Elite Influence? Religion, Economics, and the Rise of the Nazis

Spenkuch, Jörg and Tillmann, Philipp

Northwestern University, University of Chicago

30 March 2014

Elite Influence? Religion, Economics, and the Rise of the Nazis*

Jörg L. Spenkuch
Northwestern University

Philipp Tillmann
University of Chicago

March 2014

Abstract

Adolf Hitler's seizure of power was one of the most consequential events of the twentieth century. Yet, our understanding of which factors fueled the astonishing rise of the Nazis remains highly incomplete. This paper shows that religion played an important role in the Nazi party's electoral success—dwarfing all available socioeconomic variables. To obtain the first causal estimates we exploit plausibly exogenous variation in the geographic distribution of Catholics and Protestants due to a peace treaty in the sixteenth century. Even after allowing for sizeable violations of the exclusion restriction, the evidence indicates that Catholics were significantly less likely to vote for the Nazi Party than Protestants. Consistent with the historical record, our results are most naturally rationalized by a model in which the Catholic Church leaned on believers to vote for the democratic Zentrum Party, whereas the Protestant Church remained politically neutral.

*We would like to thank Gary Becker, Dana Chandler, Georgy Egorov, Roland Fryer, Steven Levitt, Roger Myerson, Elisa Olivieri, Nicola Persico, Jesse Shapiro, David Toniatti, and especially Georg Spenkuch for advice and many hours of helpful conversation. Davide Cantoni, Jürgen Falter, Jared Rubin, Nico Voigtländer, and Hans-Joachim Voth generously shared their data with us. We gratefully acknowledge research assistance from Enrico Berkes, Steven Castongia, Yuxuan Chen, and Moonish Maredia. All views expressed in this paper as well as any remaining errors are solely our responsibility. Correspondence can be addressed to the authors at MEDS Department, Kellogg School of Management, 2001 Sheridan Rd, Evanston, IL 60208 [Spenkuch], or Department of Economics, University of Chicago, 1126 E 59th St, Chicago, IL 60637 [Tillmann], or by email: j-spenkuch@kellogg.northwestern.edu [Spenkuch], ptillmann@uchicago.edu [Tillmann].

1. Introduction

Social scientists have long analyzed the role of elites in democratic transitions and breakdowns, revolutions and mass movements, as well as various other social phenomena (e.g., Acemoglu and Robinson 2005; Michels 1911; Mills 1956; Mosca 1896). Pareto (1916), for instance, argues that true democracy is an illusion and that a ruling class will always emerge to enrich itself. Consequently, he characterizes elites as those who are the most adept at using the two modes of political rule: force and persuasion.

For centuries, the Catholic Church was a master of both. In medieval times it could exploit its unique position at the intersection of spiritual and worldly authority to strong-arm rulers and peasants alike. The advent of mass democracy, however, brought about fundamental changes. If the Church or any other group of elites wanted to achieve their political goals they now had to persuade the populus (for examples, see Ekelund et al. 2006; Gill 1998; or Warner 2000). Such a radical shift in the "rules of the game" raises important questions. Are voters susceptible to this form of influence from above? To what extent are elites, such as the Church and its dignitaries, able to wield power through "steering" the masses?

To shed light on these issues we present evidence from the Weimar Republic. Few historical events have been more consequential than the failure of Germany's first democracy and Adolf Hitler's ensuing rise to power. Almost none are more difficult to understand. Even contemporary observers were surprised by the Nazis' rapid success. In 1928 the Nazi Party (NSDAP) won only 2.6% of votes. Within two and half years, however, its vote share increased by a factor of seven, only to double again by 1932. At the end of the Weimar Republic in 1933, the NSDAP obtained 43.9% of the popular vote and was by far the largest faction in parliament (see Figure 1).

With few exceptions Germany's traditional elites either condemned the Republic and supported conservative parties that sought to abolish it, or they remained politically uninvolved (see, e.g., Mommsen 1989). By contrast, the Catholic Church remained supportive of the new democracy. Scarred by Bismarck's *Kulturkampf*, the Church backed its traditional ally, the democratic Zentrum (Centre Party).[1]

Promoting the political and cultural ideals of the Catholic Church, the Zentrum had been the spearhead of Political Catholicism ever since its founding in the second half of the nineteenth century. Not only were many high-ranking party officials ordained Catholic priests, but the Church had traditionally tried to use its influence to sway Catholics to vote for the Zentrum (Anderson 2000). Between 1919 and 1932, the party participated in all of the Weimar Republic's governing coalitions.

[1]Our description of the Zentrum Party and its election results always includes its Bavarian branch, the Bavarian People's Party (BVP), even though it was formally a separate party.

Alerted by the NSDAP's sudden success at the polls, the Church took an explicit anti-Nazi position after the September elections of 1930. The German bishops even went so far as to officially forbid believers to join the NSDAP or to vote for it. Noncompliers were threatened with excommunication and, in many instances, publically shamed (see, e.g., Abel 1938; Fandel 1997, 2002; Scholder 1977).

As one would expect if the Church's proscription was, indeed, effective, Figure 2 shows that support for the Nazis was by no means uniform. Despite the onset of the World Economic Crisis, majoritarian Catholic regions remained strongholds of the Zentrum. Voters in predominantly Protestant areas, however, abandoned their traditional parties and flocked toward the Nazis.

Although the link between religion and NSDAP vote shares may be surprising, we are not the first to recognize it. In fact, the rise of the Nazis is one of the most studied topics in modern history, and scholars of fascism have unearthed numerous factors associated with Nazi support (see, e.g., Brown 1982; Childers 1983; Falter 1991; Hamilton 1982; O'Loughlin 2002; among many others). However, as pointed out by King et al. (2008), this literature draws only rarely on adequate econometric techniques, and the quantitative evidence that does exist remains purely correlational.[2]

In the first part of this paper we show that religion is the single most important predictor of Nazi votes. More specifically, constituencies' religious composition explains slightly more than 40% of the county-level variation in NSDAP vote shares. All other available variables combined (including electoral district fixed effects) add only an additional 41%. We, therefore, argue that in order to fully comprehend the failure of Germany's first democracy, one needs to understand the role of religion and that of the Catholic Church.

