

Habemus Papam? Polarization and Conflict in the Papal States*

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Abstract

We study the effect of divisions within the elite on the probability of internal conflict in the Papal States between 1295 and 1846. We assemble a new database using information on cardinals that participated in conclaves during this period, and construct measures of polarization and fractionalization based on the cardinals' places of birth. The deaths of popes and cardinals provide plausible exogenous variation in the timing of the conclave and the composition of the College of Cardinals, which we exploit to analyze the causal effect of a divided conclave on conflict. We find that an increase of one standard deviation in our measure of polarization raised the likelihood of internal conflict by between 3 and 4 percent in a given year and by up to 24 percent in a given papacy. The effect is largest in the initial years after the conclave, to gradually vanish over time. Our results confirm that cardinals' influence on the politics of the Papal States decreased after reforms introduced between 1586 and 1588. These reforms successfully attenuated the political consequences of divisions among cardinals, the elite of one of the largest and oldest organizations.

JEL codes: D72, D74, N33, N43, Z12.

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“[T]he history of man is the history of the continuous replacement of certain elites: as one ascends, another declines.”

Wilfredo Pareto (1848–1923)

1 Introduction

In this paper we analyze the effect of a divided elite on the likelihood of internal conflict. Recent literature discusses the role of the elite on a number of outcomes. [Acemoglu \(2008\)](#) analyzes the economic costs and benefits under both oligarchic and democratic societies and describes how an unequal distribution of income may sustain inefficient oligarchic institutions. [Besley and Kudamatsu \(2008\)](#) prove that economically successful autocracies occur when the group with the ability to choose a leader (the *selectorate*) is capable of removing bad rulers. Other theoretical work focuses on divisions within the elite and the quality of the leader. For example, [Guriev and Sonin \(2009\)](#) show that a strong dictator may expropriate individual oligarchs, while a weak dictator cannot prevent expropriation within the oligarchy. Divisions within the elite may also lead to an extension of the franchise ([Acemoglu and Robinson, 2000](#); [Lizzeri and Persico, 2004](#); [Llavador and Oxoby, 2005](#); [Acemoglu, 2008](#); [Ghosal and Proto, 2009](#)), inefficient policies ([Acemoglu, Robinson, and Verdier, 2004](#); [Padro i Miquel, 2007](#)) or to weaker states and internal conflicts ([Fearon and Laitin, 2003](#)). This literature provides abundant anecdotal evidence for their theoretical predictions. Systematic empirical evidence, however, has been elusive.

We argue that a divided elite might undermine the authority of the leader, who in turn might be less able to prevent or suppress revolts. To investigate this hypothesis, we assemble a new dataset on the composition of the College of Cardinals, internal conflicts (riots, revolts) and wars in the Papal States between 1295 and 1846. Three main features of the Papal States make this the ideal setting to test for this hypothesis. First, there is a well defined institutional context with the pope as ruler, a well established procedure for selecting the pope, known as *conclave*, and a small and well identified group of participants in the conclave (the College of Cardinals), which allow us to clearly identify the elite as the pope and those who select him. Second, the deaths of popes and cardinals provide plausible exogenous variation in the timing of the conclave and the composition of the College of Cardinals at the time of the election. We exploit this variation to analyze the causal effect of a divided conclave on conflict. Third, we take advantage of a set reforms

to the College of Cardinals implemented in 1586–1588, which permanently reduced the influence of cardinals both in the outcome of elections and in the managing of the church (Walsh, 2011a).

We construct our measure of divisions in the College of Cardinals with indexes of fractionalization and polarization based on the birthplaces of cardinals attending the conclave. We opt for these measures since written secret ballots were the most common procedure to select a new pope.¹ These indexes weigh different aspects of the degree of diversity across groups: While fractionalization is maximized when all groups are of the same size, polarization reaches its maximum when there is a half and half split of groups.² Historians have highlighted divisions among cardinals based on places of origin (Broderick, 1987; Baumgartner, 2003 Walsh, 2003; Collins, 2009). Given that cardinals represented political interests of different states/kingdoms in Europe, we argue that these measures also reflect divisions within the conclave. A divided conclave implied that cardinals had to make concessions and find a consensus candidate. These compromise choices might have weakened papal authority, either through selecting worse popes or through changing the incentives for them to implement better policies (Caselli and Morelli, 2004; Besley, 2005), and therefore had an effect on the likelihood of conflicts.

The anecdotal evidence suggests that popes had more authority and support if they were elected in conclaves with low polarization levels. One example is the papacy of Julius II (r. 1503-1513) who reconquered, without firing a shot, cities that were part of the Papal States but were effectively controlled by adversary factions. His army was then actively involved in the war of the European and Italian alliance against Venice in 1509, the unsuccessful war of the Holy League against France and Ferrara in 1510, and the war against France in 1511–1512 that ended the presence of the French on Italian soil (Chambers, 2006; Kelly, 1986). Remarkably, Julius II was unanimously elected and the level of polarization among the cardinals during this conclave, measured by the cardinals’ birthplaces, is among the

¹There were two other procedures to select a pope: *Acclamation*, in which the cardinals unanimously proclaimed one of the candidates as pope, and *Compromissum*, in which the election was delegated to a small commission. These methods were rarely used during the period we study (Colomer and Mclean, 1998).

²Fractionalization has been traditionally used as the measure of ethnic/religious diversity in the literature. In section 4 later in the paper we argue that polarization is a relevant measure of diversity from both a theoretical and empirical point of view. See also Alesina, Devleeschauwer, Easterly, Kurlat, and Wacziarg (2003) and Alesina and Ferrara (2005) for recent reviews of the literature. For a discussion on the origin of diversity indexes see Ginsburgh and Weber (2014).

lowest in our sample.

A critical challenge to our identification strategy is that changes in the composition of the College of Cardinals might not be random, and thus they can be possibly correlated with the likelihood of internal conflict. We argue that the deaths of popes and cardinals provide exogenous variation in the timing of the conclave and the composition of the College of Cardinals at the time of the election.³ We also describe how the nomination of new cardinals closely followed cardinals' deaths, both in numbers and in the distribution of birthplaces. Moreover, by including only those cardinals present during the final vote, we exploit additional variation in the attendance of cardinals due to poor health. These fortuitous incidents are unlikely to have directly influenced internal conflict in the Papal States.

We first document a positive relationship between polarization of the College of Cardinals and the time to elect a new pope (i.e. the length of a conclave), particularly before the reforms of 1586–88, even after controlling for the number of cardinals and the length of the previous papacy, among other variables. Fractionalization also has a positive effect on the length of the conclave, but it is not statistically different from zero. We interpret these results as evidence of the inability of a polarized College of Cardinals to unite behind a single candidacy. Therefore, popes elected in conclaves under high polarization generated less consensus.

Our main finding indicates that polarization among cardinals increased the likelihood of internal conflict: a one standard deviation increase in our measure of polarization raised the probability of an internal conflict in a given year by between 3 and 4 percent, or by 24 percent in a given papacy. The effect is particularly strong during the first years of the papacy, to gradually decline afterwards. These results are consistent with the interpretation of an irresolute leader learning throughout his papacy. Also consistent with our results for the length of the conclave, the effect of polarization on conflict is present particularly before the 1586-88 reforms. For years after the reforms the effect of polarization on the likelihood of conflict is statistically insignificant.

The effect of polarization on the incidence of internal conflict is robust to various alternative specifications. Birthplace is arguably not the only way to identify groups of cardinals and measure polarization and fractionalization in conclaves. Our results do not change if

³We provide more details in section 4, including examples of popes dying unexpectedly. We also discuss the possibility of unnatural deaths due to poisoning.

we instead use their workplace (the bishopry place of a cardinal). Neither do they change when we modify our polarization and fractionalization measures to consider inter-group distances between groups of cardinals, as in [Esteban, Mayoral, and Ray \(2012\)](#). However, a measure of polarization derived from the popes that nominated cardinals (suggested in the literature as an alternative source of divisions among cardinals) does not have an effect on the likelihood of conflict. We interpret these results as evidence that geography-based measures of polarization have more bite than the nomination-based ones in proxying for divisions among cardinals.

Polarization also has a positive and significant effect on the intensity of conflict. Our results indicate that 1 standard deviation increase in polarization raises the intensity of conflict (conditional on its occurrence) by 81 percent. On the other hand, polarization does not have an effect on the incidence of war between the Papal States and other states. We interpret this result as evidence of weak leaders being subject to two opposing forces that counterbalance each other: They might be less likely to initiate wars, but they might be more likely to be attacked. In addition, weak leaders could see war as an opportunity to increase their legitimacy and capabilities ([Chiozza and Goemans, 2004, 2011](#)).

Finally, we present additional evidence to disregard the most plausible alternative explanations. For example, we show that polarization among the cardinals did not increase conflict in other regions of Italy. This result rules out the possibility of polarization being a proxy for widespread instability in the region. We also show that electing a foreign-born pope does not have an effect on conflict in the Papal States. Taken together, these results provide support to our preferred interpretation that a divided elite would decrease the ability of the leader to prevent or suppress revolts. Our data does not allow us to completely rule out the possibility that conflict erupted after a polarized conclave because the losing faction would organize revolts to undermine the pope. This and our preferred mechanism are likely intertwined: Weak popes had trouble in keeping their cardinals loyal, while dissident cardinals further weakened the political power of the pope. However, the absence of a strong link between polarization and wars suggests that losing factions were less likely to initiate conflicts against the Papal States.

Our paper relates to various strands of the economics literature. First, it is related to the literature looking at the effect of ethnic or religious divisions on conflict. Some examples are [Fearon and Laitin \(2003\)](#), [Montalvo and Reynal-Querol \(2005\)](#), [Esteban and](#)

Ray (2011), Esteban, Mayoral, and Ray (2012), and Desmet, Ortuño-Ortín, and Wacziarg (2012). We contribute to this literature by showing that in autocracies divisions among the elite can help explain conflict, particularly in contexts where non-economic markers for the society as a whole are less relevant.

Second, since it shows that popes and cardinals had an effect on the likelihood of conflict in the Papal States, our paper complements Chaney (2013) who provides empirical evidence that religious leaders exercised political power, particularly during periods of economic downturn. More generally, we contribute to the literature discussing the interplay between religion and conflict (Iyigun, 2011; Iyigun, 2013; Aldashev and Platteau, 2014).

Third, our paper relates to the literature explaining civil conflict in Europe. Iyigun (2008) shows that the Ottomans' military activity in Europe reduced military engagements between Protestants and Catholics between 1520 and 1650. Gennaioli and Voth (2012) highlight the link between state capacity (measured by the ruler's ability to control taxes and its collection) and the presence of military conflict, particularly when the cost of money (and therefore the cost of war) is high. We show that an alternative measure of state capacity (namely the cohesiveness of its elite) can be a determinant of conflict.

Recent articles have analyzed the role of leadership on various outcomes such as economic growth, stock prices and the provision of public goods.⁴ Jones and Olken (2009) show that the removal of leaders by assassination can increase the intensity of small-scale conflicts. Our findings complement those of Jones and Olken in showing that not only leaders, but also the support they enjoy among the elite, can have an impact on the incidence and intensity of conflict.

Finally, our paper is related to the literature on the economics of religious organizations. Ekelund, Hébert, and Tollison (2006, 2011) have argued that in the medieval catholic church the pope took the role of the CEO, while the College of Cardinals acted as the board of directors. Our results show that a higher level of consensus among the cardinals, measured by their polarization, improved the pope's performance in handling *earthly* matters.⁵ We

⁴On leaders and economic growth, see Jones and Olken (2005) and Besley, Montalvo, and Reynal-Querol (2011). See Johnson, Magee, Nagarajan, and Newman (1985) on death of executives and stock prices, and Chattopadhyay and Duflo (2004) on the effect of female leaders on the provision of public goods at the village level. Acemoglu, Reed, and Robinson (2014) show that chiefdoms in Sierra Leone with a larger number of ruling families exhibit better human capital outcomes, which they attribute to a better performance of leaders facing increased political competition.

⁵We do not find evidence of polarization on the pope's performance in *spiritual* matters, measured by the number of beatifications and canonizations (see section 6).

are, to the best of our knowledge, the first to provide empirical evidence showing that a divided elite in one of the largest and oldest organizations can have an impact on the selection of its leader and hence on conflict.

The remainder of this paper is organized as follows. Section 2 provides the historical context, describing popes, cardinals and the conclaves. Section 3 describes the sources of our data, while section 4 presents the econometric framework and discusses identification. Section 5 presents the results on conclave length and conflict, while section 6 provides evidence of the potential mechanisms. Finally section 7 states the conclusion.

2 Historical Background

2.1 The popes and the states of the church

The title *pope* is employed to denote the bishop of Rome, who as successor of St. Peter is the chief pastor of the whole catholic church (Joyce, 1911).⁶ As other medieval bishops, the bishop of Rome possessed local states and castles, but in addition the pope claimed much more widespread *temporal* possessions (Chambers, 2006). These possessions were acquired through political donations, such as the one made by emperor Constantine I (272–337), and their successive confirmations.⁷ The most significant donation came from Pepin, King of the Franks, in 751, and was later confirmed by his son Charlemagne.⁸

Over the course of the next centuries the size of the states of the church varied considerably. The pope relied heavily on the support of the Carolingian emperors, and according to Schnürer (1912) this alliance remained the necessary condition for the existence of the papal states until the end of the Staufen dynasty in 1268. During this period a more coherent papal state starts to emerge in central Italy, with some recognised boundaries (Chambers, 2006). The first king of the Habsburg dynasty, Rudolph I, renounced all imperial rights in the Romagna region in 1279, allowing it to be integrated into the papal states (Collins, 2009). Figure 1, taken from Chambers (2006), shows in white the extent of the states of the church between the thirteenth and nineteenth centuries.

Political control of the popes over the states of the church varied considerably throughout

⁶For a recent comprehensive history of the papacy and more references, see Duffy (2006) and Collins (2009).

⁷The “Donation of Constantine” allegedly gave the pope privileges and possessions in Italy, but there is consensus that the document is an eighth-century forgery.

⁸For details and more references on the states of the church, see Schnürer (1912) and Chambers (2006).

our period of analysis. [Chambers \(2006\)](#) argues that “it would be wrong to suppose that all papal claims of secular jurisdiction, taxation and service were exactly defined, or that local warlords and others readily conceded obedience to Rome. This was no modern state yet, no equivalent to the contemporary strong monarchies of France or England” [p. XV]. Indeed, from 1309 until 1377 the popes resided at Avignon instead of Rome, exercising control of the papal states through military legates who often had to compromise with those in effective control there ([Chambers, 2006](#)). The popes regained control in 1353, to face another set back during the Great Schism (1378–1417). After its end pope Martin V (r. 1417–31) attempted to establish a centralized monarchy. Analyzing the papacy during the sixteenth and seventeenth century, [Collins \(2009\)](#) states that “once elected, the popes were absolute rulers within the city of Rome and the Papal States” [p. 371]. Before the outbreak of the French Revolution, the papal states comprised most of the territory that had belonged to them at the time of Charlemagne ([Schnürer, 1912](#)).

After the French Revolution the States of the Pope experienced important changes. In 1797 the pope had to give up Avignon to France, as well as other territories in Italy to the Cisalpine Republic. In 1809 the Papal States suffered from occupation by Napoleon, but were again restored in the Congress of Vienna (1815). However, the idea of national unification and the hatred against foreign rulers were already widespread in Italy ([Schnürer, 1912](#)). We end our period of analysis at the death of pope Gregory XVI in 1846, since his successor Pius IX implemented large changes in the temporal government of the Papal States. This is also the period regarded as the start of the process of unification of Italy with Count Cavour. The States of the Church were finally occupied in 1870, when France withdrew its troops because of the Franco-German war. In 1871 the law of the Papal Guarantees declared the Vatican, the Lateran Church and Castel Gandolfo as extra-territorial. However, pope Pius IX refused to accept this law, and locked himself in the Vatican. The Roman Question, as this conflict became known, was only resolved by the Lateran Treaty of 1929, establishing the Vatican City as an independent state.

Panel A of [Table 1](#) shows characteristics of the popes in our sample. The average age of the pope when elected is 61, though it presents significant variation, from 37 to 80. Time in office also presents significant variation, from just a few days to more than 24 years, with an average of 9 years. These variables have been regarded as relevant controls for the incidence of conflict in the literature ([Horowitz, McDermott, and Stam, 2005](#); [Bak and Palmer, 2010](#)).

However, there is little evidence of whether the age or tenure of popes actually played a role in regard to conflict in the papal states. [Collins \(2009\)](#) reproduces a speech given by Pius II (1458–64) defining his role in military operations: “We do not go to fight in person, since we are physically weak and priest, whom it does not befit to wield the sword” [pp. 56–57].

