0109	0.009	0.0283	1								
Meta	-0.0117	-0.0081	-0.0023	0.02	0.0028	-0.006	-0.0072	-0.0043	0.0145	1							
Narino	0.006	-0.0147	<b>0.0651*</b>	0.0158	0.0234	0.0385	0.0173	-0.0109	-0.013	0.0283	-0.0058	<b>0.0658*</b>	1				
NdeSantan-r	<b>0.0659*</b>	0.0272	-0.0039	0.0534	0.0385	0.0173	0.0108	-0.0075	0.0111	0.0434	0.0111	1					
Putumayo	0.0447	0.0325	-0.0035	0.0234	0.0473	-0.0094	0.0142	-0.0068	-0.0008	0.02	-0.0008	0.0359	1				
Santander	-0.005	-0.0034	-0.001	-0.0041	-0.0067	-0.0026	-0.0031	-0.0018	-0.0047	-0.0026	-0.0047	-0.0045	-0.0041	1			
Tolima	0.0393	-0.0108	-0.003	-0.0128	0.0069	-0.008	0.0199	-0.0058	0.0237	-0.0082	-0.0148	0.0265	-0.0128	-0.0035	1		
Guajira	0.0356	-0.0083	-0.0023	-0.0098	0.002	-0.0061	-0.0074	-0.0044	0.0137	-0.0063	-0.0114	-0.0108	-0.0098	-0.0027	-0.0084	1	
Valle	-0.0016	0.011	-0.0034	0.0249	0.0378	-0.0091	-0.0109	0.0364	0.0002	0.0211	0.0514	0.02	0.0446	-0.004	0.0105	0.0203	1

Notes: The table shows the correlation between the timing of FARC attacks across departments between 2006 and 2015. \* $p < 0.1$ , using the Bonferroni correction for multiple hypothesis testing.

Table A9: Relationship between voteValue and party of proposer across parties

	(1) all	(2) PD	(3) PL	(4) PU	(5) CR	(6) PC	(7) CD
proposed by member of PD	-0.193*** (0.0258)	<b>0.407***</b> (0.0284)	-0.213*** (0.0321)	-0.228*** (0.0311)	-0.247*** (0.0304)	-0.206*** (0.0298)	-0.422*** (0.0788)
proposed by member of PL	0.00429 (0.0202)	-0.00705 (0.0286)	<b>0.0854***</b> (0.0244)	-0.0271 (0.0254)	-0.0165 (0.0228)	0.0393 (0.0245)	-0.0606 (0.0457)
proposed by member of PU	0.0295 (0.0198)	-0.0506* (0.0280)	0.00556 (0.0242)	<b>0.0835***</b> (0.0252)	0.00552 (0.0220)	0.101*** (0.0237)	-0.0838* (0.0451)
proposed by member of CR	0.0282 (0.0267)	-0.00177 (0.0392)	0.00834 (0.0328)	0.00404 (0.0351)	<b>0.140***</b> (0.0296)	0.0770** (0.0316)	0.0179 (0.0530)
proposed by member of PC	0.0255 (0.0217)	-0.0722** (0.0307)	0.0280 (0.0271)	0.00816 (0.0272)	0.0268 (0.0240)	<b>0.146***</b> (0.0252)	-0.111** (0.0455)
proposed by member of CD	-0.158*** (0.0251)	-0.180*** (0.0398)	-0.314*** (0.0336)	-0.205*** (0.0335)	-0.183*** (0.0307)	-0.171*** (0.0328)	<b>0.103**</b> (0.0425)
no proposer	0.498*** (0.0164)	-0.0434* (0.0229)	0.545*** (0.0201)	0.591*** (0.0205)	0.471*** (0.0188)	0.617*** (0.0202)	0.0549 (0.0414)
Constant	-0.0649*** (0.0156)	0.180*** (0.0212)	-0.0847*** (0.0191)	-0.125*** (0.0194)	-0.0401** (0.0177)	-0.157*** (0.0191)	0.181*** (0.0329)
N	781247	35697	162143	201096	72086	159907	25540

Notes: The table shows a regression of *voteValue* (1 if approve, 0 if abstain, -1 if reject) on dummy variables indicating the party of the politician who proposed the vote. The regression is run separately for members of each party (across columns). Standard errors clustered at the congressional vote level. The bold coefficients indicate support for their own party. Significance levels shown below \*p<0.10, \*\*p<0.05, \*\*\*p<0.01.