While descriptive evidence on who voted for Hitler may by itself be interesting, it is insufficient to judge whether religion had a *causal* impact on the rise of the Nazis, and, if so, through which channels it operated. King et al. (2008), for instance, argue that Protestants and Catholics simply had divergent economic interests and that the relative weakness of the NSDAP in predominantly Catholic areas is attributable to its inability to appeal to farmers.

The second part of the paper is devoted to showing that the effect of religion on the voting behavior of Germans was indeed causal. Our evidence from the last fully free elections held in November 1932 indicates that Catholics were about 28 percentage points less likely to vote for the NSDAP than Protestants. Compared to an overall Nazi vote share of 33.1%, the effect of religion is not only statistically but also economically highly significant. Taken at

[2]Two recent exceptions are Adena et al. (2013) and Satyanath et al. (2013). Adena et al. (2013) estimate the impact of radio propaganda on NSDAP vote shares, while Satyanath et al. (2013) examine the relationship between cultural capital and support for the Nazis. Both papers use state-of-the-art econometric methods to estimate causal effects.

face value, our point estimates suggest that, *ceteris paribus*, Protestants were three to four times more likely to vote for the Nazis than Catholics.

To obtain the first causal estimates we exploit plausibly exogenous variation in the geographic distribution of Catholics and Protestants due to a stipulation in the Peace of Augsburg in 1555. Ending decades of religious conflict and war, the Peace of Augsburg established the *ius reformandi*. According to the principle *cuius regio, eius religio* ("whose realm, his religion"), territorial lords obtained the right to determine states' official religion and, therefore, the religion of all their subjects. While the treaty secured the unity of religion within individual states, it led to religious fragmentation of Germany as a whole, which at this time consisted of more than a thousand independent territories.[3]

Figure 3 depicts the spread of religion in the aftermath of the Peace. As the comparison with Figure 2 demonstrates, the geographic distribution of Protestants and Catholics due to lords' choices in the second half of the sixteenth century still resembles that during the Weimar Republic, *and* it is highly correlated with NSDAP vote shares.

Nevertheless, for our instrumental variable estimates to have a causal interpretation, it must be the case that princes' choices are orthogonal to unobserved determinants of individuals' voting decisions in 1932. This assumption is fundamentally untestable, but one may be willing to judge its plausibility by considering the process that led to the adoption of a particular faith.

Historians argue that most rulers were deeply religious and not only concerned about their own salvation, but also that of their subjects. Thus, their religious conscience often dictated a particular choice (see, for instance, Dixon 2002 and Lutz 1997). Moreover, politics of the day, such as existing feuds or alliances, are believed to have played an important role (Scribner and Dixon 2003). Cantoni (2012) provides otherwise scarce statistical evidence, finding that "latitude, contribution to the *Reichsmatrikel* [a proxy for military power], ecclesiastical status, and distance to Wittenberg [the origin of the Reformation movement] are the only economically and statistically significant predictors" of princes' decisions (p. 511). He rationalizes these findings through a theory of strategic neighborhood interactions, in which territorial lords followed the lead of their more powerful neighbors.[4]

Although plausible (especially after controlling for the factors mentioned above), there is no guarantee that the exclusion restriction required for a valid instrument is exactly satisfied. We, therefore, use econometric techniques developed by Conley et al. (2012) to show that

[3]Not until the Peace of Westphalia in 1648 were subjects formally free to choose their own religion.

[4]Rubin (2014) shows that cities that had a printing press at the beginning of the sixteenth century were also more likely to adopt the Protestant faith, and Dittmar (2011) argues that they experienced faster subsequent growth. To ensure that our results are robust to this potential confound, we explicitly control for it.

our main estimates are qualitatively robust to sizeable violations of the exclusion restriction. That is, even if rulers' choices in the sixteenth century had an independent impact on the voting behavior of Germans almost four hundred years later, as long as one is willing to rule out that this independent effect exceeds 12.5 percentage points, one would still conclude that religion exerted a significant influence on Nazi vote shares. To put this into perspective, 12.5 percentage points corresponds to almost half of all NSDAP supporters (among eligible voters) in the November elections of 1932, to more than four times the difference in the voting behavior of urban and rural constituencies, or to the estimated impact of moving almost the entire workforce from agriculture into manufacturing.

The third part of the paper argues that the effect of religion operated through the Catholic Church pressuring believers to vote for the Zentrum Party, while the Protestant Church remained politically neutral. Building on formal theories of conformity (e.g., Akerlof 1980 and Bernheim 1994), we develop a simple model of voting decisions in the face of pressure by the Church. Five key pieces of evidence support the predictions of our model: (i) Religious differences in NSDAP vote shares are substantially smaller in areas where the Church's official position was undermined by a priest who openly sympathized with the Nazis. (ii) Religious differences in NSDAP vote shares are much smaller in counties where, before the advent of the Nazis, Catholics did not follow the Church's "recommendation" to vote for the Zentrum. (iii) The effect of religion is larger in rural areas than in cities, where the Church yielded arguably less influence and where the pressure to conform is likely to have been lower. (iv) Perhaps counterintuitively, our model predicts that Catholics and Protestants should have been equally likely to support left-wing parties—despite the Catholic Church's constant warnings about the dangers of Socialism. That is, the Church should have been able to "dissuade" believers from voting for the NSDAP, but not from supporting the Communist Party (KPD). This prediction is also borne out in the data. (v) Lastly, looking at different proxy variables for Nazi ideology and anti-Semitism, we find that religious differences *reversed* after March 1933, when the Catholic bishops gave up their opposition and took a position favorable to Hitler.

By contrast, the data are incompatible with a number of alternative explanations for the effect of religion on Nazi vote shares. For instance, by conditioning on measures of church attendance and other religious activities, we can rule out that religiosity itself is driving our results. Moreover, we find that the effect of religion does not vary with the share of Catholics in a county or municipality, which casts doubt on explanations based on traditional models of peer effects, culture, and social milieus.

Naturally, our paper is closely related to a vast literature on the rise of fascism and the downfall of Germany's first democracy. We partially review these studies in Section 2. More-

over, our analysis contributes to a growing literature on the economics of religion (e.g., Barro and McCleary 2005, 2006; Basten and Betz 2013; Becker and Woessmann 2009; Campante and Yanagizawa-Drott 2013; Iannaccone 1992, 1998; Spenkuch 2011) as well as to an important body of work on the power of elites in shaping the political economy (e.g., Acemoglu and Robinson 2000, 2001, 2005; Conley and Temimi 2001; Lizzeri and Persico 2004; Weingast 1997). While much of the latter focuses on elites' rent seeking and their role in the transition towards democracy, we present evidence on the ability of elites to wield political influence through "steering" the masses, even after universal suffrage has been achieved.