2.2 The cardinals

The cardinals of the Catholic Church constitute the elite of the church. They follow immediately after the pope and are therefore considered “the Princes of the Church” ([Sägmüller, 1908](#)). They are organized in three orders: cardinal-bishops, cardinal-priests and cardinal-deacons.⁹ Together these three orders form the College of Cardinals. Since the twelfth century the College of Cardinals has played an important role in the church, both liturgically and politically. They have been traditionally regarded as advisers to the pope ([Broderick, 1987](#)), participate in the administration of papal justice and finances, and can serve as legates of the pope ([Sägmüller, 1908](#)). More crucial for the purpose of this paper, cardinals have an important role after the death of the pope (*sede vacante*): the administration of the States of the church and the election of a new pope. We provide more details of this later in the paper.

A new cardinal can be nominated only by the pope. However, cardinals-to-be required the effort of other cardinals and civil rulers to secure their nomination.¹⁰ Traditionally, the total number of cardinals was supposed to be limited to 53, with 7 cardinal-bishops, 28 cardinal-priests and 18 cardinal deacons. However, as shown in [Figure 2](#), this theoretical maximum was not met for most of the three first centuries in our sample.¹¹ [Panel B of Table 1](#) shows that before the reforms of 1586–88 the average number of cardinals participating in conclaves was 27. There was only one conclave before 1586 with more than 53 cardinals:

⁹The orders of cardinalate had a major impact before the two-third rule, where the cardinal-bishops were conferred “principal judgment” (i.e. having priority in the election over cardinal-priests and cardinal-deacons). After the two-third rule was established, the cardinal-bishops established themselves as leaders of factions of cardinal-priests and cardinal-deacons.

¹⁰[Broderick \(1987\)](#) gives the example of the Aragon kings to illustrate the eagerness of rulers to obtain places in the College of Cardinals for their subjects. [Hollingsworth \(2006\)](#) presents a vivid depiction of bishop Ippolito d’Este (1479–1520)’s everyday life, as well as his struggle to obtain the red hat, symbol of the cardinalate.

¹¹[Figure 2](#) shows the number of cardinals participating in each of the conclaves in our sample. In looking at cardinals participating in conclaves we follow [Broderick \(1987\)](#), who argues that for the Middle Ages the size of the College of Cardinals is better determined on the occasion of papal elections.

the election of Paul IV in 1555, where 56 cardinals participated in the conclave. According to Broderick (1987), the reason to have few cardinals during this period is attributable to the pressure of the cardinals themselves: “Motivating this policy was ambition to inflate the power and prestige of individual cardinals, and to increase their income” [p. 28].¹²

Two apostolic constitutions issued in 1586 (*Postquam verus*) and 1588 (*Immensa*) by pope Sixtus V (r. 1585–90) changed the organization of the College of Cardinals and reduced its power permanently (Walsh, 2011a). He established 70 as the permanent maximum number of cardinals, with 6, 50, and 14 cardinals for the bishop, priest and deacon orders, respectively. He also set up a system of congregations, which reduced the role of *consistories* (regular gatherings of the College of Cardinals with the pope), and thus the opportunities for the cardinals to meet and exercise their influence acting as a college (Broderick, 1987; Walsh, 2003; Walsh, 2011a). The role of the cardinals as papal advisors also declined as their number increased (Collins, 2009). Even though succeeding popes were as free as Sixtus V to change limit on the number of cardinals, it was kept at 70 until 1958, when pope John XXIII (r. 1958–63) increased the number of cardinals to 75. Panel B of Table 1 shows that after 1586 the average number of cardinals participating in conclaves raised to 54. However, it still displays significant variation across conclaves, with 35 and 66 cardinals as the minimum and maximum, respectively.

2.3 The conclaves

The conclave is the procedure to select a new pope. In this section we highlight key elements of the conclaves that are relevant for our empirical strategy. We focus on the rules that were in place during our period of observation (1295–1846).¹³

The duty of electing a new ruler (the pope) falls solely into the hands of the College of Cardinals. These elections occur behind closed doors (hence the name of conclave, “with key”), and only the cardinals participate. Figure 3 presents the timing of the conclave. Once the pope dies, the see is declared vacant (*sede vacante*) and limited powers are transferred

¹²The College of cardinals tried to limit the power of elected popes by imposing conditions to candidates, known as *capitulations* (Schaefer, 1908). One example is the election of pope Innocent VI in 1352. Schaefer (1908) states that “the conditions then laid down by the cardinals restricted the rights of the future pope, especially with regard to the nomination, punishment, or deposition of cardinals.”

¹³Colomer and Mclean (1998) and Toman (2004) discuss the main features of the conclaves, as well as changes that have occur along their history. See also Dowling (1908), Baumgartner (2003) and Walsh (2003) for more details and sources.

to the College of Cardinals. The conclave does not start immediately, since time is reserved for the pope’s burial and to allow cardinals traveling from other states to join the conclave. We denote the time between the death of the pope and the beginning of the conclave as *interregnum*.¹⁴ The conclave ends when a new pope is successfully elected.

We start our analysis with the election of pope Boniface VIII in December of 1294 because from this year onward the conclave regulations were effectively enforced.¹⁵ In theory, anyone (not only cardinals) could be elected as a pope, but most of the time the College ended up electing one of its own members. The election of the pope required a high level of consensus: two-thirds of the cardinals present in the conclave. The two-thirds rule was introduced in 1179 to achieve stability without having to reach unanimity.¹⁶ The practice of locking cardinals was introduced later in order to speed up the election process, which suffered from long delays. Panel C of Table 1 shows that the average length of a conclave in our sample is 51 days. As explained earlier, the papacy of Sixtus V made important changes to the College of Cardinals. These changes had an effect in the length of the conclave, with average lengths of 44 and 60 days for conclaves occurring before and after the reforms to the College of Cardinals, respectively.

Only one vote per day was allowed, and even though the secret vote was formally adopted in the sixteenth century, Colomer and Mclean (1998) assert it was used in earlier conclaves. They also state that from 1294 to 1621 the ballot used in the conclaves was a form of approval voting: the voter could choose either one or several candidates. Cardinals were advised though not to choose too many candidates.¹⁷ The ballot was changed to a categorical ballot (single choice for a candidate) after 1621. Also in 1621 the number of votes per day was increased to two. Finally, there was no elimination of candidates between one round and the following, and candidates were always eligible even if they did not appear in previous rounds.

¹⁴Commonly *interregnum* has been used to symbolize the same period of *sede vacante*.

¹⁵This was not the first pope to be elected in a conclave. Pope Gregory X established the conclave in 1274, and the election of popes Innocent V, Adrian V and John XXI in 1276 lasted only for 2, 10 and 21 days, respectively. However, John XXI revoked the creation of the conclave, and the following and the following 5 elections were deadlocked for long periods. Finally, pope Celestine V in 1294 re-established the practice of the conclave (Miranda, 2012). See Colomer and Mclean (1998) for a discussion of the motives of Celestine V for adopting the conclave. He abdicated the throne the same year.

¹⁶See Colomer and Mclean (1998) for a discussion of the introduction of this rule and how, under concavity in voter preferences, the rule is invulnerable to cycles.

¹⁷Colomer and Mclean (1998) find that the average number of candidates voted by a cardinal during this period was between 1.5 and 2.

3 Data sources

3.1 Conclaves, popes and cardinals characteristics

Our list of officially recognized popes, together with the length of the papacy comes from [Duffy \(2006\)](#). We exclude anti-popes and pseudo-cardinals (cardinals created by anti-popes) from the main analysis. During the Great Schism (1378–1417) we consider the popes of the Roman Obedience.¹⁸

Our primary sources of information regarding the length of conclaves and vacant see, and cardinals’ birthplaces are [Miranda \(2012\)](#) and [Cheney \(2012\)](#). We classify cardinals’ birthplaces according to the political entity (e.g. kingdom, city-state, duchy) that controlled them when they were born.¹⁹ For instance, if a cardinal was born in Milan in a period in which Milan was under the Spanish rule, we classify his birthplace as Spain. We consider political unions across our dataset. For example, we classify as Aragonese those cardinals born in Barcelona before 1469, the year of the marriage of the Catholic Kings.²⁰ If they were born after 1469, we classify them as Spanish. Online Appendix A gives precise details of the creation of birthplace-groups.

Table 2 shows our resulting groups. Our sample consists of 1,292 cardinals in 43 different birthplace-groups. Cardinals from the Papal States constitute 31 percent of the sample, followed by French cardinals with 15 percent of the sample, and Spanish cardinals with 13 percent.²¹ But not all groups are present in every conclave: The average number of groups in our sample is 11, ranging from 4 groups in the conclaves that elected Innocent VI (1352) and Urban V (1362) to 16 groups in the conclaves that elected Urban VII (1590), Gregory XIV (1590), Innocent IX (1591), Clement VIII (1592), Innocent XII (1721) and Benedict XIV (1740).

Additional information for cardinals (year of birth/death, and year of nomination to the cardinalate) comes from [Miranda \(2012\)](#).

¹⁸Section 6.2 analyses the relation between polarization and the existence of anti-popes.

¹⁹Similarly we classify cardinal’s workplaces according to the political power that ruled over the last place where a bishop was based before he was nominated cardinal.

²⁰The marriage of the Catholic Kings implied the unification of the kingdom of Aragon and the kingdom of Castile.

²¹Cardinals can be grouped in broader categories, such as North, Center, and South Italy. The results of this exercise, available upon request, are quantitatively similar to those presented here.

3.2 Conflict

Our main source of information for internal disturbances within the Papal States is [Sorokin \(1937\)](#). The third volume of his book “Social and Cultural Dynamics” is devoted to the fluctuation of social relationships, war, and revolution, and it includes most of the recorded internal disturbances of importance in Europe. Internal disturbances are defined as disorders, riots, revolts or revolutions. Relying on various sources, he argues that the fact that these disturbances are mentioned in the annals of history is considered a sign of its importance.²² He also constructs a measure of the intensity of the disturbance, which relies on four elements: the extent of the area of the disturbance, the population involved, its duration, and the amount of violence. The index ranges from 0 to 100.

[Sorokin](#) does not distinguish between disturbances in the Papal States and other states within Italy. Therefore we classify the disturbances according to the place where they occurred. Of the 98 disturbances that [Sorokin](#) registered for Italy between 1295 and 1846, 18 occurred within the Papal States territories. It is somewhat surprising that [Sorokin](#) did not record any disturbance in the Papal States between 1511 and 1796. However, [Sorokin](#) does record internal disturbances for the rest of Italy for the period of 1511–1796 (used as a control in our regressions), although less frequent and smaller in magnitude than those before 1511. Therefore, there is no evidence that disturbances in the Papal States during the 16th and 17th centuries were overlooked by [Sorokin](#). We nonetheless enlarge these data with information on internal conflicts from [Alfani \(2013\)](#). This author does not report conflict intensity (at least comparable to [Sorokin](#)’s measure), therefore we only include these data when looking at incidence of conflict. [Table 3](#) lists all internal disturbances included in our analysis.

Panel A of [Table 4](#) shows our descriptive statistics for internal conflict. The incidence of conflict in the Papal States is 5.3 percent, since we observe 24 years with disturbances. Average intensity, conditional on the existence of conflict, is 13.37. As a comparison, [Sorokin](#) gives the Glorious Revolution in England (1688) an intensity of 25.59, and the French Revolution (1789) an index of 79.43.

Information regarding wars fought by the Papal States and other European powers was

²²[Sorokin](#) argues that many insignificant disorders “pass by without leaving any traces in the records of history. Even if they are mentioned by some of the contemporaries who happen to witness such disturbances . . . they are soon forgotten and have little chance of being passed on to subsequent generations” ([Sorokin, 1937](#), p. 385).

obtained from Brecke (2001), Lee (2012) and Ganse (2012). The inclusion of wars allows us to control for the possibility that revolts might be more likely to occur when the sovereign has focused his military resources on fighting wars (Vidal-Robert, 2013). Panel B of Table 4 shows that the Papal States were at war with other states 26 percent of the time in our sample.

3.3 Additional controls

Recent evidence shows that climate can be a relevant factor of civil conflict, particularly in Europe (Tol and Wagner, 2010; Hsiang, Burke, and Miguel, 2013; Lee, Zhang, Brecke, and Fei, 2013). To account for this, we use data from Germany and Central Europe temperature anomalies during our period of study (Glaser and Riemann, 2009).²³

We construct a dummy variable that takes the value of 1 if the year is a holy year of jubilee. This celebration, instituted by pope Boniface VIII in year 1300, granted a plenary indulgence (forgiveness of sins) to pilgrims to the four Basilicas in Rome during this year. The great influx of pilgrims during these years was an additional source of income for the papal finances (Collins, 2009). Panel C of Table 4 presents summary statistics for these variables.

In alternative specifications (not shown) we control for the price of wheat in Tuscany taken from Arroyo Abad and Lindert (2005) who constructed it from Malanima (2002), or for the consumer price index for Center and North Italy taken from Malanima (2013). The results are similar but we lose precision, since these variables are not available for all years we consider.²⁴

²³Glaser and Riemann (2009) define a temperature anomaly as the 11 year-moving average temperature difference versus the reference period (1761–1970). Following Lee, Zhang, Brecke, and Fei (2013), in alternative specifications we have included data for the North Atlantic Oscillation (NOA) from Trouet, Esper, Graham, Baker, Scourse, and Frank (2009). We do not present the results since they are very similar.

²⁴None of these controls is statistically significant when included in the regressions, and both are fairly correlated with weather anomalies (-0.22 for the consumer price index and -0.18 for the price of wheat).

4 Empirical Strategy

4.1 Measures of divisions among the cardinals

Our measures of disagreement among the cardinals are constructed based on the birthplaces of cardinals attending the conclave.²⁵ This choice is motivated by anecdotal evidence discussed in the introduction, as well as by Colomer and Mclean (1998), who contend that a relevant source of division among cardinals was their allegiance to each of the Christian kingdoms in Europe. We capture these allegiances by constructing distributional measures of the cardinals’ birthplaces. We follow Montalvo and Reynal-Querol (2005) to construct the following indexes:

$$FRAC = 1 - \sum_{i=1}^N \pi_i^2 \quad (1)$$

$$POL = \sum_{i=1}^N \pi_i^2 (1 - \pi_i) \quad (2)$$

where π_i is the proportion of cardinals attending the conclave that belong to the same birthplace group i . The fractionalization index (FRAC) can be interpreted as the probability that two randomly selected individuals in a given conclave will not belong to the same birthplace group. The polarization index (POL) corresponds to the index RQ in Montalvo and Reynal-Querol (2005), but it is also the index P used in Esteban, Mayoral, and Ray (2012) when the inter-group measure is binary. POL captures how far the distribution of groups is from a bipolar distribution (i.e. a distribution with its mass concentrated in two poles), which has the highest level of polarization.²⁶

The distributional measures for the cardinals’ birthplace are labeled as FRACBIRTH and POLBIRTH for fractionalization and polarization, respectively. In alternative specifications we use the cardinals’ working place to construct FRACWORK and POLWORK. Panel D of Table 4 shows descriptive statistics for these variables. In the Online Appendix B we

²⁵We exclude cardinals who die during the conclave, and are thus not present in the final vote that elects the pope.

²⁶See the discussion in Montalvo and Reynal-Querol (2005) and Esteban, Mayoral, and Ray (2012). Esteban, Mayoral, and Ray argue that POL and FRAC are based only on group sizes, and do not exploit variations in inter-group distances. Therefore they consider FRAC, a version of POL with a non-binary distance, and the Greenberg-Gini index as their distributional measures. They proxy for inter-group distance (which in their model is the inter-group difference in preferences over public goods) by using the groups’ linguistic distance. We discuss this issue in the robustness section.

further describe these variables, as well as provide additional details on their construction.

4.2 Identification

We estimate the following model:

$$y_t = \alpha + X_p\beta + Z_p\lambda + W_t\eta + \mu_{century} + \epsilon_t \quad (3)$$

where y_t is the outcome of interest (length of the conclave or our measure of internal conflict in the Papal States) in year t . X_p are the measures of disagreement among the cardinals (FRACBIRTH and POLBIRTH in our main regressions), Z_p are a set of controls at the papacy level (e.g. number of cardinals present in the conclave, length of the previous papacy), W_t is a set of year-varying controls (e.g. disturbances in other Italian regions, wars against other European states, weather, jubilee year), and ϵ_t is the error term. We allow for ϵ_t to be autocorrelated up to 10 lags and heteroscedastic (Newey and West, 1987).²⁷

Our coefficient of interest is β , namely the effect of FRACBIRTH and POLBIRTH on internal disturbances. As discussed earlier, we expect both to have a positive effect on the incidence of conflict. The identification assumption is that, conditional on papacy and time controls, the vector of measures of divisions among cardinals X_p is uncorrelated with the error term ϵ_t .