Table A10: Effect of FARC attacks on vote value, by ruling party position, time-series

Panel A: Pre-peace process						
	(1) reject	(2) abstain	(3) approve	(4) reject	(5) abstain	(6) approve
Post-attack, 3+ caslts.	0.00419 (0.00882)	-0.0501** (0.0248)	0.0459* (0.0255)	0.0382 (0.0421)	-0.0203 (0.0287)	-0.0179 (0.0303)
N	284625	284625	284625	89242	89242	89242
N. politicians	513	513	513	511	511	511
Panel B: Post-peace process						
Post-attack, 3+ caslts.	0.0272** (0.0117)	0.0125 (0.0248)	-0.0397 (0.0249)	0.0512* (0.0305)	0.00287 (0.0283)	-0.0541** (0.0216)
N	165480	165480	165480	135984	135984	135984
N. politicians	421	421	421	418	418	418
Politician FE	yes	yes	yes	yes	yes	yes
Day FE	no	no	no	no	no	no
Attack window dummy	yes	yes	yes	yes	yes	yes
Exclude overlap	yes	yes	yes	yes	yes	yes
Time function	yes	yes	yes	yes	yes	yes
Party trends	yes	yes	yes	yes	yes	yes
avg. PU vote	appr (>0)	appr (>0)	appr (>0)	rejt (<=0)	rejt (<=0)	rejt (<=0)

Notes: Estimates using the main time-series specification (politician fixed effects, time function, party linear trends) where the dependent variables are indicator variables for whether politicians reject, abstain from, or approve a congressional vote. Columns 1-3 include only votes which the ruling party voted to approve and columns 4-6 includes only votes which the ruling party rejected. Two-way clustered standard errors at the politician and week level in parentheses. Significance levels shown below \*p<0.10, \*\*p<0.05, \*\*\*p<0.01.

Table A11: Effect of FARC attacks on vote value, by ruling party position, diff-in-diff

Panel A: Pre-peace process						
	(1) reject	(2) abstain	(3) approve	(4) reject	(5) abstain	(6) approve
Post-attack in HD, 3+ caslts.	-0.00531 (0.0107)	-0.0843** (0.0363)	0.0896** (0.0353)	0.0577 (0.0455)	-0.0804 (0.0491)	0.0227 (0.0297)
N	328247	328247	328247	104026	104026	104026
N. politicians	516	516	516	515	515	515
Panel B: Post-peace process						
Post-attack in HD, 3+ caslts.	0.0170 (0.0190)	0.0693** (0.0276)	-0.0863*** (0.0304)	0.00274 (0.0521)	0.0344 (0.0475)	-0.0372 (0.0262)
N	195249	195249	195249	153427	153427	153427
N. politicians	420	420	420	420	420	420
Politician FE	yes	yes	yes	yes	yes	yes
Day FE	yes	yes	yes	yes	yes	yes
Attack window dummy	yes	yes	yes	yes	yes	yes
Exclude overlap	yes	yes	yes	yes	yes	yes
Time function	no	no	no	no	no	no
Party trends	yes	yes	yes	yes	yes	yes
avg. PU vote	appr (>0)	appr (>0)	appr (>0)	rejt (<=0)	rejt (<=0)	rejt (<=0)

Notes: Estimates using the main diff-in-diff specification (politician and day fixed effects, party linear trends) where the dependent variables are indicator variables for whether politicians reject, abstain from, or approve a congressional vote. Columns 1-3 include only votes which the ruling party voted to approve and columns 4-6 includes only votes which the ruling party rejected. Clustered standard errors at the politician level in parentheses. Significance levels shown below \*p<0.10, \*\*p<0.05, \*\*\*p<0.01.