The plan for the rest of the paper is as follows. Section 2 provides background information on the rise of the Nazis, while selectively reviewing the existing empirical literature. Section 3 describes the data and presents partial correlations. Our main results appear in Section 4. Section 5 discusses potential mechanisms, and the last section concludes. An Appendix with ancillary results as well as the precise definitions of all variables used throughout the analysis is provided on the authors' websites.

2. Historical Background and Previous Literature

2.1. *The Fall of the Weimar Democracy and the Rise of the Nazis*

With Germany's defeat in World War I came the end of her monarchy. Although the ensuing revolution resulted in the signing of a democratic constitution, the Weimar Republic was off to a bad start (see Table 1 for a list of key events that led to its eventual downfall).[5]

Public outrage over the Treaty of Versailles, the beginnings of a severe post-war inflation as well as several coup attempts and political assassinations all dragged the Republic into turmoil. The primary beneficiaries of the various crises were radical parties on both ends of the political spectrum.

One of them was the National Socialist Workers Party (NSDAP). Founded in 1919, the Nazi Party was initially little more than one amongst many in the *völkisch* milieu of Munich. Yet, under the leadership of Adolf Hitler, its 55th member and primary agitator, it soon became known as the most radical, anti-Semitic party in Bavaria.

In November 1923, Hitler decided to take the initiative and overthrow the government. Known as the Beer Hall Putsch and inspired by Mussolini's March on Rome, his "March on Berlin" failed miserably. The NSDAP was subsequently outlawed and Hitler was convicted of treason. The right-leaning court, however, sentenced him to only five years in prison with the possibility of parole after as little as six months.[6]

[5]The description in this section draws on the superb account of Mommsen (1989), among others.

[6]At the time, the justice system was heavily biased. Gumbel (1922), for instance, documents that offenders from the political right received much milder sentences than those from the left.

With Hitler behind bars the Nazi movement became disorganized and fragmented. The NSDAP even "merged" with the German Völkisch Freedom Party (DVFP) to file a joint list for the party's first two national elections in 1924.

Overshadowed by the previous crises, the May elections of 1924 saw large gains of antidemocratic parties. The communist KPD, for instance, increased its vote share by more than 10% percentage points, whereas the Nazis obtained 6.5% of the popular vote.

Following the end of hyperinflation and aided by the Dawes Plan (which reduced Germany's reparation payments), economic conditions steadily bettered over the course of 1924. So, when snap elections became necessary in December of the same year, radical parties lost support, while their democratic counterparts experienced considerable gains.

Notwithstanding parties' inability (or unwillingness) to compromise and despite multiple changes to the governing coalition (which never had a secure majority), the economic and political situation continued to improve. Parliament served the full legislative term, and the period between 1924 and 1929 became known as the Republic's "Golden Era."

After Hitler's release from prison and with the ban on the Nazi Party lifted in February 1925, the Nazi movement began to regroup. In a radical change of strategy, Hitler was now determined to ascend to power legally, i.e. by winning elections. Yet, until the fall of 1929 the NSDAP remained insignificant, achieving only 2.6% of the popular vote in 1928.[7]

All of this changed changed when publishing mogul Alfred Hugenberg and the right-wing German National People's Party (DNVP) launched a large-scale media campaign against the Young Plan (a treaty that further *reduced* Germany's reparations payments). While the campaign itself was ultimately unsuccessful, it provided the Nazis with an opportunity to gain national exposure. By the spring of 1930, Hitler and the NSDAP had become household names.

Around the same time, Germany's ongoing economic and political stabilization came to an abrupt halt. Due to the onset of the Great Depression, American banks withdrew short-term loans on which German companies had been relying during the upturn, industrial production declined by over 40%, and unemployment skyrocketed to a peak of about 6 million (i.e. more than one in four workers) during the winter of 1932. Unable to effectively deal with the problem of rising unemployment, the Weimar Republic's last democratically governing cabinet stepped down in March of 1930.

The following September election saw landslide gains for the NSDAP. With a vote share of 18.3%—more than seven times its previous result—the Nazis became the second largest faction in parliament. Even contemporaries were surprised by NSDAP's sudden success.

[7]Due to strict proportionality rule with no minimum threshold, the NSDAP was still able to win 12 seats in the *Reichstag*.

Since radical parties had won the majority of seats, Heinrich Brüning, the previously appointed Chancellor, circumvented the legislative prerogative of the *Reichstag* and instead governed through the use of emergency decrees (according to Article 48 of the Weimar Constitution). As would all of his successors.

Most historians now believe that Brüning deliberately pursued deflationary policies to make allied reparation demands look more and more unreasonable and improve Germany's bargaining position.[8] In May 1932, *Reichspräsident* Paul von Hindenburg replaced Brüning with the well-known monarchist Franz von Papen. Even before the *Reichstag* could deliver a vote of no confidence, President von Hindenburg dissolved parliament and ordered new elections.[9]

In light of worsening economic conditions and increasing radicalization of the political climate, the extremist KPD and NSDAP won over half of all votes in July of 1932. For the NSDAP this meant a doubling of its vote share from two years prior.

Despite Hitler's promise to tolerate the next presidential cabinet in exchange for new elections and a lift of the ban on the SA (the NSDAP's paramilitary unit)—Hitler was even offered a post in the cabinet—the new Reichstag issued a vote of no confidence in its very first session. Consequently, it was dissolved yet again.

The subsequent November elections delivered hope for the embattled democracy. For the first time since 1928, the NSDAP actually lost votes. Although the Nazis were still the largest faction in parliament, contemporary observers questioned Hitler's all-or-nothing strategy and saw the party in decline.

Ironically, just two months later, General von Schleicher, Papen's successor as *Reichskanzler*, was forced to step down. Fearing a military coup under von Schleicher's leadership and urged by his group of advisors, President von Hindenburg named Hitler the new Chancellor on January 30, 1933.