As previously mentioned, the death of popes, together with the deaths of cardinals, provide plausible exogenous variation in the timing of the conclave and in the composition of the College of Cardinals at the time of the conclave, and therefore in our measures of disagreement among them. Examples of popes dying unexpectedly abound. Leo X (r. 1513–1521) suddenly died of malaria at age forty-six, while Marcellus II (r. 1555) died of a stroke only twenty-two days after being elected (O’Malley, 2009). Baumgartner (2003) recounts how the death of Julius III (r. 1550–1555) caught both the emperor of the Holy Roman Empire and the king of France by surprise.²⁸ The same is true for cardinals. Moreover, since we construct our measures of fractionalization and polarization taking into account only cardinals present at the final vote, we further exploit variation in the cardinals’ presence due to poor health: Old cardinals were less likely to travel to the conclave, and those who

²⁷We choose 10 lags since the average tenure for popes is around 10 years. Our results are unaffected if we allow for more lags.

²⁸Upsets in the other direction were also common. One example is John XXII (r. 1316–1334), elected when he was seventy-two and reigning for eighteen more years.

became sick during the conclave would either abandon it or eventually die before it ended.²⁹ Still, cardinals are appointed by the pope himself, and popes with long tenures might have been able to replace a significant number of cardinals (conditional on their predecessors' deaths). In addition, the naming of cardinals changes the pool of potential candidates in the subsequent election. We address this issue in two ways. First, we control in all our specifications for tenure length of the previous pope. A long papacy might be able to replace more cardinals, and therefore have more influence on the subsequent conclave. Second, in the Online Appendix C we show that nominations of cardinals closely follow cardinals' deaths, at least in terms of numbers and distribution of places of birth. We also show that taking into account the differences between cardinals' deaths and appointments in our regressions does not affect the results.

Deaths as a source of exogenous variation has been already employed in the literature (e.g. [Jones and Olken, 2005](#); [Fracassi and Tate, 2012](#)). Our exogeneity assumption might be violated if many cardinals died of unnatural causes.³⁰ [Fornasin, Breschi, and Manfredini \(2010\)](#) analyze mortality patterns of cardinals between the sixteenth and twentieth centuries and report that poisoning is suspected as the cause of death for ten or more cardinals. However, [Bellenger and Fletcher \(2001\)](#) mention that stating poisoning as the cause of death was used to cover medical incompetence. Of the 1,292 cardinals in our sample, [Miranda \(2012\)](#) only states poisoning as the certain cause of death in 8 of them. There are other 26 cardinals described as “probably poisoned”, though some of them also list other probable causes of death.³¹ Therefore we do not regard deaths by poisoning as a concern to our empirical strategy.

²⁹There was no age limit for cardinals to participate in conclaves. A limit was introduced by Pope Paul VI in 1970, restricting the right to vote to cardinals under eighty.

³⁰Wikipedia lists only two popes that were allegedly murdered within our period of analysis: Boniface VIII in 1303 and Benedict XI in 1305 (see http://en.wikipedia.org/wiki/List_of_murdered_popes). Our results are unaffected if we drop these papacies from the regressions.

³¹For example, for cardinal Jacques de Via, who died in 1317, [Miranda \(2012\)](#) states that “Some sources have indicated that he may have died because of ‘witchcraft’ or due to being poisoned; others (...) indicate that he died of natural causes”.

5 Conflict in the Papal States: Evidence

5.1 Length of the conclave

Before turning to conflict, we explore whether disagreement among the cardinals had an effect on the length of the conclave. Evidence shows that U.S. juries deliberate longer when the cases are more complex (Brunell, Dave, and Morgan, 2009). Moreover, Hannaford-Agor, Hans, Mott, and Munsterman (2002) show that trials for which the jury is hung on any count have a much higher average juror response for “time and effort spent trying to convince others”. Therefore, the length of the conclave can be seen as an indicator for the struggle of the cardinals to find a consensus candidate, but it can also indicate the complexity of the screening process.

In Table 5 we assess whether our measures of fractionalization and polarization influence the length of the conclave. We estimate a duration model with conclave length, $l_{conclave}$, as our dependent variable. We present the coefficients estimates instead of the hazard ratios since we have continuous covariates. In columns 1 and 2 we include all conclaves in our sample. Column 1 does not include century dummies, and shows that both fractionalization and polarization measured using cardinals’ birthplaces (FRACBIRTH and POLBIRTH) decrease the hazard of an end of the conclave, but only the estimate of POLBIRTH is statistically significant at conventional levels. In column 2 we include century dummies, and both FRACBIRTH and POLBIRTH significantly reduce the hazard of an end of the conclave. To analyze whether the changes to the College of Cardinals implemented by pope Sixtus V had an effect on this relationship, we split the sample into papacies pre-reform (columns 3 and 4) and post-reform (columns 5 and 6). In the first half of our sample, only polarization is statistically significant, with 1 standard deviation increase in POLBIRTH reducing the hazard of an end of the conclave by 36 percent (column 4). By and large, these results indicate that a more polarized College of cardinals faced a longer conclave, particularly before the reforms of 1586–88. After the reforms to the College of Cardinals polarization has positive effect, increasing the likelihood of an end of the conclave.³² We do not find a robust and significant effect of fractionalization on the length of the conclave.

³²In this sample the variable *interregnum* has a negative and significant effect: a delay of 16 days to start the conclave (equivalent to 1 standard deviation) decreases the hazard of an end of the conclave by 67 percent (column 6).

5.2 Main result: polarization and conflict

Table 6 presents the results of estimating a linear probability model for equation (3) to analyze the effect of polarization and fractionalization in the College of Cardinals on the incidence of internal conflict. The dependent variable, $disturbances_t$, is a dummy variable taking the value of 1 if there was an internal disturbance in year t . In column 1 we include the measures of fractionalization and polarization constructed considering cardinals' birthplaces (FRACBIRTH and POLBIRTH, respectively), and only controlling by the number of cardinals attending the conclave, $ncard_p$. It is commonly believed that after long papacies the cardinals would choose older popes to have a *transitory regime*. Therefore in column 2 we add controls for the length of the previous papacy ($lpapacy_{p-1}$), as well as the number of days to start the conclave ($interregnum_p$) and the age of the pope when elected ($ageelected_p$). In column 3 we include the length of the current papacy up to year t ($tenure_t$), and controls for disturbances in other parts of Italy ($distitaly_t$), and wars of the Papal States with other European powers ($wars_t$). In column 4 we include controls for weather anomalies ($weather_t$) and jubilee years ($jubilee_t$). Finally, in columns 5 and 6 we include century and half-century dummies, respectively.

The estimates for POLBIRTH are positive and statistically significant at 1 percent across all specifications. An increase of 1 standard deviation in POLBIRTH (0.084) raises the probability of conflict by between 2.8 and 4 percent, depending on the specification. On the other hand, FRACBIRTH is statistically insignificant in all specifications.

Most of our controls are statistically insignificant, specially after including century and half-century dummies. Being at war with other states significantly increase the probability of internal conflict by 8.2 percent, while being in a holy year of jubilee decreases the probability of conflict by 5 percent (column 4).

As explained earlier, during the papacy of Sixtus V there were a number of reforms that changed the size and role of the College of Cardinals. Similarly to what we did to analyze the length of the conclave, in Table 7 we now split the sample into pre-reform (columns 1 to 3) and post-reform (columns 4 to 6). Looking at the pre-reform sample, we find that the effect of polarization on conflict is larger than in the pooled sample: A one standard deviation increase in POLBIRTH (0.119) raises the probability of conflict by 5.8 percent (column 3). In contrast, columns 4-6 show that both FRACBIRTH and POLBIRTH have

positive effect on conflict, but it is not significant at conventional levels.³³ Therefore the results are consistent with our premise that the reforms of Sixtus V, which reduced the power of the College of Cardinals, weakened the link between polarization and conflict.

Our results indicate that increasing polarization in the conclave by 1 standard deviation raises the likelihood of conflict in the years following the conclave. But our hypothesis suggests that conflict should arise earlier in the papacy, since a weak or inexperienced pope might learn from his mistakes over time. In Table 8 we present the results of estimating equation (3), but now including dummies for each triennium after the conclave, as well as interactions with POLBIRTH and FRACBIRTH. The table reports the marginal effect of POLBIRTH on the probability of conflict for each triennium after the conclave. Columns 1 and 2 we include all years, and we observe a positive and significant effect of POLBIRTH on conflict in the first 5 years after the conclave. The effect is the largest in years 3-5 after the conclave, with a 1 standard deviation increase in POLBIRTH raising the likelihood of conflict by 5.2 percent (column 2). After year 5 the effect becomes smaller and not statistically significant. In years 12-14 after the conclave the effect becomes negative and statistically significant, with a decrease of 12 percent in the likelihood of conflict for a 1 standard deviation increase in POLBIRTH. After year 14 the effect of POLBIRTH bounces back and forth between positive and negative, with a large negative and significant effect in years 21-23 after the conclave. These extreme values, however, are driven by very few observations, since the first 5 bins contain 92 percent of the sample. In columns 3 and 4 we restrict the sample to years after the reforms of 1586-88. The results are very similar to those presented in columns 1 and 2, with a positive and significant effect in the first 5 years after the conclave. In Figure 4 we plot the results from column 3, scaled so that each dot represents the effect of a 1 standard deviation increase in POLBIRTH on the probability of internal conflict. We only include the first 5 bins for ease of exposition, and because they comprise 98 percent of the pre-reform sample. These results are compatible with our learning hypothesis, where an initially weak pope becomes more experienced in suppressing revolts later in his tenure. We discuss this and other potential channels of causation later in the paper.

Columns 5 and 6 of table 8 also present results for the sample of years after the reforms. Despite the non-significant result in the previous table, here we find that polarization has a

³³We obtain similar results if we estimate the model for the whole sample and include a dummy variable equal to one for years after the reforms, interacted with FRACBIRTH and POLBIRTH.

positive and significant effect on conflict in years 3-5 after the conclave. The effect is large: a 1 standard deviation increase in POLBIRTH (0.050) raises the likelihood of conflict by between 13 and 15 percent.

Finally, to analyze the overall effect of POLBIRTH on the probability of internal conflict we estimate equation (3) with papacy-level (instead of year-level) data. We present these results in Table D-1 in the Online Appendix D. By and large these results confirm our previous findings: an increase in polarization during the conclave, measured by POLBIRTH, has a positive effect on the probability of disturbances in the following papacy. Regarding the magnitude of the effect, a one standard deviation increase in POLBIRTH (0.105) raises the probability of at least one conflict during a papacy by 24 percent (column 1).

5.3 Robustness

In this section we describe several regressions we perform to assess the robustness of our main result.

5.3.1 Alternative groupings: Workplace and popes

As mentioned earlier, cardinals needed the support of civil rulers for their nomination, and therefore their workplace could play a relevant role. In Table 9 we replicate our main result but now constructing the measures of polarization and fractionalization using the cardinals' place of work instead of their birthplace. These variables are labeled as FRACWORK and POLWORK for fractionalization and polarization, respectively. The correlation between the measures using workplace and birthplace is positive, but not immense, since many of the non-Italian cardinals in our sample resided in the Papal States (48 percent), compared to the 31 percent of cardinals whose place of birth is in the Papal States. The correlation between POLBIRTH and POLWORK it is 0.27 in the full sample and 0.53 in the pre-reform sample.

The results shown in Table 9 show that polarization in the College of Cardinals constructed with the cardinals workplaces significantly increased the likelihood of conflict, particularly before the 1586-88 reforms. The magnitude of the effect is larger than when birthplace is used to construct the groups: One standard deviation increase in polarization raises the likelihood of conflict by between 5.3 and 6.9 percent (columns 3 and 4).

Some authors (e.g. Baumgartner, 2003) have pointed out that cardinals nominated by

the same pope would constitute a faction in the conclave, usually commanded by the cardinal-nephew of the pope. In Table 10 we test whether distributional measures constructed using this alternative grouping had an effect on the likelihood of conflict. We include in the regressions the variables `FRACNOM` and `POLNOM`, which are measures of fractionalization and polarization constructed using the popes that nominated cardinals as the grouping variable. The results show that neither measure has a statistically significant effect on conflict, suggesting that geography-based measures of differences among cardinals played a more important role in the incidence of conflict in the Papal States.

5.3.2 Polarization and fractionalization weighted by distance

Throughout the paper we use “binary” measures of fractionalization and polarization, i.e. without considering inter-group distances. Esteban, Mayoral, and Ray (2012) find that distributional measures that take into account inter-group distances better predict the incidence of ethnic conflict. We allow for this possibility by replacing our measures of polarization and fractionalization by the following indexes:

$$FRACBIRTH^* = \sum_{i=1}^N \sum_{j=1}^N \pi_i \pi_j d_{ij} \quad (4)$$

$$POLBIRTH^* = \sum_{i=1}^N \sum_{j=1}^N \pi_i^2 \pi_j d_{ij} \quad (5)$$

where as before π_i is the proportion of cardinals belonging to a birthplace group i , and d_{ij} is a measure of distance between birthplace groups i and j . These indexes collapse to `FRACBIRTH` and `POLBIRTH` when d_{ij} is just a 0—1 variable. This distance is meant to capture differences in preferences over public goods. We depart from the conflict literature and use the log of the distance between capital cities as our measure of distance, instead of linguistic distance.³⁴ Our argument for this choice is both historical as well as practical. Latin was the common language of the clergy, and most cardinals spoke several languages.³⁵ Therefore it does not seem appropriate to use language as a proxy for differences in cardinals’ preferences.

³⁴We computed “as the crow flies” distances (the shortest distance between two points) using the Google Maps API.

³⁵See Burke (2004) for a discussion on the use of Latin in the church. Latin was also used by lawyers, officials, diplomats and travellers.

We present the results of this exercise in Table 11. Columns 1 and 2 show the results for the whole period, while columns 3 and 4 restrict the sample to the pre-reform period, and columns 5 and 6 restrict it to the post-reform period. Polarization has a positive and significant effect, while fractionalization is statistically significant. A one standard deviation increase in polarization for the whole sample (0.135) raises the probability of conflict by between 2.7 and 3.6 percent, while for the pre-reform sample our results are significantly larger: a one standard deviation increase in polarization (0.170) raises the probability of conflict by between 3.5 and 4.8 percent. In the post-reform period we find a positive but statistically insignificant effect of polarization. The similarity in terms of magnitudes of these results to the ones in our benchmark specification validate the use of the “binary” measures of disagreement among the cardinals.

5.4 Alternative outcomes: conflict intensity and wars

5.4.1 Intensity of internal disturbances

We have seen that a more polarized College of Cardinals increases the probability of internal conflict during the subsequent papacy. But does increased polarization affect the magnitude of these disturbances? We test for this possibility by estimating equation (3), but now with the intensity of conflict as the dependent variable. As explained before, we only have this variable available for conflicts reported in Sorokin (1937).

Table 12 presents our results. We show results for Tobit estimations to account for censoring at zero. In columns 1 and 2 we show results for the whole sample and for the pre-reform sample in columns 3 and 4. We omit the estimates for the post-reform period since we observe few conflicts from Sorokin’s data. Our measure of polarization in the College of Cardinals is positive and significant in all specifications. Conditional on observing a conflict, a one standard deviation increase in POLBIRTH raises the intensity of conflict in the pre-reform sample by 10.68, equivalent to an increase of 81 percent in the average intensity (column 2).

5.4.2 Wars against other states

In this section we analyze whether our measures of disagreement among the cardinals can explain the incidence of wars against other states. We do not have a clear prediction regarding the sign of the coefficient on polarization. On the one hand, more polarized

conclaves might debilitate the position of elected popes to fight wars against other states, either by “tying his hands” with capitulations, or by agreements among different factions of cardinals. On the other hand, a weaker pope might make the Papal States more likely to be attacked by other states. [Chiozza and Goemans \(2011\)](#) also argue that weak leaders might find worthy to start a war to increase their legitimacy at home.

We estimate a linear probability model where the dependent variable is dummy variable indicating whether the Papal States were at war with other state. Columns 5-10 of [Table 12](#) present these results. Looking at the results for the whole sample (columns 5 and 6), we find that polarization has a positive effect on the probability of war, but its effects is not statistically significant at conventional levels. The effect of fractionalization on the likelihood of war, on the other hand, is positive and significant in column 1 but disappears when we include controls in column 2. In columns 7 and 8 we restrict the sample to pre-reform years, and find similar results to those for the full sample, with a positive effect of polarization on the incidence of wars statistically significant at 10 percent. Finally, in columns 9 and 10 we look at years post-reform, and find that both polarization and fractionalization have a negative and imprecise effect on conflict. Taken together, these results provide evidence that, despite increasing the likelihood of internal conflict, more polarization among the cardinals did not have a significant impact on the likelihood of being at war with other states.

6 Identifying the Mechanism

We have argued that a more polarized conclave might increase the likelihood of internal conflict through the election of a weak pope that is less able to suppress revolts. Most of the results presented in the previous section, however, are also consistent with alternative interpretations. In this section we discuss them and provide suggestive evidence in favor of our proposed mechanism.

6.1 Disturbances in the rest of Italy

If division among the cardinals had an effect on internal conflict only in the Papal States because it proxies for the quality of the pope as a leader, we should not observe an increase in disturbances elsewhere. In [Table 13](#) we perform this falsification test, with a dummy for

disturbances in Italy excluding the Papal States ($distitaly_t$) as our dependent variable. We find that polarization has no effect on the likelihood of disturbances in the rest of Italy, neither in the full nor in the pre- or post-reform samples. These results indicate that it is unlikely that polarization in the College of Cardinals is proxying for conflict throughout all Italy. They also provide evidence against and increase in the incidence of conflict because of the weakness of the pope on religious grounds. If this were the case, conflict should be observed elsewhere in Italy, and not only within the Papal States.

6.2 Foreign popes, antipopes and papal territories

Some scholars have pointed out that the Roman people were not pleased when a conclave culminated in the election of a foreign pope (Baumgartner, 2003).³⁶ In columns 1-3 of table 14 we investigate whether the nationality of the pope has an effect on the occurrence of conflict. We add a dummy variable indicating whether the pope is Italian but not from the Papal States, and a dummy for whether the pope is non-Italian.³⁷ These two variables do not have a statistically significant effect on the likelihood of conflict and, perhaps more importantly, the estimates for POLBIRTH remain unaltered.

The remainder of Table 14 presents evidence that increased polarization made it more likely to have an antipope elected (columns 4 and 5), as well as to reduce the size of the papal territories (columns 6–8). These results provide some support to one of the most plausible alternative mechanisms, namely that conclaves with high polarization among the cardinals would leave the losing faction dissatisfied with the outcome of the election, and this group would support revolts. However, this explanation is difficult to differentiate from our proposed interpretation that polarized conclaves elected weak popes, and these weak popes were not able to suppress revolts. Indeed, these two mechanisms were likely to reinforce each other: Weak popes were less able to keep their cardinals at bay, while dissident cardinals further weakened the political power of the pope. Two of the results we have discussed in the previous sections suggest that our preferred explanation is more plausible. First, we do not find strong evidence of a statistically significant relationship between increased polarization and the likelihood of wars against the Papal States, which

³⁶Baumgartner (2003) argues that when a foreigner was elected the Roman mob was not able to plunder his house. Also, some feared that the papacy could be moved away from Rome.

³⁷We depart from our grouping strategy for birthplaces and define Italian as being born in the Italian peninsula.

would support the “losing faction” mechanism. And second, the effect of polarization on conflict is the largest at the beginning of the papacy, suggesting a process of learning-by-doing of the initially weak or inexperienced pope.

6.3 Religious productivity: canonizations and beatifications

We have shown that a more polarized conclave leads to more conflict, within the Papal States and also with other states. We have argued that a more polarized conclave elects consensus candidates that might not have enough support to suppress revolts. But did polarization also weaken the religious productivity of popes? To investigate this possibility we analyze canonizations (the naming of saints) and beatifications (the naming of blessed) as proxies for the pope’s religious productivity.³⁸ We rely on [Barro, McCleary, and McQuoid \(2011\)](#) for data on the number of beatified and canonized after 1592, and on [Walsh \(2011b\)](#) for data before 1592 (available only for the number of canonized).

Table 15 shows papacy-level regressions where the dependent variable is the rate of canonizations (number of canonizations per papacy) in columns 1-6, and the rate of beatifications (number of beatifications per papacy) in columns 7-8. None of these specifications provide evidence of a change in religious productivity due to polarization in the College of Cardinals, suggesting a low degree of complementarity between warfare and sainthood making.

7 Conclusions

Traditional models of conflict consider two parties (an elite and an oppressed group) that fight against each other. We argue that in most cases the elite is not a unified body, but it is composed of several groups that can disagree, particularly when selecting their leader. If we were able to find exogenous variation on the level of disagreement among elite groups, we could tease out its effect on the incidence and intensity of internal conflict. But two problems arise: First, how can we identify the different elite groups, and measure their disagreement? And second, disagreement among these groups can be spurred by conflict if it is not measured before conflict takes place.

³⁸See [Barro, McCleary, and McQuoid \(2011\)](#) for a discussion on the determinants of canonizations and beatifications. The process of canonization requires papal approval, and it is a major activity of the Catholic Church.

In this paper we overcome these issues by analyzing the effect of disagreement among cardinals during conclaves on internal conflict in the Papal States in 1295–1846. In the Catholic church the elite is clearly defined: the College of Cardinals elects the pope, and most of the time the successor comes from their own ranks. We construct measures of political grievances among the cardinals during the conclave based on their birthplace and analyze their impact on internal conflicts that took place in the subsequent papacy.

We first document that the length of a conclave is positively associated with an increase in polarization of the College of Cardinals, particularly before the reforms introduced in 1586–88. We interpret this result as evidence of the struggle of the cardinals to unite behind a single candidate, since even after controlling for the number of candidates attending the conclave (which we see as a proxy for the cost of the screening process), the coefficient on polarization measured by the cardinals’ birthplaces is still large and statistically significant.

We then show that our measure of polarization significantly increases the probability of internal conflict, while our measure of fractionalization has a negative effect but statistically insignificant. These results are robust to several alternative specifications, such as using cardinals’ workplace instead of birthplace to construct our measures of divisions, or taking into account distances between groups. We also find the effect of polarization to be larger in the first years of the papacy, to gradually fade after the fifth year. Consistent with our result for the length of the conclave, the relationship between polarization and the likelihood of conflict is stronger prior to the reforms introduced by pope Sixtus V, which permanently reduced the power of the College of Cardinals. Polarization also increases the intensity of conflict, but does not have a robust effect on the probability of being at war with other states.

Our results complement those of [Montalvo and Reynal-Querol \(2005\)](#) and [Esteban, Mayoral, and Ray \(2012\)](#), who find that polarization is the driving force of ethnic conflict, on two dimensions. First, we show that polarization among the elite significantly increases the incidence and intensity of conflict. This result is particularly relevant for autocracies, and in contexts where ethnicity is not a relevant marker. Second, we make use of the time series variation in our measures of both conflict and polarization within the Papal States, instead of relying on cross country data for identification. Between 1295 and 1846 the institution of the conclave remained almost unaltered, making it one of the longest lasting mechanisms for leader selection.

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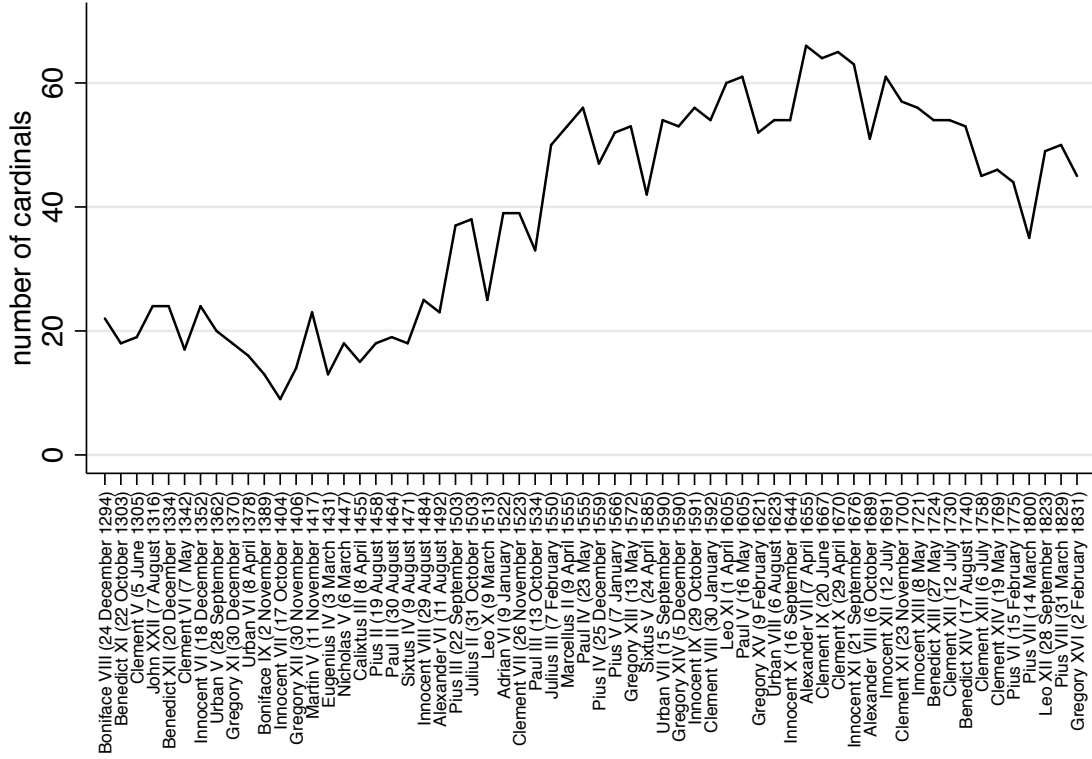
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Figure 1: The Papal States



Source: D.S. Chambers, *Popes, cardinals and war: the military church in Renaissance and early modern Europe*, 2006.

Figure 2: Number of cardinals in conclaves



Notes: The figure plots the number of cardinals present in each conclave. The horizontal axis shows the name of the pope elected, with the date of election in parenthesis.

Figure 3: Timing of papal elections

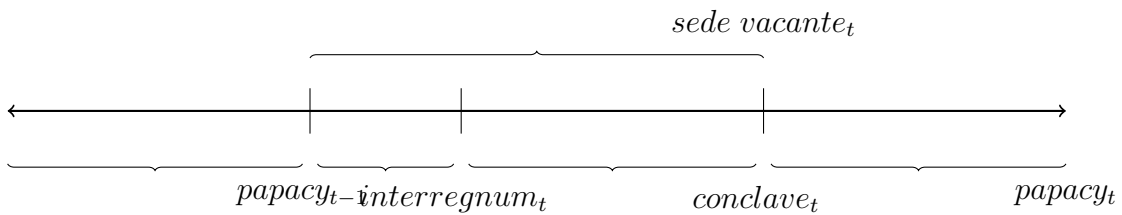
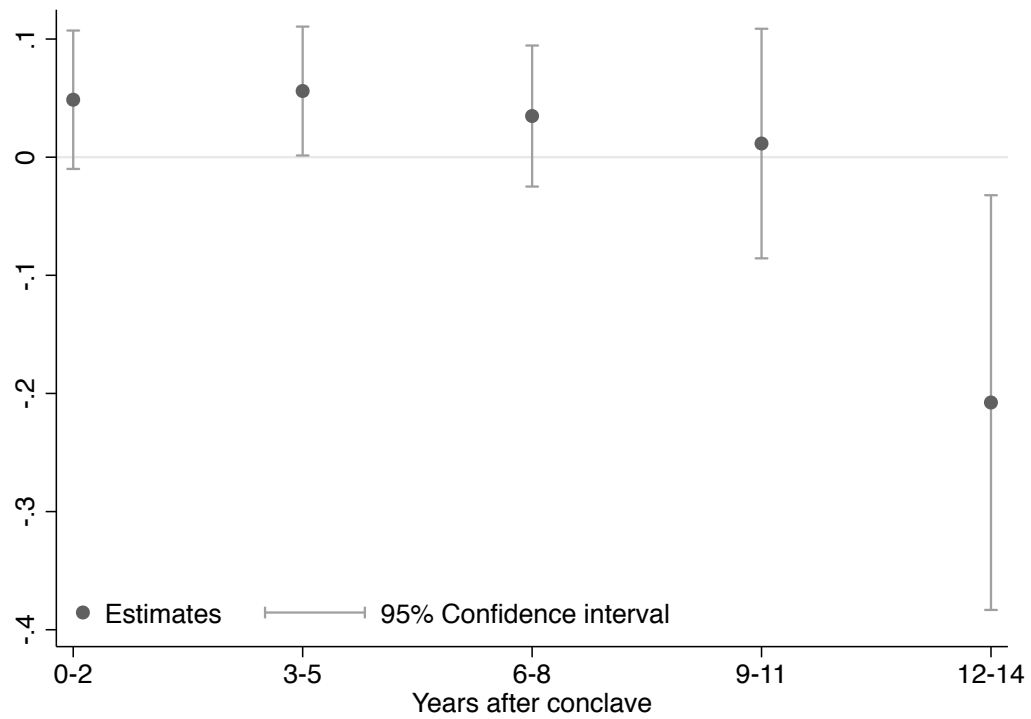


Figure 4: The effect of polarization on conflict



Notes: The figure shows estimates of the effect of a 1 s.d. increase in POLBIRTH on the probability of conflict, and are computed using the coefficients from column 3 in Table 8.

Table 1: Popes, cardinals and conclaves

Variable	Mean	Std. Dev.	Min.	Max.	N
A. Popes					
Age when elected (years)	61.42	10.54	37.30	79.90	62
Tenure (100 days)	31.72	22.11	0.12	89.62	62
B. Cardinals					
Number of cardinals	39.19	17.24	9.00	66.00	62
Number of cardinals pre-reform	27.83	13.74	9.00	56.00	35
Number of cardinals post-reform	53.93	7.18	35.00	66.00	27
C. Conclaves					
Conclave length (100 days)	0.509	1.140	0.02	8.17	62
Conclaves pre-reform (100 days)	0.439	1.462	0.02	8.17	35
Conclaves post-reform (100 days)	0.600	0.487	0.02	1.80	27
Vacant see (100 days)	0.788	1.541	0.12	8.62	62
Interregnum (100 days)	0.279	1.077	0.08	8.58	62

Notes: All sources are listed in the text. The unit of observation is a papacy. The pre-reform sample includes conclaves occurring before 1586, while the post-reform sample includes conclaves on or after 1586. In panel B we include only cardinals participating in conclaves.

Table 2: Grouping of Cardinals' place of birth

Origin	Number	Percent	Origin	Number	Percent
Aragon	14	1.08	Milan	34	2.63
Austria	39	3.02	Modena	4	0.31
Baden	1	0.08	Naples	52	4.02
Bamberg	2	0.15	Papal States	404	31.27
Bavaria	1	0.08	Parma	6	0.46
Belgium	1	0.08	Perugia	1	0.08
Bologna	2	0.15	Poland	6	0.46
Burgundy	3	0.23	Portugal	20	1.55
Castile	11	0.85	Prato	1	0.08
Cyprus	1	0.08	Provence	1	0.08
England	27	2.09	Ravenna	1	0.08
Ferrara	3	0.23	Sardinia	10	0.77
Flanders	2	0.15	Savoy	18	1.39
Florence	89	6.89	Saxony	2	0.15
France	190	14.71	Sicily	1	0.08
Genoa	44	3.41	Siena	9	0.7
Hesse-Darmstadt	1	0.08	Spain	161	12.46
Holy Roman Empire	25	1.93	Swiss Confederation	1	0.08
Hungary	11	0.85	Todi	1	0.08
Lithuania	1	0.08	Urbino	2	0.15
Lucca	5	0.39	Venice	76	5.88
Mantua	8	0.62	Total	1,292	100

Notes: All sources are listed in the text. The unit of observation is a cardinal.

Table 3: List of internal disturbances in the Papal States

Year	Disturbance	Source	Intensity
1296	Coup d'etat at Rimini	Sorokin (1937)	5.60
1303	Armed attack of Pope	Sorokin (1937)	3.91
1308	Civil war at Ferrara, Modena and Reggio	Sorokin (1937)	12.05
1317	Insurrection at Ferrara	Sorokin (1937)	6.60
1327	Revolution at Rome	Sorokin (1937)	7.92
1332	Disturbances at Bologna	Sorokin (1937)	5.82
1349	Roman revolution (Cola di Rienzi)	Sorokin (1937)	16.14
1375-8	Uprising in the Pope's province	Sorokin (1937)	24.1
1393	Disturbances at Viterbo and Perugia	Sorokin (1937)	9.08
1405	Disturbances at Rome	Sorokin (1937)	9.66
1410-2	Civil war at Bologna	Sorokin (1937)	15.52
1416	Insurrection at Bologna	Sorokin (1937)	15.17
1434	Republican insurrection at Rome	Sorokin (1937)	17.10
1488	Murder of the tyrant at Forli-Fachino	Sorokin (1937)	4.54
1502	Uprising of the condottieri in Romagna	Sorokin (1937)	9.06
1511	Disturbances at Rome	Sorokin (1937)	9.66
1528	Anti-Spanish uprising in Aquila	Alfani (2013)	-
1545	Farnese vs The Papal States	Alfani (2013)	-
1590	Disturbances at Mantua	Alfani (2013)	-
1635	Disturbances at Nonantola	Alfani (2013)	-
1648	Disturbances at Bologna	Alfani (2013)	-
1796-7	Republican insurrection in middle Italy	Sorokin (1937)	15.17
1831	Revolution at Romagna, Parma, and Modena	Sorokin (1937)	15.17

Notes: The table shows all conflicts in the Papal States included in our sample. The name of the disturbance is taken from the source. Intensity is an index that ranges from 0 to 100 constructed based on four elements: the extent of the area of the disturbance, the population involved, its duration, and the amount of violence.