With only two other Nazis being part of Hitler's cabinet, the old conservative elites believed they could control him.[10] This assessment proved to be fatally wrong. Aided by the Reichstag Fire Decree, which suspended most civil liberties, and with the help of the police apparatus (which was under the control of Hermann Göring, then Prussian Minister of the Interior), the Nazis started to persecute political enemies within a month after Hitler took office.

Nevertheless, the NDSAP was unable to achieve an absolute majority in the Republic's

[8]Others, however, disagree. They argue that Brüning had no other choice given the economic situation. See, e.g., Borchardt (1980) and Büttner (1989) for opposing views.

[9]Papen had originally been a member of the Zentrum, but was forced to leave the party when he accepted the chancellorship.

[10]Franz von Papen, who rejoined the cabinet as vice chancellor, even proclaimed: "Within two months we will have pushed Hitler so far in the corner that he'll squeak" (quoted in Fest 1973).

last election of March 1933. While many KPD and SPD candidates had been imprisoned or had fled the country, voters could still choose from all major parties and cast their ballots in secret.[11] Together, Communists and Social Democrats received more than 30% of votes. Yet, with 43.9%, the Nazi Party was by far the largest faction in parliament. On March 23, 1933, the newly constituted Reichstag sealed the end of the Republic by passing the Enabling Act.

Although the Nazis were backed by almost half of the electorate, historians often highlight the role of elites in the failure of Germany's first democracy (see, e.g., Büttner 2008; Fest 1973; Kolb 1984; Schulze 1983). Due to the precarious situation during the Republic's founding, the "old elites," i.e. landed nobility (*Junker*), the army's officer corps, industrial tycoons, judges, high-ranking bureaucrats, etc., were generally allowed to remain in their positions of power. This led to a remarkable continuity between the old Empire and the new Republic (Büttner 2008) and cemented preexisting cleavages (Lepsius 1966; Lipset and Rokkan 1967). Mommsen (1989) emphasizes the broad antirepublican consensus within the old elites, and Fest (1973) argues that Hitler would have never been appointed Chancellor had it not been for von Hindenburg's advisors and the support of government officials, army officers, as well as members of the nationalistic bourgeoisie.[12]

However, not every group of elites actively supported the Nazis. Despite a waging internal debate about the perceived merits of National Socialism, the Protestant Church remained officially neutral (Scholder 1977). That is, according to the guidelines of its member churches, priests were to remain politically uninvolved.[13]

The Catholic Church went even further. Alerted by the NSDAP's success in the September elections of 1930, the German bishops took an explicit anti-Nazi stand. In the diocese of Mainz, for instance, Catholics were officially forbidden to be members of the Nazi Party, and noncompliers could not receive any of the sacraments (cf. Müller 1963).

In the eyes of the Catholic Church, the NSDAP was not only an ideological opponent, but also a threat to its political influence, which had been secured through the Zentrum Party ever since the end of Bismarck's *Kulturkampf* (Fandel 2002; Morsey 1988). According to Deuerlein (1963), nobody of public standing opposed the Nazis more than the Catholic Church and its dignitaries.

There exists, indeed, ample anecdotal evidence to support this assertion. For example, in the small village of Waldsee the local priest is said to have warned parishioners that "whoever

[11] Irregularities in vote counts, etc. are believed to have been minor (see Bracher et al. 1960).

[12] Ferguson and Voth (2008) show that a significant proportion of Germany's largest firms had substantial links to the NSDAP and that they experienced large abnormal returns after Hitler took power.

[13] In practice this often meant that members of the NSDAP and its paramilitary groups would be allowed to attend mass in full uniform and that "the 'Amen' of the priest was drowned out by the 'Sieg Heil' of the brown formations" (Scholder 1977, p. 182).

votes for Hitler will have to justify himself on Judgment Day. There is no bigger sin than voting for Hitler!" (quoted in Fandel 1997, p. 35). Others called Hitler a "vagabond" and withheld Easter communion or absolution from suspected Nazi supporters (see Fandel 1997, 2002). In fact, many parish priests went above and beyond the orders of their bishops. Kißener (2009), for instance, mentions a Sunday sermon entitled "Heil Christ, not Heil Hitler!" during which the priest chastised parishioners for supporting the NSDAP in the previous election. In short, "in the Catholic milieu [...] supporters of National Socialism paid for their political beliefs with social ostracism" (Fandel 2002, p. 306).

For the Catholic Church such practices were hardly new. Since at least 1921 it had been actively discouraging believers from supporting various leftist groups, such as the communist KPD (Scholder 1977). And even before the founding of the Weimar Republic, the Church had traditionally used its influence to sway Catholics to vote for the Zentrum. Anderson (2000), for instance, notes that during the *Kaiserreich* "the most important of all of the parish clergy's task was to make sure that the Zentrum's ballots got distributed" (p. 131). It was also common for Sunday sermons to remind parishioners of their "obligation" to "vote according to their conscience"—a formula beloved by the clergy for the nod it made in the direction of voters' freedom, all the while reminding them what "conscience" required of every good Catholic (Anderson 2000, p. 132).

Although the Catholic Church and its dignitaries had been vigilant in resisting the Nazis until the very last election in 1933, their resistance crumbled shortly after passage of the Enabling Act. On March 28, 1933, Bishop Bertram issued an official statement calling the "general proscription and warnings of National Socialism [...] no longer necessary" (quoted in Kißener 2009, p. 19; see also Gruber 2005). While the same statement contained other more carefully worded passages, it was widely perceived as the "episcopacy's approval of the Third Reich and its Führer" (Scholder 1977, p. 320).

Some historians argue that the German episcopacy reversed its position to clear the way for the concordat between the Holy See and Third Reich, which was reached only four months later (e.g., Bracher 1956; Scholder 1977). Others, such as Becker (1968) or Stickler (2009), deny such a connection. They argue that Hitler's mere promise to respect Catholics' freedom of religion and to guarantee the continued existence of Catholic schools sufficed for the Church to back down. Somewhat less controversial is Kershaw's (1985) assertion that, as an institution, neither the Catholic nor the Protestant Church offered any meaningful resistance during the Third Reich.