Table 4: Conflict, fractionalization, polarization and additional controls

Variable	Mean	Std. Dev.	Min.	Max.	N
A. Internal Disturbances					
Disturbances in Papal States (incidence)	0.053	0.223	0.000	1.000	552
Disturbances in Papal States (intensity)	0.581	3.023	0.000	24.100	552
Conditional on conflict	13.366	6.378	3.910	24.100	24
Disturbances in the rest of Italy (incidence)	0.168	0.375	0.000	1.000	552
B. Wars					
Wars against other states (incidence)	0.261	0.440	0.000	1.000	552
Wars against other states (number)	0.315	0.573	0.000	3.000	552
C. Additional controls					
Temperature anomalies	-0.249	0.262	-1.168	0.492	552
Jubilee year	0.034	0.182	0.000	1.000	552
D. Polarization and fractionalization					
FRACBIRTH	0.739	0.115	0.265	0.890	552
POLBIRTH	0.607	0.084	0.385	0.790	552
FRACWORK	0.618	0.202	0.185	0.920	552
POLWORK	0.585	0.110	0.292	0.739	552

Notes: All sources are listed in the text. The unit of observation is a year. In Panel A, intensity of disturbances is constructed with data from [Sorokin \(1937\)](#).

Table 5: Determinants of conclave length

Dep. Variable: Papacies:	All		<i>lconclave</i> Pre-reform		Post-reform	
	(1)	(2)	(3)	(4)	(5)	(6)
FRACBIRTH	-0.795 (0.852)	-4.403*** (1.677)	-0.307 (0.967)	-1.723 (1.372)	30.591* (16.870)	32.518 (24.631)
POLBIRTH	-3.691** (1.620)	-3.047 (1.879)	-3.573** (1.812)	-3.645* (1.948)	33.364** (13.705)	35.372* (19.861)
$ncard_p$	-0.026*** (0.010)	-0.016 (0.019)	-0.025* (0.014)	-0.027 (0.020)	0.007 (0.028)	-0.036 (0.053)
$lpapacy_{p-1}$	0.004 (0.006)	0.010 (0.006)	0.007 (0.009)	0.009 (0.009)	0.013 (0.010)	0.023* (0.013)
$interregnum_p$	0.009 (0.051)	-0.004 (0.047)	-0.001 (0.033)	-0.006 (0.032)	-1.875** (0.772)	-4.246*** (1.296)
Century dummies	no	yes	no	yes	no	yes
Observations	62	62	35	35	27	27
R-squared	0.029	0.082	0.025	0.051	0.069	0.157

Notes: Coefficients are estimated from a Cox Proportional Hazard model. Coefficients, and not hazard ratios, are reported with robust standard errors in parenthesis. The dependent variable *lconclave* is the length of the conclave. FRACBIRTH and POLBIRTH are fractionalization and polarization measures using the birthplace of cardinals as grouping. $ncard_p$ is the number of cardinals in the conclave, $lpapacy_{p-1}$ is the length of the previous papacy, and $interregnum_p$ is the number of days between the death of the pope and the start of the conclave. *lconclave*, $lpapacy_{p-1}$ and $interregnum_p$ are measured in hundreds of days. The pre-reform sample includes conclaves occurring before 1586, while the post-reform sample includes conclaves on or after 1586. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively.

Table 6: Fractionalization, polarization, and disturbances in the Papal States

Dep. Variable:	Disturbances within the Papal States _t					
	(1)	(2)	(3)	(4)	(5)	(6)
FRACBIRTH	-0.007 (0.109)	-0.010 (0.114)	-0.054 (0.126)	-0.037 (0.118)	-0.087 (0.118)	-0.077 (0.110)
POLBIRTH	0.373*** (0.112)	0.381*** (0.112)	0.353*** (0.105)	0.339*** (0.105)	0.444*** (0.126)	0.477*** (0.140)
<i>ncard_p</i>	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.001** (0.001)	-0.004*** (0.001)	-0.004 (0.002)
<i>lpapacy_{p-1}</i>		-0.001** (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
<i>interregnum_p</i>		0.005 (0.007)	0.009 (0.008)	0.008 (0.008)	0.015* (0.008)	0.013 (0.009)
<i>ageelected_p</i>		0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
<i>tenure_t</i>			0.000 (0.002)	-0.000 (0.002)	-0.000 (0.002)	-0.000 (0.002)
<i>distitaly_t</i>			0.039 (0.033)	0.040 (0.032)	0.043 (0.035)	0.043 (0.035)
<i>wars_t</i>			0.080** (0.037)	0.082** (0.038)	0.083** (0.040)	0.079* (0.043)
<i>weather_t</i>				0.054 (0.042)	0.029 (0.042)	0.021 (0.046)
<i>jubilee_t</i>				-0.050*** (0.016)	-0.048*** (0.018)	-0.048*** (0.018)
Century dummies	no	no	no	no	yes	no
Half-century dummies	no	no	no	no	no	yes
Observations	552	552	552	552	552	552
R-squared	0.046	0.055	0.081	0.085	0.097	0.098

Notes: Coefficients are estimated from a linear probability model with Newey-West standard errors allowing for a maximum of 10 lags in parentheses. The dependent variable is a dummy indicating whether there were disturbances within the Papal States during year t . FRACBIRTH and POLBIRTH are fractionalization and polarization measures using the birthplace of cardinals as grouping. $ncard_p$ is the number of cardinals in the conclave, $lpapacy_{p-1}$ is the length of the previous papacy. $interregnum_p$ is the number of days between the death of the pope and the start of the conclave. $lpapacy_{p-1}$ and $interregnum_p$ are measured in hundreds of days. $ageelected_p$ is the age of the pope when elected, in years. $tenure_t$ is the length of the papacy up to year t , in years. $distitaly_t$ is a dummy indicating whether there were disturbances in Italy (not including the Papal States) during year t . $wars_t$ is a dummy indicating whether the Papal States were at war with other European states. $weather_t$ is a measure of temperature anomalies. $jubilee_t$ is an indicator for Holy years of Jubilee. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively.

Table 7: Before and after reform

Dep. Variable: Sample:	disturbances _t					
	Pre-reform			Post-reform		
	(1)	(2)	(3)	(4)	(5)	(6)
FRACBIRTH	-0.017 (0.117)	-0.058 (0.138)	-0.117 (0.137)	0.084 (0.569)	0.322 (0.553)	0.114 (0.411)
POLBIRTH	0.418*** (0.131)	0.352*** (0.134)	0.485*** (0.150)	0.422 (0.548)	0.687 (0.551)	0.440 (0.428)
<i>ncard_p</i>	-0.001 (0.001)	-0.001 (0.001)	-0.005* (0.003)	-0.001 (0.001)	-0.003 (0.002)	-0.004** (0.002)
<i>lpapacy_{p-1}</i>		-0.000 (0.001)	-0.000 (0.001)		0.000 (0.000)	0.000 (0.000)
<i>interregnum_p</i>		0.010 (0.008)	0.018** (0.008)		-0.121** (0.057)	-0.108** (0.048)
<i>ageelected_p</i>		0.001 (0.002)	0.001 (0.002)		0.002 (0.001)	0.002* (0.001)
<i>tenure_t</i>		-0.002 (0.004)	-0.002 (0.003)		0.003 (0.002)	0.003 (0.002)
<i>distitaly_t</i>		0.061 (0.044)	0.065 (0.047)		-0.017 (0.012)	-0.017 (0.011)
<i>wars_t</i>		0.116* (0.063)	0.104 (0.066)		0.037 (0.032)	0.037 (0.032)
<i>weather_t</i>		0.088 (0.061)	0.056 (0.066)		-0.006 (0.052)	0.022 (0.051)
<i>jubilee_t</i>		-0.075*** (0.027)	-0.079** (0.031)		-0.024 (0.015)	-0.022 (0.017)
Century dummies	no	no	yes	no	no	yes
Observations	291	291	291	261	261	261
R-squared	0.037	0.095	0.104	0.020	0.059	0.068

Notes: Coefficients are estimated from a linear probability model with Newey-West standard errors allowing for a maximum of 10 lags in parentheses. The dependent variable is a dummy indicating whether there were disturbances within the Papal States during year t . FRACBIRTH and POLBIRTH are fractionalization and polarization measures using the birthplace of cardinals as grouping. $ncard_p$ is the number of cardinals in the conclave, $lpapacy_{p-1}$ is the length of the previous papacy. $interregnum_p$ is the number of days between the death of the pope and the start of the conclave. $lpapacy_{p-1}$ and $interregnum_p$ are measured in hundreds of days. $ageelected_p$ is the age of the pope when elected, in years. $tenure_t$ is the length of the papacy up to year t , in years. $distitaly_t$ is a dummy indicating whether there were disturbances in Italy (not including the Papal States) during year t . $wars_t$ is a dummy indicating whether the Papal States were at war with other European states. $weather_t$ is a measure of temperature anomalies. $jubilee_t$ is an indicator for Holy years of Jubilee. The pre-reform period includes years 1295–1585, while the post-reform period includes years 1586–1846. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively.

Table 8: Persistence of the Effect

Sample:	All		Pre-reform		Post-reform	
	(1)	(2)	(3)	(4)	(5)	(6)
Years since conclave:						
0-2	0.374** (0.184)	0.431** (0.187)	0.468 (0.288)	0.537** (0.266)	-0.667 (0.665)	-1.094 (0.680)
3-5	0.561** (0.241)	0.619** (0.271)	0.539** (0.268)	0.645* (0.343)	3.036** (1.363)	2.680** (1.238)
6-8	0.284 (0.219)	0.370 (0.237)	0.335 (0.293)	0.502 (0.334)	0.273 (0.430)	0.141 (0.495)
9-11	0.098 (0.425)	0.216 (0.412)	0.111 (0.477)	0.309 (0.503)	0.029 (0.341)	-0.134 (0.468)
12-14	-1.460* (0.782)	-1.318* (0.798)	-2.000** (0.862)	-1.126 (1.433)	-1.818 (1.834)	-1.616 (1.810)
15-17	1.693** (0.720)	1.932*** (0.709)	2.871* (1.533)	3.570* (1.857)	0.270 (0.304)	0.433 (0.294)
18-20	-0.087 (0.421)	-0.027 (0.460)			3.414* (2.017)	2.257 (1.912)
21-23	-63.475*** (12.698)	-59.299*** (13.709)			-62.668*** (12.834)	-65.778*** (12.779)
Additional controls	yes	yes	yes	yes	yes	yes
Century dummies	no	yes	no	yes	no	yes
Observations	552	552	291	291	261	261
R-squared	0.147	0.157	0.127	0.133	0.298	0.305

Notes: The table reports marginal effects of POLBIRTH on the probability of conflict for each triennium after the conclave. Coefficients are estimated from a linear probability model with Newey-West standard errors allowing for a maximum of 10 lags in parentheses. Additional controls are FRACBIRTH, dummies for triennia after the conclave and interactions with POLBIRTH and FRACBIRTH, $ncard_{p-1}$, $lpapacy_{p-1}$, $interregnum_{p-1}$, $ageelected_{p-1}$, $tenure_t$, $distitaly_t$, $wars_t$, $weather_t$ and $jubilee_t$. The pre-reform period includes years 1295–1585, while the post-reform period includes years 1586–1846. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively.

Table 9: Fractionalization and polarization computed using cardinals' workplace

Dep. Variable: Sample:	Disturbances within the Papal States _t					
	All		Pre-reform		Post-reform	
	(1)	(2)	(3)	(4)	(5)	(6)
FRACWORK	-0.061 (0.053)	-0.121 (0.118)	0.577 (0.392)	0.600 (0.372)	-0.076 (0.300)	-0.298 (0.233)
POLWORK	0.224** (0.087)	0.124 (0.125)	0.660** (0.257)	0.513* (0.271)	0.151 (0.343)	0.289 (0.300)
n_{card_p}	-0.003*** (0.001)	-0.004** (0.002)	-0.003*** (0.001)	-0.004 (0.003)	-0.002* (0.001)	-0.005** (0.002)
$lpapacy_{p-1}$		-0.000 (0.000)		-0.001 (0.001)		0.000 (0.000)
$interregnum_p$		0.009 (0.008)		0.011 (0.008)		-0.132** (0.058)
$ageelected_p$		0.001 (0.001)		0.001 (0.002)		0.001* (0.001)
$tenure_t$		-0.000 (0.002)		-0.003 (0.004)		0.003 (0.002)
$distitaly_t$		0.040 (0.034)		0.059 (0.046)		-0.016 (0.010)
$wars_t$		0.089** (0.041)		0.108 (0.067)		0.036 (0.032)
$weather_t$		0.043 (0.046)		0.071 (0.078)		0.034 (0.041)
$jubilee_t$		-0.046*** (0.017)		-0.068** (0.030)		-0.020 (0.017)
Century dummies	no	yes	no	yes	no	yes
Observations	552	552	291	291	261	261
R-squared	0.038	0.082	0.034	0.094	0.010	0.066

Notes: Coefficients are estimated from a linear probability model with Newey-West standard errors allowing for a maximum of 10 lags in parentheses. The dependent variable is a dummy indicating whether there were disturbances within the Papal States during year t . FRACWORK and POLWORK are fractionalization and polarization measures using the workplace of cardinals at the time of their elevation to cardinalate as grouping. n_{card_p} is the number of cardinals in the conclave, $lpapacy_p$ is the length of the previous papacy. $interregnum_p$ is the number of days between the death of the pope and the start of the conclave. $lpapacy_{p-1}$ and $interregnum_p$ are measured in hundreds of days. $ageelected_p$ is the age of the pope when elected, in years. $tenure_t$ is the length of the papacy up to year t , in years. $distitaly_t$ is a dummy variable indicating whether there were disturbances in Italy, excluding the Papal States, in year t . $wars_t$ is a dummy indicating whether the Papal States were at war with other European states. $weather_t$ is a measure of temperature anomalies. $jubilee_t$ is an indicator for Holy years of Jubilee. The pre-reform period includes years 1295–1585, while the post-reform period includes years 1586–1846. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively.

Table 10: Fractionalization and polarization computed using cardinals' nominators

Dep. Variable: Sample:	Disturbances within the Papal States _t					
	All		Pre-reform		Post-reform	
	(1)	(2)	(3)	(4)	(5)	(6)
FRACNOM	-0.033 (0.068)	-0.018 (0.094)	-0.105 (0.127)	-0.171 (0.185)	0.032 (0.071)	0.057 (0.062)
POLNOM	0.115 (0.076)	0.044 (0.070)	0.179 (0.139)	0.155 (0.170)	0.061 (0.050)	0.031 (0.049)
$ncard_p$	-0.002*** (0.001)	-0.003** (0.001)	-0.003** (0.001)	-0.002 (0.003)	-0.002 (0.002)	-0.005*** (0.002)
$lpapacy_{p-1}$		-0.000 (0.001)		-0.001 (0.001)		0.001 (0.000)
$interregnum_p$		0.008 (0.008)		0.012 (0.009)		-0.142*** (0.051)
$ageelected_p$		0.001 (0.001)		0.001 (0.002)		0.001 (0.001)
$tenure_t$		0.000 (0.002)		-0.001 (0.003)		0.003 (0.002)
$distitaly_t$		0.045 (0.036)		0.070 (0.049)		-0.016* (0.010)
$wars_t$		0.089** (0.039)		0.120* (0.064)		0.033 (0.033)
$weather_t$		0.050 (0.048)		0.078 (0.076)		0.054 (0.050)
$jubilee_t$		-0.043** (0.018)		-0.059** (0.030)		-0.018 (0.018)
Century dummies	no	yes	no	yes	no	yes
Observations	552	552	291	291	261	261
R-squared	0.033	0.080	0.020	0.090	0.016	0.065

Notes: Coefficients are estimated from a linear probability model with Newey-West standard errors allowing for a maximum of 10 lags in parentheses. The dependent variable is a dummy indicating whether there were disturbances within the Papal States during year t . FRACNOM and POLNOM are fractionalization and polarization measures using the popes who nominated the cardinals as grouping. $ncard_p$ is the number of cardinals in the conclave, $lpapacy_p$ is the length of the previous papacy. $interregnum_p$ is the number of days between the death of the pope and the start of the conclave. $lpapacy_{p-1}$ and $interregnum_p$ are measured in hundreds of days. $ageelected_p$ is the age of the pope when elected, in years. $tenure_t$ is the length of the papacy up to year t , in years. $distitaly_t$ is a dummy variable indicating whether there were disturbances in Italy, excluding the Papal States, in year t . $wars_t$ is a dummy indicating whether the Papal States were at war with other European states. $weather_t$ is a measure of temperature anomalies. $jubilee_t$ is an indicator for Holy years of Jubilee. The pre-reform period includes years 1295–1585, while the post-reform period includes years 1586–1846. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively.