2.2. *Related Literature*

As noted in the introduction, there exists a vast literature examining the correlates of Nazi support (e.g., Brown 1982; Childers 1983; Falter 1991; Hamilton 1982; Hänisch 1983; King et al. 2008; among many others). Although most of the literature is concerned with the effect of class divisions and the worsening economic situation, we are by no means the first to point out the relationship between NSDAP vote shares and religion (see, for instance, von Kuehnelt-Leddhin 1952, or Lipset 1963). Even contemporary observers had been aware of the fact that the Nazis gained more votes in predominantly Protestant regions (see the sources cited in Fandel 2002, or in Childers 1983).[14]

In the seminal account of elections during the Weimar Republic, Falter (1991) calculates that, until 1933, Protestants were about twice as likely to vote for the Nazi Party as Catholics—a difference borne out in various subsamples of the data. Although he argues for a genuine effect of religion, Falter (1991) acknowledges that simple correlations (without standard errors) are insufficient to establish such a claim. In fact, he states that the assumptions required for his estimates to have a causal interpretation are "in many cases unrealistic" (Falter 1991, p. 443).

It may thus not be surprising that King et al. (2008) lament the lack of modern econometric methods that have been brought to bear on the problem. With the exception of Adena et al.'s (2013) analysis of the impact of radio propaganda, and Voigtländer and Voth (2012) and Satyanath et al. (2013), who respectively study the role of historically rooted anti-Semitism and social capital, the existing quantitative evidence on the determinants of Nazi support remains purely correlational.

The resulting uncertainty about the effect of religion is reflected in different explanations for the patterns in Figure 2. Some attribute Catholics' apparent resistance to a distinctively Catholic milieu with a close-knit network of clubs, unions, and other civic organizations (e.g., Burnham 1972; Falter 1991; Heilbronner 1998; Kuropka 2012; Lepsius 1966). Others emphasize the importance of observational differences between Protestants and Catholics. Brown (1982), for instance, shows that Nazis gained strong support from the Catholic petty bourgeoisie, but not from Catholic peasants. In the most sophisticated study to date, King et al. (2008) suggest that the correlation between religion and Nazi vote shares is entirely spurious. More precisely, King et al. (2008) argue that Protestants and Catholics simply had divergent economic interests, and the relative weakness of the NSDAP in predominantly Catholic areas is attributable to its inability to appeal to farmers.

[14]This cannot be explained by the NSDAP's campaign strategy. Childers (1983) reports that the Nazis tried extraordinarily hard to win over Catholics and that they were determined to weaken the Zentrum's hold on its traditional constituents.

Interestingly, neither of these explanations is in line with what Hitler himself believed. According to Hitler, the NSDAP would only be able to "win over supporters of the Zentrum [...] if the curia abandoned it" (quoted in Scholder 1977, p. 304).

3. A First Look at the Data

3.1. *Data Description and Summary Statistics*

In order to shed light on the true role of religion and that of the Catholic Church, we rely on official election results combined with information from the 1925 and 1933 Censuses. These data were compiled by Falter and Hänisch (1990) from official publications by the *Statistische Reichsamt* and are, for most election years, available at the county as well as the municipality levels (see Hänisch 1988 or the Data Appendix to this paper for details). Unfortunately, the *Statistische Reichsamt* never released municipality-level results for the *Reichstag* elections in July and November of 1932. Since these were the last two elections of the Weimar Republic that were undoubtedly free, much of our empirical analysis is conducted at the county level.[15] Unless otherwise noted, we restrict attention to the 982 counties with nonmissing information on religious composition and election results in November 1932.[16] Where appropriate we supplement our main analysis with municipality-level results for the 1930 and 1933 parliamentary elections. Reassuringly, our results are robust to the choice of aggregation and election year.

Table 2A displays NSDAP vote shares over the course of the Weimar Republic. Note well, the numbers therein do not match the official election results in Figure 1. In order to avoid issues of endogenous turnout all vote shares throughout the remainder of the analysis are calculated as a percentage of the entire voting-eligible population, whereas those in Figure 1 refer only to valid votes. It is also worth pointing out that in 1924 the NSDAP did not run under its own name but together with other right-wing parties. Notwithstanding this caveat, the raw data reveal only small initial differences between majoritarian Catholic and predominantly Protestant counties. Between 1928 and 1930, however, these differences amplify until they reach about 13.4 percentage points in 1932. Given an overall NSDAP vote share of 26.4%, it appears that Catholics were much more resistant to the allure of the Nazis than Protestants.

At the same time, the descriptive statistics in Table 2B demonstrate that majoritarian Catholic counties differ from their Protestant counterparts along several important dimen-

[15]The March elections of 1933 are generally regarded as "partially free." Despite considerable Nazi propaganda and political persecution of Communists and Social Democrats, voters could still choose among all major parties and mark their ballots in secret. Irregularities in vote counts are believed to have been minor (see Bracher et al. 1960).

[16]We lose three observations due to missing data on their religious composition.

sions.[17] For instance, predominantly Catholic counties are more rural and employ a much larger fraction of the work force in agriculture. Moreover, they have lower unemployement rates and are more likely to be located in the south of the Weimar Republic, further away from sea ports as well as major cities such as Berlin. Thus, any argument linking Nazi vote shares to the religious composition of the electorate (and ultimately the Catholic Church) must, at the very least, be based on an empirical strategy that carefully controls for all observable differences.

3.2. *Partial Correlations and Bounds on the Causal Effect of Religion*

To determine whether religion remains correlated with Nazi vote shares, even after controlling for observable characteristics, we focus on the November election of 1932 and estimate models of the following form:

$$v_c = \mu_d + \beta Catholic_c + X_c'\theta + \varepsilon_c. \tag{1}$$

Here, v_c denotes NSDAP vote shares (among all eligible voters) in county c, $Catholic_c$ measures the share of Catholics, X_c is a comprehensive vector of controls, and μ_d marks an electoral district fixed effect.

For comparison, in 1932 the Weimar Republic was roughly the same size as the current state of California. It was subdivided into almost a thousand counties, which partition its 35 electoral districts. Thus, by including electoral district fixed effects we account nonparametrically for all factors that were approximately constant within these relatively small regions.

Table 3 presents results from estimating equation (1) by weighted least squares, with weights corresponding to counties' voting-eligible population. To allow for arbitrary forms of correlation in the residuals of nearby counties, standard errors are clustered by electoral district. Moving from the left to the right of the table, the set of included controls grows steadily.