Table 11: Fractionalization and polarization weighted by distance

Dep. Variable: Sample:	All		disturbances _t		Post-reform	
			Pre-reform			
	(1)	(2)	(3)	(4)	(5)	(6)
FRACBIRTH*	-0.006 (0.016)	-0.016 (0.017)	-0.006 (0.019)	-0.018 (0.020)	-0.005 (0.035)	0.000 (0.028)
POLBIRTH*	0.203*** (0.070)	0.265*** (0.084)	0.207** (0.080)	0.286*** (0.108)	0.218 (0.179)	0.260 (0.169)
<i>ncard_p</i>	-0.002*** (0.001)	-0.005*** (0.002)	-0.002* (0.001)	-0.005* (0.003)	-0.001 (0.001)	-0.004** (0.002)
<i>lpapacy_{p-1}</i>		-0.000 (0.000)		-0.000 (0.001)		0.000 (0.000)
<i>interregnum_p</i>		0.014* (0.008)		0.017** (0.009)		-0.101** (0.045)
<i>ageelected_p</i>		0.001 (0.001)		0.001 (0.002)		0.002** (0.001)
<i>tenure_t</i>		-0.000 (0.002)		-0.002 (0.003)		0.003 (0.002)
<i>distitaly_t</i>		0.046 (0.035)		0.070 (0.047)		-0.018 (0.011)
<i>wars_t</i>		0.083** (0.040)		0.106 (0.065)		0.036 (0.032)
<i>weather_t</i>		0.031 (0.042)		0.059 (0.064)		0.019 (0.052)
<i>jubilee_t</i>		-0.046** (0.018)		-0.075** (0.031)		-0.023 (0.017)
Century dummies	no	yes	no	yes	no	yes
Observations	552	552	291	291	261	261
R-squared	0.043	0.095	0.031	0.101	0.022	0.071

Notes: Coefficients are estimated from a linear probability model with Newey-West standard errors allowing for a maximum of 10 lags in parentheses. FRACBIRTH* and POLBIRTH* are measures of fractionalization and polarization that take into account inter-group distances, and are defined in the text. *ncard_p* is the number of cardinals in the conclave, *lpapacy_p* is the length of the previous papacy. *interregnum_p* is the number of days between the death of the pope and the start of the conclave. *lpapacy_{p-1}* and *interregnum_p* are measured in hundreds of days. *ageelected_p* is the age of the pope when elected, in years. *tenure_t* is the length of the papacy up to year *t*, in years. *distitaly_t* is a dummy variable indicating whether there were disturbances in Italy, excluding the Papal States, in year *t*. *wars_t* is a dummy indicating whether the Papal States were at war with other European states. *weather_t* is a measure of temperature anomalies. *jubilee_t* is an indicator for Holy years of Jubilee. The pre-reform period includes years 1295–1585, while the post-reform period includes years 1586–1846. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively.

Table 12: Intensity and wars

Dep. Variable:	Intensity of disturbances _t				wars _t					
	All		Pre-reform		All		Pre-reform		Post-reform	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
FRACBIRTH	-17.963 (25.430)	-32.047 (21.480)	-17.059 (24.993)	-29.807 (22.536)	0.606*** (0.201)	0.032 (0.316)	0.663*** (0.211)	-0.065 (0.364)	-2.795 (2.198)	-1.966 (2.657)
POLBIRTH	95.155*** (22.875)	104.376*** (27.341)	91.877*** (22.341)	102.868*** (27.080)	0.356 (0.407)	0.637 (0.415)	0.349 (0.471)	0.893* (0.516)	-2.016 (1.727)	-2.273 (1.940)
<i>ncard_p</i>	-0.718*** (0.172)	-0.520 (0.593)	-0.518** (0.236)	-0.463 (0.663)	-0.004* (0.002)	-0.011** (0.005)	-0.002 (0.004)	-0.021*** (0.006)	-0.004 (0.006)	-0.006 (0.013)
<i>lpapacy_{p-1}</i>		-0.176** (0.077)		-0.092 (0.088)		-0.005*** (0.002)		-0.003 (0.003)		-0.004* (0.002)
<i>interregnum_p</i>		4.129** (1.690)		3.880** (1.715)		-0.039** (0.018)		-0.020 (0.020)		-0.263 (0.276)
wars _t		21.375** (8.967)		18.667* (10.138)						
jubilee _t						-0.139** (0.064)		-0.240*** (0.065)		0.020 (0.087)
Century dummies	no	yes	no	yes	no	yes	no	yes	no	yes
Observations	552	552	291	291	552	552	291	291	261	261
R-squared	0.096	0.178	0.063	0.125	0.041	0.211	0.042	0.224	0.035	0.242

Notes: Columns 1-4: Coefficients are estimated from a tobit model with robust standard errors clustered at the papacy level. The dependent variable is conflict intensity in the Papal States in year t . Columns 5-10: Coefficients are estimated from a linear probability model with Newey-West standard errors allowing for a maximum of 10 lags in parentheses. The dependent variable is a dummy indicating whether the Papal States were at war with another state during year t . All columns: FRACBIRTH and POLBIRTH are fractionalization and polarization measures using the birthplace of cardinals as grouping. $ncard_p$ is the number of cardinals in the conclave and $lpapacy_{p-1}$ is the length of the previous papacy. $interregnum_p$ is the number of days between the death of the pope and the start of the conclave. $lpapacy_{p-1}$ and $interregnum_p$ are measured in hundreds of days. Odd columns also include $ageelected_p$, $tenure_t$, $distitaly_t$ and $weather_t$ as controls. The pre-reform period includes years 1295–1585, while the post-reform period includes years 1586–1846. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively. ^a Pseudo R-squared in columns 1-4.

Table 13: Fractionalization, polarization, and disturbances in Italy

Dep. Variable: Sample:	distitaly _t					
	All		Pre-reform		Post-reform	
	(1)	(2)	(3)	(4)	(5)	(6)
FRACBIRTH	-0.216 (0.167)	0.158 (0.295)	-0.264 (0.191)	0.209 (0.308)	-0.445 (0.735)	-0.796 (0.869)
POLBIRTH	0.278 (0.247)	-0.005 (0.239)	0.413 (0.312)	-0.111 (0.369)	-0.418 (0.738)	-0.697 (0.853)
<i>ncard_p</i>	-0.005*** (0.001)	-0.000 (0.003)	-0.005* (0.003)	-0.000 (0.005)	0.003 (0.002)	0.006** (0.003)
<i>lpapacy_{p-1}</i>	-0.002** (0.001)	-0.002** (0.001)	-0.003* (0.002)	-0.004** (0.002)	-0.001** (0.001)	-0.001** (0.001)
<i>interregnum_p</i>	-0.005 (0.008)	-0.009 (0.009)	-0.002 (0.010)	-0.011 (0.012)	0.284*** (0.081)	0.275*** (0.093)
<i>ageelected_p</i>	0.000 (0.002)	0.000 (0.002)	0.000 (0.003)	0.000 (0.003)	0.003 (0.002)	0.003 (0.002)
<i>tenure_t</i>	-0.006 (0.004)	-0.005 (0.004)	-0.020*** (0.007)	-0.020*** (0.007)	0.002 (0.004)	0.004 (0.004)
<i>disturbances_t</i>	0.112 (0.088)	0.120 (0.093)	0.152 (0.105)	0.159 (0.110)	-0.058* (0.035)	-0.059** (0.030)
<i>wars_t</i>	-0.044 (0.041)	-0.021 (0.045)	-0.026 (0.067)	0.019 (0.073)	-0.037 (0.048)	-0.054 (0.044)
<i>weather_t</i>	-0.029 (0.076)	-0.017 (0.080)	-0.077 (0.126)	-0.069 (0.124)	0.074 (0.075)	0.112 (0.090)
<i>jubilee_t</i>	0.046 (0.080)	0.048 (0.076)	0.149 (0.128)	0.172 (0.122)	-0.094*** (0.034)	-0.094*** (0.036)
Century dummies	no	yes	no	yes	no	yes
Observations	552	552	291	291	261	261
R-squared	0.089	0.109	0.114	0.139	0.040	0.049

Notes: Coefficients are estimated from a linear probability model with Newey-West standard errors allowing for a maximum of 10 lags in parentheses. The dependent variable is a dummy variable indicating whether there were disturbances in Italy, excluding the Papal States, in year t . FRACBIRTH and POLBIRTH are fractionalization and polarization measures using the birthplace of cardinals as grouping. $ncard_p$ is the number of cardinals in the conclave, $lpapacy_{p-1}$ is the length of the previous papacy. $interregnum_p$ is the number of days between the death of the pope and the start of the conclave. $lpapacy_{p-1}$ and $interregnum_p$ are measured in hundreds of days. $ageelected_p$ is the age of the pope when elected, in years. $tenure_t$ is the length of the papacy up to year t , in years. $disturbances_t$ is a dummy for internal disturbances in the Papal States. $wars_t$ is a dummy indicating whether the Papal States were at war with other European states. $weather_t$ is a measure of temperature anomalies. $jubilee_t$ is an indicator for Holy years of Jubilee. The pre-reform period includes years 1295–1585, while the post-reform period includes years 1586–1846. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively.

Table 14: Foreign popes, antipopes and papal territories

Dep. Variable:	disturbances _t			antipope _t		log(size papal states) _t		
	All (1)	Pre (2)	Post (3)	All (4)	Pre (5)	All (6)	Pre (7)	Post (8)
FRACBIRTH	-0.086 (0.118)	-0.116 (0.140)	0.126 (0.449)	0.482* (0.285)	-0.030 (0.278)	-0.059 (0.149)	0.071 (0.197)	-0.616** (0.306)
POLBIRTH	0.445*** (0.125)	0.492*** (0.142)	0.449 (0.449)	1.652*** (0.352)	2.646*** (0.442)	-0.300 (0.189)	-0.570* (0.320)	-0.778** (0.312)
<i>ncard_p</i>	-0.004*** (0.001)	-0.005* (0.003)	-0.004** (0.002)	-0.010*** (0.004)	-0.022*** (0.007)	0.006** (0.002)	0.007* (0.004)	0.002 (0.001)
<i>lpapacy_{p-1}</i>	-0.000 (0.000)	-0.000 (0.001)	0.000 (0.000)	0.001 (0.001)	0.007** (0.003)	-0.001 (0.001)	-0.002 (0.001)	0.000 (0.000)
<i>interregnum_p</i>	0.015* (0.009)	0.018 (0.013)	-0.108** (0.048)	-0.011 (0.015)	0.019 (0.015)	-0.030** (0.014)	-0.034** (0.015)	-0.332*** (0.101)
<i>popeitalian_p</i>	0.002 (0.019)	-0.002 (0.072)						
<i>popeforeign_p</i>	0.004 (0.039)	0.008 (0.063)	0.013 (0.059)					
Century dummies	yes	yes	yes	yes	yes	yes	yes	yes
Observations	552	291	261	552	291	552	291	261
R-squared	0.097	0.104	0.068	0.511	0.575	0.842	0.690	0.498

Notes: Coefficients are estimated from a linear probability model with Newey-West standard errors allowing for a maximum of 5 lags in parentheses. In columns 1-3, the dependent variable is a dummy indicating whether there were disturbances within the Papal States during year t ; in columns 4-5 it is a dummy indicating whether an antipope was elected in year t ; and in columns 6-8 it is the log of the size of the papal states, measured in km^2 . FRACBIRTH and POLBIRTH are fractionalization and polarization measures using the birthplace of cardinals as grouping. *ncard_p* is the number of cardinals in the conclave, *lpapacy_{p-1}* is the length of the previous papacy. *interregnum_p* is the number of days between the death of the pope and the start of the conclave. *lpapacy_{p-1}* and *interregnum_p* are measured in hundreds of days. *popeitalian_p* is a dummy for whether the pope was born in Italy, excluding the Papal States. *popeforeign_p* is a dummy for whether the pope was not born in Italy. All regressions include *ageelected_p*, *tenure_t*, *distitaly_t*, *war_t*, *weather_t* and *jubilee_t* as controls. The pre-reform period includes years 1295–1585, while the post-reform period includes years 1586–1846. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively.

Table 15: Canonizations and beatifications

Dep. Variable: Sample:	Canonization rate _p						Beatification rate _p	
	All		Pre-reform		Post-reform		Post-reform ^a	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
FRACBIRTH	0.343 (0.232)	0.959 (0.601)	0.340*** (0.120)	0.395 (0.256)	9.931 (6.184)	12.324 (10.327)	1.206 (3.031)	1.736 (3.770)
POLBIRTH	0.184 (0.664)	-0.796 (0.990)	-0.201 (0.233)	-0.360 (0.440)	7.542 (7.081)	7.795 (9.720)	2.098 (2.966)	2.812 (2.783)
<i>ncard_p</i>	0.005* (0.003)	-0.030* (0.016)	-0.003 (0.003)	-0.008 (0.005)	-0.009 (0.018)	-0.085* (0.042)	-0.005 (0.004)	-0.019 (0.011)
<i>lpapacy_p</i>		-0.007 (0.004)		-0.002 (0.004)		-0.008 (0.012)		0.003 (0.006)
<i>lpapacy_{p-1}</i>		-0.001 (0.002)		-0.001 (0.001)		-0.004 (0.006)		0.001 (0.007)
<i>interregnum_p</i>		0.031 (0.024)		0.005 (0.017)		-0.416 (1.136)		-0.568 (0.795)
<i>ageelected_p</i>		0.015** (0.007)		0.004 (0.003)		0.022 (0.022)		0.010 (0.016)
Century dummies	no	yes	no	yes	no	yes	no	yes
Observations	62	62	35	35	27	27	24	24
R-squared	0.034	0.343	0.059	0.123	0.040	0.473	0.068	0.209

Notes: Coefficients are estimated from a linear probability model with Newey-West standard errors allowing for a maximum of 5 lags in parentheses. In columns 1-6, the dependent variable is the canonization rate, defined as the number of canonizations in papacy p divided by the length of the papacy in years; while in columns 7-8 the dependent variable is the beatification rate, defined as the number of beatifications in papacy p divided by the length of the papacy in years. FRACBIRTH and POLBIRTH are fractionalization and polarization measures using the birthplace of cardinals as grouping. $ncard_p$ is the number of cardinals in the conclave, $lpapacy_p$ and $lpapacy_{p-1}$ are the length of the current and previous papacy, respectively. $interregnum_p$ is the number of days between the death of the pope and the start of the conclave. $lpapacy_p$, $lpapacy_{p-1}$ and $interregnum_p$ are measured in hundreds of days. $ageelected_p$ is the age of the pope when elected, in years. The pre-reform period includes years 1295–1585, while the post-reform period includes years 1586–1846. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively.

^a Data only from 1592.

ONLINE APPENDIX (NOT FOR PUBLICATION)

Habemus Papam? Polarization and Conflict in the Papal States

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A. Data construction of cardinals' birthplaces

Information on cardinals is directly extracted from the short biographies contained in [Miranda \(2012\)](#) and [Cheney \(2012\)](#).

Birthplaces have been grouped considering the political entity that was ruling them at the time cardinals were born. In order to classify birthplaces we collected information from Encyclopedia Britannica and Euratlas (www.euratlas.net/history/europe/). We describe the details of the most relevant regions of the classification below.

Savoy, including Turin, was independent until 1714, when it became part of the Kingdom of Sicily. In 1720 it passed to the Kingdom of Sardinia and after a short period under France (1792-1815) it returned to Sardinia.

Genoa remained independent until 1528, with the exception of two short periods, one under France (1394-1409) and one under Milan (1421-1435). After 1528 it was a Spanish political satellite. In 1746 it passed under the Austrian Habsburgs and afterwards, in 1797, to France and in 1814 to Savoy.

Milan was under French rule between 1499-1513 and it fell under Spanish rule between 1535 and 1706. From that year onwards it remained under the Austrian Habsburgs (and then Austro-Hungarian Empire) with the exception of a small period (1796-1815) when it was under France.

Vercelli was annexed to Milan in 1335. In 1427 it became part of Savoy until the end of the period of analysis, except for years 1638-1659 in which it was under Spain.

Trent was part of the Holy Roman Empire.

Venice was independent until 1797, when it was conquered by France. In 1814, it passed to the Austro-Hungarian Empire and it regained independence in 1849.

Verona was annexed to Venice in 1405.

Udine was annexed to Venice in 1420. In 1797 it was annexed to Austria.

Treviso was annexed to Venice in 1339. In 1797 it was annexed to Austria.

Padua was annexed to Venice in 1405. In 1797 it became part of the Austro-Hungarian Empire, except for a short period of time (1805-1814) when it was part of France.

Pavia was annexed to Milan in 1361. Spain gained its possession in 1525 and it kept Pavia under its control until 1713, when it became part of Austria until the end of our period of analysis; with the exception of the period between 1796-1815 when it was part of France.

Mantua was annexed to the Austrian Empire in 1707. Except for a brief period (1797-1814) in which Mantua was under French rule, it was part of the Austrian Habsburg's Empire.

Modena remained independent until 1598, when it joined the Papal States. In 1816 it fell under the Austrian rule.

Parma was annexed to Milan in 1341. After a short period under French rule (1500-1521), it became part of the Papal States until 1545, when it regained its independence. In 1731 was annexed to Austria. With the exception of the French period between 1797 and 1815, it remained under the Austrian rule.

Ravenna was annexed to Venice in 1440. In 1509, it joined the Papal States until the end of the period, except for years 1796-1814 in which France took it.

Siena became part of the Grand Duchy of Tuscany in 1555. Pisa became part of Florence in 1406; it regained independence in 1494, but it was conquered by Florence (afterwards Grand Duchy of Tuscany) in 1509. Prato became part of Florence in 1350.

Lucca was independent until 1799, when it was annexed to France. In 1847 it passed to Tuscany.

Arezzo fell into the dominion of Florence in 1384 and later on was part of the Grand Duchy of Tuscany.

Urbino remained independent until 1626, when it joined the Papal States. Cesena joined the Papal States in 1645. Todi joined the Papal States in 1367. Rimini joined the Papal States in 1509. Perugia joined the Papal States in 1540. Ferrara remained independent until it became part of the Papal States in 1598. Benevento, just the city, was part of the Papal States. Bologna joined the Papal States in 1506. Ancona joined the Papal States in 1532. Rieti was part of the Papal States except for a short period of time (1309-1354) when it was part of Naples. Senigallia was annexed to Ravenna in late 15th century and then to Urbino; it became part of the Papal States in 1631.

Naples was annexed to Aragon in 1442. It was part of Spain from 1468 until 1714 when it regained independence.

Sicily became part of the Crown of Aragon in 1409, and then part of Spain, when Aragon unified with Castile, until 1714. From then onwards it was part of the Kingdom of Naples.

Carpentras was part of the Papal States until 1791, when it was annexed to France.

Arras was part of Burgundy from 1329 until 1477, when it became part of France. In 1556 it

became part of the Spanish Netherlands. In 1659 it became part of France. Dax was English until 1451, when it became part of France. Douai belonged to Flanders until 1384, when it passed to Burgundy. In 1667 it became French. Aquitaine was English until 1453, when it became part of France. Cambrai was frequently conquered, but it finally became part of France in 1678. Lyon belonged to the Holy Roman Empire until it was annexed to France in 1312. Gascony was English until the Hundred Years War; from 1453, it was annexed to France. Burgundy joined France in 1477. Brittany was English until it was annexed to France in 1488.

Provence was annexed to France in 1486. Avignon was part of Provence until 1309, when it became part of the Papal States until 1791. That year it was annexed to France.

Narbonne was part of Aragon, and then Spain, until 1659, when it was annexed to France.

Douai was part of Flanders until 1384, when it was annexed to Burgundy. Douai became French in 1667.

Nice was part of Provence until it was annexed to Savoy in 1388. Although France occupied it several times, the Dukes of Savoy kept its control until 1860 when it became part of France.

Saint-Omer was annexed to Burgundy in 1340. In 1493 it was annexed to Spain, which kept its possession until 1677 when Saint-Omer was annexed to France.

Montpellier was part of Aragon until 1349, when it became part of France. Narbonne was under Aragonese rule, and then Spanish rule (from 1469 onwards) until 1659, when it became French.

Flanders, including Therouanne, was annexed to Burgundy in 1384. In 1477 it became part of Austria. Spain took its control from 1680 until 1714, when it returned to Austria until 1801. In 1830 became part of Belgium.

Liege was part of Burgundy first (end of 15th century) and then part of the Holy Roman Empire, although it had a large degree of independence. During the French Revolutionary Wars it was part of France. In 1815 became part of the Netherlands and in 1830 part of Belgium.

Krakow was annexed to Austria in 1795.

Thebe was under France until 1311, when it became part of Aragon. In 1379 it was annexed Navarra and in 1458 to the Ottoman Empire. The latter ruled it until the end of the period, with the exception of a brief period under Venice (1687-1699).

Cyprus was annexed to Venice in 1473. In 1570 it became part of the Ottoman Empire.

Table A-1 lists all conclaves included in our sample, with the breakdown of groups participating in each conclave.

Table A-1: Conclaves and cardinals according to their birthplace group

Pope elected	Conclave year	Largest group	%	Second largest	%	Third largest	%	Fourth largest	%	Other groups	%	Cardinals in conclave
Boniface VIII	1294	Papal States	0.45	France	0.23	Milan	0.09	Naples	0.09	Burgundy, England, Todi	0.14	22
Benedict XI	1303	Papal States	0.56	France	0.11	Castile	0.06	Genoa	0.06	Milan, Naples, Siena, Venice	0.22	18
Clement V	1305	Papal States	0.53	Castile	0.07	England	0.07	France	0.07	Genoa, Milan, Naples, Prato	0.27	15
John XXII	1316	England	0.33	France	0.33	Papal States	0.21	Genoa	0.04	Milan, Prato	0.08	24
Benedict XII	1334	France	0.46	Papal States	0.21	England	0.17	Aragon	0.04	Castile, Genoa, Naples	0.12	24
Clement VI	1342	France	0.59	England	0.12	Papal States	0.12	Aragon	0.06	Castile, Naples	0.12	17
Innocent VI	1352	France	0.83	Papal States	0.08	Castile	0.04	England	0.04		0	24
Urban V	1362	France	0.85	Papal States	0.1	Burgundy	0.05					20
Gregory XI	1370	France	0.72	Papal States	0.11	England	0.06	Florence	0.06	Provence	0.06	18
Urban VI	1378	France	0.69	Papal States	0.12	Aragon	0.06	Florence	0.06	Milan	0.06	16
Boniface IX	1389	Naples	0.46	Papal States	0.23	Florence	0.08	Genoa	0.08	Milan, Perugia	0.15	13
Innocent VII	1404	Naples	0.56	Papal States	0.22	Florence	0.11	Milan	0.11		0	9
Gregory XII	1406	Papal States	0.43	Naples	0.29	Florence	0.07	France	0.07	Milan, Venice	0.14	14
Martin V	1417	France	0.22	Venice	0.22	Papal States	0.13	Milan	0.09	Naples, Savoy, Castile, Florence, Genoa, Ravenna	0.35	23
Eugenius IV	1431	Papal States	0.31	Venice	0.23	Milan	0.15	Bologna	0.08	Castile, France, Siena	0.23	13
Nicholas V	1447	Venice	0.22	France	0.17	Papal States	0.17	Castile	0.11	Milan, Aragon, Naples, Portugal, Sicily	0.33	18
Calixtus III	1455	Aragon	0.2	France	0.2	Papal States	0.2	Venice	0.2	Castile, Milan	0.2	15

Table A-1: (continued)

Pope elected	Conclave year	Largest group	%	Second largest	%	Third largest	%	Fourth largest	%	Other groups	%	Cardinals in conclave
Pius II	1458	Aragon	0.28	France	0.17	Castile	0.11	Milan	0.11	Papal States, Venice, Portugal, Siena	0.33	18
Paul II	1464	France	0.26	Venice	0.21	Castile	0.16	Aragon	0.11	Papal States, Siena, Mantua	0.26	19
Sixtus IV	1471	Papal States	0.28	Venice	0.28	Aragon	0.11	France	0.11	Mantua, Genoa , Siena	0.22	18
Innocent VIII	1484	Milan	0.32	Aragon	0.16	Papal States	0.16	Venice	0.16	France, Portugal, Savoy, Siena	0.2	25
Alexander VI	1492	Milan	0.35	Papal States	0.17	Venice	0.13	Aragon	0.09	Spain, Florence, Portugal, Savoy, Siena	0.26	23
Pius III	1503	Spain	0.41	Milan	0.22	Papal States	0.11	Venice	0.08	Florence, France, Aragon, Portugal, Siena	0.19	37
Julius II	1503	Spain	0.42	Milan	0.21	Papal States	0.11	Venice	0.08	Florence, France, Aragon, Ferrara, Portugal	0.18	38
Leo X	1513	Florence	0.16	Milan	0.16	Genoa	0.12	Papal States	0.12	Spain, Venice, England, France, Hungary, Mantua, Siena, Swiss Confederation	0.44	25
Adrian VI	1522	Papal States	0.33	Florence	0.23	Milan	0.1	Spain	0.08	Venice, Genoa, Siena, Mantua, Savoy, Swiss Confederation	0.26	39
Clement VII	1523	Papal States	0.33	Florence	0.23	Milan	0.1	France	0.08	Spain, Genoa, Venice, Mantua, Savoy, Siena	0.26	39
Paul III	1534	Florence	0.15	France	0.15	Spain	0.15	Papal States	0.12	Genoa, Milan, Venice, Savoy, Holy Roman Empire, Mantua, Siena	0.42	33
Julius III	1550	Papal States	0.28	France	0.24	Spain	0.14	Florence	0.06	Venice, Genoa, Holy Roman Empire, England, Ferrara, Mantua, Modena, Portugal, Savoy, Urbino	0.28	50
Marcellus II	1555	Papal States	0.32	France	0.21	Spain	0.15	Venice	0.06	Ferrara, Genoa, Modena, Portugal, England, Holy Roman Empire, Mantua, Parma, Siena, Urbino	0.26	53

Table A-1: (continued)

Pope elected	Conclave year	Largest group	%	Second largest	%	Third largest	%	Fourth largest	%	Other groups	%	Cardinals in conclave
Paul IV	1555	Papal States	0.29	France	0.21	Spain	0.18	Venice	0.05	Ferrara, Genoa, Holy Roman Empire, Modena, Portugal, England, Mantua, Parma, Siena, Urbino	0.27	56
Pius IV	1559	Papal States	0.32	Spain	0.21	France	0.17	Florence	0.04	Genoa, Holy Roman Empire, Venice, Ferrara, Mantua, Milan, Modena, Parma, Urbino	0.26	47
Pius V	1566	Papal States	0.29	Spain	0.27	Venice	0.1	Florence	0.06	Genoa, Holy Roman Empire, Milan , Savoy, Ferrara, France, Mantua, Parma, Urbino	0.29	52
Gregory XIII	1572	Papal States	0.36	Spain	0.28	Holy Roman Empire	0.08	Venice	0.08	Genoa, Savoy, Ferrara, Florence, France, Mantua, Milan, Poland, Urbino	0.21	53
Sixtus V	1585	Papal States	0.4	Spain	0.26	Florence	0.1	France	0.07	Holy Roman Empire, Venice, Parma, Savoy	0.17	42
Urban VII	1590	Papal States	0.3	Spain	0.3	Venice	0.09	Florence	0.07	Genoa, Holy Roman Empire, Savoy, England, France, Lucca, Mantua, Modena, Parma	0.24	54
Gregory XIV	1590	Spain	0.3	Papal States	0.28	Florence	0.08	Venice	0.08	Genoa, Holy Roman Empire, Savoy, England, France, Lucca, Mantua, Modena, Parma	0.26	53
Innocent IX	1591	Papal States	0.3	Spain	0.3	Florence	0.07	Genoa	0.05	Holy Roman Empire, Venice, Parma, England, France, Lithuania, Lucca, Mantua, Modena, Savoy	0.27	56
Clement VIII	1592	Papal States	0.31	Spain	0.28	Florence	0.07	Genoa	0.06	Holy Roman Empire, Venice, Parma, England, France, Lithuania, Lucca, Mantua, Modena, Savoy	0.28	54
Leo XI	1605	Papal States	0.42	Spain	0.18	Florence	0.1	France	0.07	Genoa, Venice, Parma, Savoy, Mantua, Modena	0.23	60

Table A-1: (continued)

Pope elected	Conclave year	Largest group	%	Second largest	%	Third largest	%	Fourth largest	%	Other groups	%	Cardinals in conclave
Paul V	1605	Papal States	0.41	Spain	0.21	Florence	0.08	France	0.07	Genoa, Venice, Parma, Savoy, Mantua, Modena	0.23	61
Gregory XV	1621	Papal States	0.48	Florence	0.19	Spain	0.13	Genoa	0.08	Venice, Parma, Savoy	0.12	52
Urban VIII	1623	Papal States	0.54	Florence	0.11	Spain	0.11	Genoa	0.07	Venice, Parma, Savoy, Austria, Holy Roman Empire	0.17	54
Innocent X	1644	Papal States	0.48	Spain	0.19	Florence	0.13	Genoa	0.06	France, Venice, Holy Roman Empire, Lucca, Parma, Savoy	0.15	54
Alexander VII	1655	Papal States	0.5	Spain	0.14	Florence	0.11	Genoa	0.09	Venice, France, Hesse-Darmstadt, Holy Roman Empire, Lucca, Milan, Parma, Savoy	0.17	66
Clement IX	1667	Papal States	0.48	Florence	0.11	Genoa	0.11	Spain	0.11	Venice, France, Hesse-Darmstadt, Holy Roman Empire, Lucca, Milan, Parma	0.19	64
Clement X	1670	Papal States	0.48	Florence	0.15	Spain	0.11	Genoa	0.09	France, Venice, Milan, Hesse-Darmstadt, Lucca, Savoy	0.17	65
Innocent XI	1676	Papal States	0.41	Florence	0.16	Spain	0.13	Genoa	0.11	Venice, France, Baden, England, Holy Roman Empire, Lucca	0.19	63
Alexander VIII	1689	Papal States	0.29	Florence	0.18	Spain	0.18	Genoa	0.1	Venice , France, England, Holy Roman Empire, Hungary, Modena, Poland, Savoy	0.25	51
Innocent XII	1691	Papal States	0.25	Spain	0.21	Florence	0.16	Venice	0.1	Genoa, France, England, Flanders, Hungary, Lucca, Milan, Modena, Poland, Savoy	0.28	61
Clement XI	1700	Papal States	0.32	Spain	0.21	Venice	0.16	France	0.12	Florence, Genoa, Holy Roman Empire, Milan, Savoy	0.19	57
Innocent XIII	1721	Papal States	0.38	Spain	0.18	Florence	0.09	Venice	0.07	Austria, Naples, France, Holy Roman Empire, Hungary, Flanders, Genoa, Lucca, Parma	0.29	56

Table A-1: (continued)

Pope elected	Conclave year	Largest group	%	Second largest	%	Third largest	%	Fourth largest	%	Other groups	%	Cardinals in conclave
Benedict XIII	1724	Papal States	0.41	Spain	0.22	Florence	0.09	Austria	0.06	France, Venice, Naples, Genoa, Lucca, Parma, Portugal	0.22	54
Clement XII	1730	Papal States	0.39	Spain	0.13	Naples	0.11	Florence	0.07	France, Venice, Austria, Genoa, Hungary, Holy Roman Empire, Parma, Savoy	0.3	54
Benedict XIV	1740	Papal States	0.38	Naples	0.15	Florence	0.12	France	0.08	Spain, Venice, Austria, Genoa, Flanders, Hungary, Mantua, Savoy	0.27	52
Clement XIII	1758	Papal States	0.42	Florence	0.18	Austria	0.11	Naples	0.07	France, Genoa, Sardinia, Venice , Holy Roman Empire, Spain	0.22	45
Clement XIV	1769	Papal States	0.48	Austria	0.11	Naples	0.11	Venice	0.09	Florence, France, Genoa, Spain, Sardinia	0.22	46
Pius VI	1775	Papal States	0.48	Naples	0.14	Austria	0.11	Florence	0.07	Venice, France, Genoa, Sardinia, Spain	0.2	44
Pius VII	1800	Papal States	0.49	Austria	0.14	Naples	0.11	Venice	0.09	France, Florence, Holy Roman Empire, Sardinia, Spain	0.17	35
Leo XII	1823	Papal States	0.49	Austria	0.12	Naples	0.12	France	0.1	Florence, Sardinia, Holy Roman Empire, Hungary, Spain, Venice	0.16	49
Pius VIII	1829	Papal States	0.48	Austria	0.16	France	0.16	Naples	0.08	Sardinia, Venice, Florence, Spain	0.12	50
Gregory XVI	1831	Papal States	0.53	Austria	0.13	France	0.11	Naples	0.07	Sardinia, Spain, England, Florence, Venice	0.16	45

Notes: The table lists the groups present at each conclave, as well as the share of cardinals in each group. Groups in bold indicate the group to which the elected pope belonged. Ties are broken based on alphabetical order. Clement V, elected in 1305, was not a cardinal (and therefore was not present in the conclave) but was archbishop of Bordeaux (France). Urban V, elected in 1362, was not a cardinal, but a French abbot acting as a papal emissary in Naples. Urban VI, elected in 1378, did not belong to any of the groups present in the conclave since he was from Naples. Adrian VI, elected in 1522, was born in territories of the Holy Roman Empire. Neither he nor the other two cardinals from the Empire attended the conclave.