The first column of Table 3 shows that Catholicism and electoral support for the NSDAP are strongly negatively correlated—just as one would expect based on Figure 2. Surprisingly, by itself, counties' share of Catholics accounts for slightly more than 40% of the variation in Nazi votes shares.

The next columns add covariates related to various demographic characteristics, economic conditions as proxied by unemployment rates, as well as detailed controls for the composition of the workforce. The latter are intended not only to account for the well-known differences

[17] To show that religiously homogenous counties are fairly common, Appendix Figure A.1 presents a kernel density estimate of the distribution of counties' share of Catholics.

in the voting behavior of certain groups, like farmers or factory workers, but also to control for potential heterogeneity in the impact of the economic crisis (beyond what is already captured by unemployment rates). Column (6) also controls for geographical differences, such as latitude, longitude, distance to the nearest major city, etc. (see Table 2B for a complete list), and column (7) adds electoral district fixed effects.

Interestingly, voters in areas with a larger Jewish population seem to have been more likely to support the NSDAP. Although the respective point estimates are large in economic terms, they are estimated imprecisely due to the very limited range of the independent variable.

As suggested by much anecdotal evidence, factory workers and artisans are estimated to have been 5 to 14 percentage points less likely to vote for the NSDAP than their counterparts in agriculture (the omitted category). But again, large standard errors hamper our ability to draw sharp conclusions.

Despite stark observational differences between predominantly Catholic and Protestant counties, the partial correlation between religion and NSDAP vote shares does *not* decline with the inclusion of additional controls. In fact, the opposite appears to be true.

In our most inclusive specification Catholics are estimated to be about 29 percentage points less likely to vote for the Nazis than Protestants. Not only is the point estimate statistically highly significant, but given an overall NSDAP vote share of 26.42% in November of 1932 (cf. Table 2A), it is economically very large.

Although the estimates in Table 3 control for more potential confounds than any other estimates in the literature, they are purely correlational and do not have a causal interpretation. However, given different assumptions on the severity of omitted variables bias, one can derive bounds on the causal effect of religion.

Building on Murphy and Topel (1990) and Altonji et al. (2005), Oster (2013) shows how to bound the true causal effect based on the sensitivity of the point estimates to adding additional controls coupled with movements in the R^2. More precisely, let W_c be the vector of all *unobserved* covariates that explain Nazi vote shares on the county level, and define $\psi \equiv \frac{\text{Cov}(Catholic_c, W_c)}{\text{Cov}(Catholic_c, X_c)}$, where X_c and W_c have been scaled to have variance one.[18] Intuitively, ψ parameterizes how correlated unobserved covariates are with counties' religious composition, relative to the controls that are included in the regression. Given the point estimates and the R^2 both before and after adding covariates, Oster (2013) provides formulas to calculate the omitted variables bias for any given value of ψ. Thus, as long as the true degree of correlation is smaller than ψ, the causal effect of religion must lie between the original estimate and the one corrected for potential omitted variables bias.

Figure 4 depicts the results. The shaded region therein corresponds to the identified set

[18]Note that if W_c was observed, then equation (1) would become $v_c = \mu_d + \beta Catholic_c + X_c'\theta + W_c'\omega$.

for different values of ψ. Due to the high R^2 in our original regressions, the bounds on the true β are fairly tight. In particular, if observables are at least as important for NSDAP vote shares as unobservables, i.e. if ψ lies between -1 and 1, then we can rule out that omitted variable bias is of first-order importance.

Note that if one were to choose covariates randomly, then one would expect ψ to equal one, whereas it should lie on the unit interval if the "most important" controls are included first. For the identified set to include zero, one would have to allow for $\psi < -4.49$. That is, unobserved factors would have to be systematically "different" *and* more than four times as "important" as those for which we already control. We believe that this is unlikely.

Taking the bounds in Figure 4 at face value, our results suggest that, all else equal, Protestants were *at least* two and a half times more likely to vote for the Nazis than Catholics.[19] Thus, to fully comprehend Adolf Hitler's rise to power one must understand the role of religion and that of the Catholic Church.

4. Estimating the Causal Effect of Religion

Naturally, this requires more-precise estimates of the causal effect of religion. We, therefore, pursue an instrumental variables strategy based on the historical determinants of the geographic distribution of Catholics and Protestants. We then use Bayesian methods developed by Conley et al. (2012) to assess the sensitivity of our conclusions with respect to violations of the exclusion restriction.[20]

4.1. *The Peace of Augsburg and Religion in Weimar Germany*

As explained in the introduction, our empirical approach uses princes' choices of whether to adopt Protestantism in the aftermath of 1555 as an instrumental variable for the religion of Germans living in the same areas during the Weimar Republic. The comparison of Figures 2 and 3 suggests that both are strongly correlated. Here, we briefly review the historical causes for this pattern.[21]

At the beginning of the sixteenth century the German Lands were fragmented into several hundred independent (secular and ecclesiastical) territories and free Imperial Cities.

[19] See Section 5 for details on how to calculate relative vote propensities.

[20] In Appendix A we present evidence from an alternative instrumental variables strategy. The results rely on the instrument proposed by Becker and Woessmann (2009), i.e. distance to the city of Wittenberg—the origin of the Reformation movement. Since distance to Wittenberg is highly colinear with our other geographical covariates, and since it explains very little residual variation in counties religious' composition after accounting for territorial lords' choices (meaning that it is a weak instrument), we do not use it in the main part of our analysis. Nevertheless, the results from this alternative instrumental variables approach support our findings.

[21] The following summary borrows heavily from Spenkuch (2011), who first used this instrument to study religious differences in labor market outcomes.

Although formally governed by an emperor, political power within the Holy Roman Empire lay, for the most part, with its territorial lords.

Despite widespread discontent about matters of church organization and abuses of power by the clergy, the religious monopoly of the Roman Catholic Church remained essentially unchallenged until the "Luther affair" in 1517. What those in power initially perceived as a dispute among clergymen quickly spread to the urban (and later rural) laity and became a mass movement.

After the Diet of Speyer in 1526, the German princes assumed leadership of the Reformation movement. The Diet instituted that until a synod could settle the religious dispute, territorial lords should proceed in matters of faith as they saw fit under the Word of God and the laws of the Empire. Princes who had privately converted to Lutheranism took this as an opportunity to proceed with church reform in their state. As a devout Catholic, Emperor Charles V, however, was determined to defend the (old) Church. Yet, his attempts to undo the Reformation resulted only in the Schmalkaldic War.