B. Fractionalization and Polarization, additional details

We present the time series of FRACBIRTH and POLBIRTH in Figure B-1. An example of a conclave with high fractionalization and low polarization is the election of pope Pius II in 1458, where cardinals of 8 different birthplace groups participated and none of these groups accounted for more than 22% of the total number of cardinals. Conversely, the election of pope Innocent VII in 1404 presented high polarization but low fractionalization, with cardinals of only 2 birthplace groups participating in the conclave.

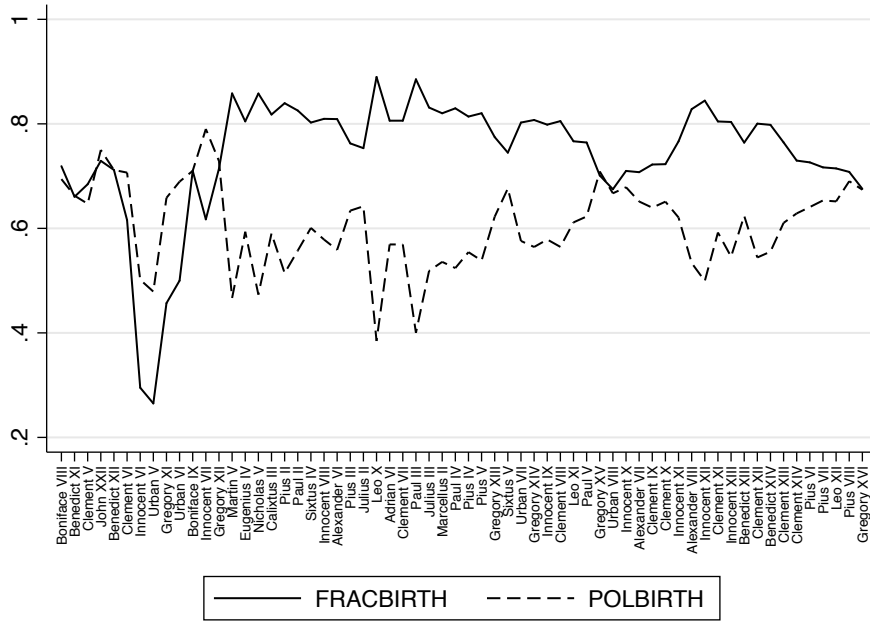
We follow [Montalvo and Reynal-Querol \(2005\)](#) and present the relationship between polarization and fractionalization in Figure B-2. The pattern observed is a positive correlation for low values of fractionalization, zero correlation for intermediate values, and a slightly negative correlation for high values, more evident when using cardinals' birthplace groups. [Montalvo and Reynal-Querol](#) observe that the pattern for low values of fractionalization is expected, since the ratio of fractionalization to polarization is $1/2$ when there are only two groups. Interestingly, we observe a similar pattern to [Montalvo and Reynal-Querol \(2005\)](#) for intermediate and high values of fractionalization.

A final note on our measures of divisions. There are years in our sample with two or three officially recognized popes in power.³⁹ Given that our conflict data varies by year, in case of multiple popes per year we assign the pope (and therefore the measures of divisions during his election) that was in power for the longest time during that year. There are also 2 years where the see was vacant (1315 and 1416). Given that we consider only cardinals present until the last day of the conclave, we assign to these years the measures of divisions of the following year (i.e. the indexes at the time the conclave ended).

We have explored an alternative strategy in which, for years with multiple popes, we assign the pope that was first elected during that year. We obtain quantitatively the same results. Our papacy-level regressions (Table D-1 in Online Appendix D), which do not suffer from these issues, confirm our main results.

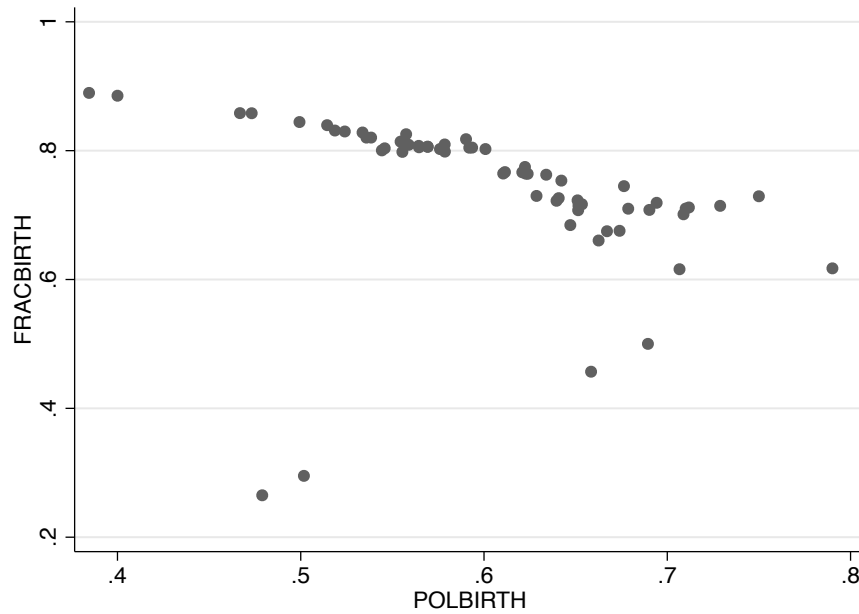
³⁹For example, in August 18, 1503 pope Alexander VI died, and pope Pius III was elected in September 22. However, he died only 27 days after his election, and Julius II was elected in October 31.

Figure B-1: Polarization and fractionalization, 1295–1846



Notes: FRACBIRTH and POLBIRTH are computed as indicated in the text. The sample includes a total of 62 conclaves.

Figure B-2: Fractionalization versus polarization



Notes: FRACBIRTH and POLBIRTH are computed as indicated in the text. The sample includes a total of 62 conclaves.

C. Deaths and nominations of cardinals

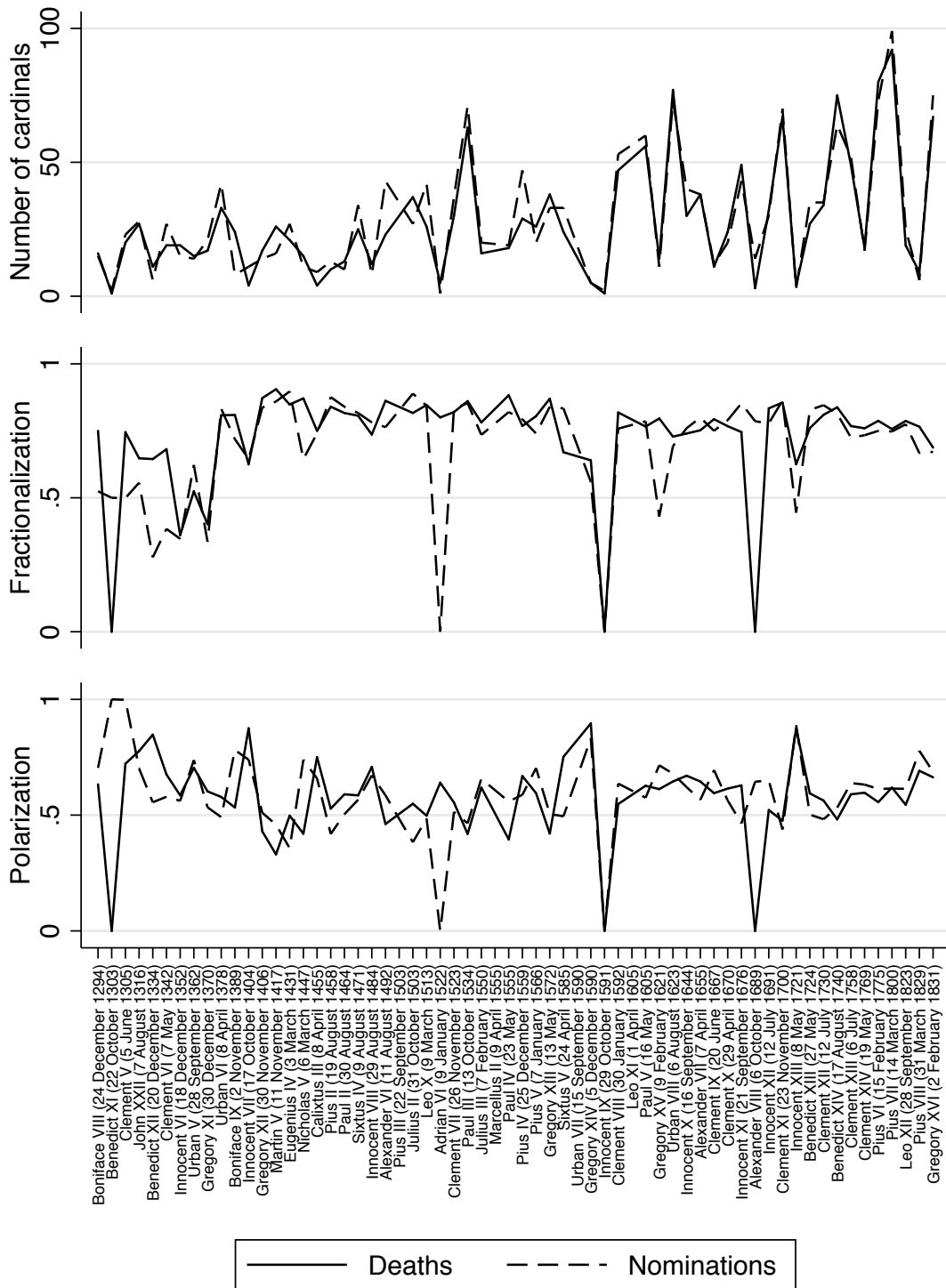
In this section we assess whether there are differences in the deaths and nominations of cardinals, both in terms of numbers and geographical distribution. To do this we construct time series of deaths and nomination of cardinals by papacy. Since there are cardinals for whom the exact date of death is not known, we use the following criteria: 1) If the year and month of death are known, we assign the day of death as 15; 2) if only the year of death is known, we assign July 1 as the date of death; 3) if the year of death is not known, we assign the date of nomination as the date of death; 4) if a cardinal dies during the interregnum or the conclave, we assign him to the next papacy, since it is the duty of the next pope to replace him. The time series of nomination of cardinals is easier to construct, since for each cardinal we know the pope who nominated him.

In the top panel of Figure C-1 we plot the number of cardinals' deaths and nominations. The nominations of new cardinals closely follows the number of deaths, despite some notable differences. For example, Alexander VIII (r. 1689–1691) nominated 14 cardinals, even though only 3 died during his reign. In contrast, Boniface IX (r. 1389–1404) nominated only 8 cardinals despite three times more cardinals died during his papacy. These differences are in part due to unexpected deaths of popes, who did not have time to nominate more cardinals, and also to unexpected deaths of cardinals.

We construct measures of polarization and fractionalization for both groups of cardinals (deaths and nominations), and plot them in the middle and bottom panels of Figure C-1. Similar to the number of cardinals, the indexes of fractionalization and polarization for both groups move together. Some of the largest differences occur in short papacies with few deaths or nominations. One example is the papacy of Adrian VI (r. 1522–1523), who nominated only one cardinal despite having five cardinals dying during his term (all of them with different birthplaces).

In Table C-1 we assess whether differences in the number of deaths and nominations of cardinals, as well as in the measures of fractionalization and polarization, attenuate the effect of polarization on conflict. We include the lagged difference between the number of cardinal deaths and nominations, $NDIFF_{p-1}$, as well as analogous differences for fractionalization ($FRACDIFF_{p-1}$) and polarization ($POLDIFF_{p-1}$). None of these measures have a statistically significant effect on the likelihood of conflict. On the other hand, our measure of polarization, $POLBIRTH$, is positive and statistically significant both in the full and pre-reform samples. The magnitude and significance is comparable to that found in our main regressions (Tables 6 and 7).

Figure C-1: Deaths and nominations of cardinals



Notes: The top figure shows the number of cardinals’ deaths and nominations in each papacy. The middle and bottom figures show the indexes of fractionalization and polarization constructed using the birthplaces of deaths (continuous line) and nominations (segmented line) of cardinals in each papacy. Papacies with no deaths or nominations of cardinals are excluded.

Table C-1: Differences in polarization and fractionalization between cardinals nominated and cardinals' deaths

Dep. Variable: Sample:	Disturbances within the Papal States _{<i>t</i>}					
	All		Pre-reform		Post-reform	
	(1)	(2)	(3)	(4)	(5)	(6)
FRACBIRTH _{<i>p</i>}	-0.014 (0.119)	-0.150 (0.122)	-0.029 (0.128)	-0.178 (0.133)	0.210 (0.658)	-0.045 (0.505)
POLBIRTH _{<i>p</i>}	0.358** (0.141)	0.518*** (0.145)	0.416** (0.182)	0.541*** (0.159)	0.552 (0.660)	0.458 (0.549)
ncard _{<i>p</i>}	-0.002*** (0.001)	-0.004*** (0.001)	-0.001 (0.001)	-0.005* (0.003)	-0.001 (0.001)	-0.003 (0.002)
FRACDIFF _{<i>p-1</i>}	0.012 (0.077)	0.064 (0.081)	0.046 (0.119)	0.016 (0.099)	-0.021 (0.063)	0.038 (0.110)
POLDIFF _{<i>p-1</i>}	0.001 (0.059)	-0.010 (0.058)	-0.026 (0.083)	0.004 (0.083)	0.064 (0.051)	0.064 (0.045)
NDIFF _{<i>p-1</i>}	0.000 (0.002)	0.001 (0.002)	-0.000 (0.002)	0.002 (0.002)	0.001 (0.002)	-0.000 (0.003)
Additional controls	no	yes	no	yes	no	yes
Century dummies	no	yes	no	yes	no	yes
Observations	543	543	282	282	261	261
R-squared	0.044	0.097	0.036	0.107	0.022	0.073

Notes: Coefficients are estimated from a linear probability model with Newey-West standard errors allowing for a maximum of 10 lags in parentheses. The dependent variable is a dummy indicating whether there were disturbances within the Papal States during year *t*. The pre-reform period includes years 1295–1585. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively.

D. Papacy-level regressions

Table D-1: Fractionalization, polarization, and disturbances in the Papal States (papacy-level regression)

Dep. Variable:	DIST		DIST5		PROPDIST	
	(1)	(2)	(3)	(4)	(5)	(6)
FRACBIRTH	0.069 (0.238)	0.024 (0.370)	-0.005 (0.227)	0.134 (0.358)	-0.057 (0.062)	-0.257 (0.173)
POLBIRTH	2.259*** (0.388)	2.220*** (0.570)	1.930*** (0.460)	1.687** (0.702)	0.503*** (0.185)	0.572** (0.267)
$ncard_p$	-0.013*** (0.002)	-0.011 (0.006)	-0.011*** (0.002)	-0.006 (0.006)	-0.002*** (0.001)	-0.003** (0.001)
$lpapacy_p$		0.004* (0.002)		0.002 (0.002)		-0.000 (0.001)
$lpapacy_{p-1}$		-0.004 (0.003)		-0.002 (0.002)		-0.001 (0.000)
$interregnum_p$		-0.033 (0.021)		-0.025* (0.015)		-0.000 (0.006)
$ageelected_p$		-0.002 (0.003)		-0.000 (0.003)		0.000 (0.001)
Century dummies	no	yes	no	yes	no	yes
Observations	62	62	62	62	62	62
R-squared	0.474	0.584	0.443	0.506	0.430	0.524

Notes: Robust standard errors in parentheses. The coefficients are estimated from a linear probability model with Newey-West standard errors allowing for a maximum of 5 lags in parentheses. DIST is a dummy variable indicating whether there were disturbances within the Papal States during papacy t . DIST5 considers disturbances that took place during the first 5 years of the papacy. PROPDIST is the proportion of the papacy under disturbances. FRACBIRTH and POLBIRTH are fractionalization and polarization measures using the birthplace of cardinals as grouping. $ncard_p$ is the number of cardinals in the conclave, $lpapacy_p$ and $lpapacy_{p-1}$ are the length of the current and previous papacy, respectively. $interregnum_p$ is the number of days between the death of the pope and the start of the conclave. $lpapacy_p$, $lpapacy_{p-1}$ and $interregnum_p$ are measured in hundreds of days. $ageelected_p$ is the age of the pope when elected, in years. ***, ** and * indicate statistical significance at the 1%, 5% and 10%, respectively.