Ending more than two decades of religious conflict, the Peace of Augsburg in 1555 established princes' constitutional right to introduce the Lutheran faith in their states (*ius reformandi*). According to the principle *cuius regio, eius religio* ("whose realm, his religion"), the religion of a lord became the official faith in his territory and, therefore, the religion of all people living within its confines.[22] Only ecclesiastical rulers were not covered by the *ius reformandi* (*reservatum ecclesiasticum*). A bishop or archbishop would lose his office and the possessions tied to it upon conversion to another faith. Ordinary subjects who refused to convert were, conditional on selling all property, granted the right to emigrate (*ius emigrandi*).

According to Scribner and Dixon (2003) only about 10% of the population ever showed a lasting interest in the ideas of the Reformation, but as much as 80% adhered to a Protestant faith at the end of the sixteenth century. Therefore, most conversions must have occurred involuntarily. There exists, indeed, ample evidence that, until the beginning of the seventeenth century, the *ius reformandi* was often strictly enforced.[23] Even residents of Imperial Cities—although formally free—were frequently forced to adopt a particular faith. In these towns, political power lay in the hands of local elites who virtually imposed the Reformation (Dixon 2002).

Historians argue that rulers' choice of religion depended on multiple factors. Most lords

[22]In contrast to the Lutheran faith (*Confessio Augustana*), neither Calvinism nor Anabaptism was protected under the Peace of Augsburg. Nevertheless, a non-negligible number of territories underwent a Second Reformation, in which Calvinism became the official religion.

[23]For instance, "heretics," i.e. those who did not adhere to the official state religion, faced the death penalty in the Duchy of Upper Saxony (Lutz 1997).

were deeply religious and cared, not only about their own salvation, but also about that of their subjects (Dixon 2002). Moreover, political considerations, such as ties between noble families or the formation of alliances, contributed to the decision (Lutz 1997). On the one hand, any converted territory had to fear losing the Emperor's support or drawing hostility from neighboring states. On the other hand, rulers also stood to gain from introducing the Reformation, as it allowed them to assert their independence and to take possession of church property.[24] The fact that territories' official religion often changed more than once, especially when a new generation of princes took reign toward the end of the sixteenth century, suggests that idiosyncratic factors also played an important role.[25]

Cantoni (2012) and Rubin (2014) provide otherwise rare empirical evidence on rulers' choices and the spread of the Reformation. Cantoni (2012) reports that "latitude, contribution to the *Reichsmatrikel* [a proxy for military power], ecclesiastical status, and distance to Wittenberg [the origin of the Reformation movement] are the only economically and statistically significant predictors" of princes' decisions (p. 511). He rationalizes these findings through a theory of strategic neighborhood interactions, in which territorial lords followed the lead of their more powerful neighbors. Rubin (2014) shows that cities which had a printing press in 1500 were subsequently more likely to adopt Protestantism, presumably because printing facilitated the spread of information.

Although individuals were formally free to choose their own faith after 1648, most territories of the Holy Roman Empire remained religiously uniform until the *Reichsdeputationshauptschluss* in 1803.[26] This piece of legislation enacted the secularization of ecclesiastical territories and the mediatization of small secular principalities. That is, ecclesiastical territories, Imperial Cities, and other small entities were annexed by neighboring states, thereby reducing the number of independent territories from over a thousand to forty-eight Imperial Cities and slightly more than thirty religiously mixed states (Nowak 1995). On a local level, however, most areas remained religiously homogenous until the mass migrations associated with Word War II.

[24]Formally, a reformed lord was head of the Protestant Church in his state. Of course, this did not apply to Catholic rulers, who nevertheless often behaved "like popes in their lands" (Dixon 2002, p. 117).

[25]For instance, testing the *reservatum ecclesiasticum*, Archbishop Gebhard Truchseß von Waldburg converted to the Lutheran faith in order to be allowed to marry a Protestant canoness. He thereby started the Cologne War (1582/83).

[26]Ending the Thirty Years' War, the Peace of Westphalia (1648) also ended princes' right to determine the religion of their subjects—although the *ius reformandi* remained formally in place. A territory's official Church was guaranteed the right to publicly celebrate mass, etc. (*exercitium publicum religionis*), but individuals were allowed to choose and privately practice another faith (*devotio domestica*). In contrast to the Peace of Augsburg, the Peace of Westphalia did not only protect the Catholic and Lutheran denominations, but also Calvinists. Regarding disputes, the peace treaty stipulated the "normal year" 1624. That is, territories should remain with the side that controlled them in January 1624.

In creating a mapping between counties at the end of the Weimar Republic and the religion of the princes who reigned over the corresponding areas in the aftermath of the Peace of Augsburg, this paper relies on several historical accounts, in particular the regional histories by Schindling and Ziegler (1992a,b, 1993a,b, 1995, 1996), which contain the most detailed available information on the territories of the Holy Roman Empire for the period from 1500 to 1650.

The mapping created with this information is based on the religious situation around 1624—the "normal year" set in the Peace of Westphalia.[27] Although there existed notable differences between and within different reformed faiths, as a whole the teachings of Lutherans, Calvinists, and Zwinglians were much closer to each other than to the doctrines of the Catholic Church (Dixon 2002). The primary mapping, therefore, abstracts from differences between reformed denominations and differentiates only between Protestant and Catholic territories.

Only in a few instances does the area of a county correspond exactly to that of some state at the beginning of the seventeenth century. Whenever Catholic and Protestant princes reigned over different parts of a county, or whenever its area encompassed an Imperial City or an ecclesiastical territory, the religion assigned to this county is the likely religion of the majority of subjects. Since population estimates for the period are often not available, relative populations are gauged by comparing the size of the areas in question (assuming equal densities). In cases in which this procedure yields ambiguous results, the respective counties are classified as neither "historically Protestant" nor "historically Catholic", but as "mixed."[28] Appendix B provides additional detail regarding the construction of the mapping.

4.2. *First Stage and Reduced Form Results*

Table 4 demonstrates that rulers' choices are indeed heavily correlated with the religion of Germans living in the same areas over 300 years later. The estimates therein correspond to the following econometric model:

$$(2) \qquad Catholic_c = \kappa_d + \alpha_0 Historically\,Catholic_c + \alpha_1 Historically\,Mixed_c + X_c'\phi + \eta_c,$$

where $Catholic_c$ denotes county c's share of Catholics when the Nazis took power, $Historically$

[27]Since territories' official religions were not constant in the aftermath of the Peace of Augsburg, there exists the possibility that the results depend on the choice of base year. To rule this out, a second mapping based on the situation directly after the Peace of Augsburg in 1555 has been created. Both mappings are fairly similar, but the situation in 1624 is a slightly better predictor of the geographic distribution of Protestants and Catholics about 300 years later.

[28]This is the case for 10.1% of counties. Our results are robust to classifying these counties as either Protestant or Catholic.

$Catholic_c$ and $Historically\,Mixed_c$ are indicator variables for whether c is classified as "historically Catholic" or "mixed," and X_c marks a comprehensive vector of controls, including the factors that Cantoni (2012) and Rubin (2014) have shown to be correlated with the spread of the Reformation movement. As before, we also add electoral district fixed effects, κ_d.

Although the point estimates do decline with the inclusion of additional controls, especially latitude and electoral district fixed effects, they remain economically large and statistically highly significant. Conditioning on the electoral district, we estimate that the share of Catholics is almost 43 percentage points higher in counties governed by a Catholic ruler than in those governed by a Protestant one. Similarly, historically mixed counties have a 22 percentage points higher share of Catholics.

Since rulers' choices introduce variation in the religion of Germans during the Weimar Republic, one would also expect their choices to be correlated with Nazi vote shares if Catholicism were, indeed, to have a causal effect. Table 5 explores this issue by estimating the reduced form relationship:

$$v_c = \pi_d + \rho_0 Historically\,Catholic_c + \rho_1 Historically\,Mixed_c + X_c'\vartheta + \varsigma_c. \tag{3}$$

According to the reduced form point estimates, the NSDAP received between 11.7 and 16.7 percentage points fewer votes in November of 1932 if the lord who ruled over a county's area at the end of the sixteenth century chose to remain Catholic. By the same token, historically mixed counties are estimated to have 5.6 to 8.1 percentage points lower Nazi vote shares.

One possible explanation for the findings in Table 5 is that historically Protestant territories differ systematically from historically Catholic ones, above and beyond the factors for which we already control. For instance, the former might have developed a different set of institutions or developed a culture particularly receptive to the message of the NSDAP. In such a case, the reduced form estimates might be driven by *unobserved* differences.

However, the explanatory power of this argument appears a priori limited. At least since the creation of a unified German Empire in 1871, possibly even since the *Reichsdeputationshauptschluss* in 1803, did formal institutions converge between traditionally Protestant and Catholic areas. Moreover, Cantoni (2010) reports that there is no evidence for divergence in economic prosperity between Protestant and Catholic cities.

Also, to the extent that institutions and culture are common to counties within the same electoral district, one would expect estimates of the reduced form effect of religion to decline considerably with the inclusion of electoral district fixed effects. This is not the case. In fact, estimates that condition on the electoral district are statistically indistinguishable from

those that do not.

4.3. *Instrumental Variables Estimates*

The preceding discussion established a relationship between princes' choices in the aftermath of the Peace of Augsburg and the religion of Germans during the Weimar Republic, as well as a correlation between princes' religion and NSDAP vote shares. It also appears that observable county characteristics cannot explain the reduced form results. Taken together, these findings point to a causal effect of religion. In what follows, this effect is examined more rigorously using the religion of a territorial lord as an instrumental variable (IV) for counties' religious composition at the end of the Weimar Republic.

For territories' official religion in the aftermath of 1555 to be a valid instrument for that of Germans living in the corresponding areas more than 300 years later, it must be the case that princes' religion is uncorrelated with *unobserved* factors determining Nazi vote shares. Unfortunately, this assumption is fundamentally untestable. The arguments in Section 4.1, however, suggest that a territory's official religion stands a reasonable chance of satisfying the exogeneity assumption required for a valid instrument, especially after controlling for all variables known to have influenced rulers' choices.

If one accepts this assumption, then instrumental variable estimates are consistent and have a causal interpretation. The effect of Catholicism can then be estimated by two-stage least squares (2SLS), treating counties' religious composition as endogenous and the variables included in X_c as exogenous. That is, the estimating equation becomes

$$v_c = \mu_d + \beta \widehat{Catholic}_c + X_c'\theta + \varepsilon_c, \tag{4}$$

where $\widehat{Catholic}_c$ denotes the *predicted* share of Catholics based on the first stage in equation (2).

Results from our IV regressions are displayed in Table 6. As was the case for their OLS counterparts, the impact of religion is estimated quite precisely. More importantly, it is economically very large, and, if anything, it grows with the inclusion of additional controls. Taken at face value, the 2SLS estimates suggest that in the last undoubtedly free election Catholics were 27.5 percentage points less likely to vote for the Nazis than Protestants. The results from our IV approach are, therefore, remarkably similar to the partial correlations reported in Table 3.

Of course, for the point estimates in Table 6 to identify the *causal* effect of Catholicism on Nazi vote shares, it must be the case that ε_c is uncorrelated with $\widehat{Catholic}_c$. That is, princes' choice of religion must influence NSDAP vote shares only through the religion of

contemporary Germans. This is a fairly strong assumption, and it is not clear whether it is, in fact, exactly satisfied. We, therefore, use Bayesian methods developed by Conley et al. (2012) to assess the robustness of our results with respect to violations of the exclusion restriction.

Specifically, we consider the following econometric model:

$$v_c = \mu_d + \beta Catholic_c + X_c'\theta + \gamma_0 Historically\,Catholic_c + \gamma_1 Historically\,Mixed_c + \varepsilon_c. \tag{5}$$

Here, the vector $\gamma = [\gamma_0, \gamma_1]$ parameterizes the extent to which the exclusion restriction is violated. If the exclusion restriction does, in fact, hold, then $\gamma_0 = \gamma_1 = 0$.

Since $Catholic_c$ is potentially endogenous, β and γ cannot be separately identified. It is, however, possible to identify β and conduct inference conditional on specifying the *support* or the *distribution* of γ (see Conley et al. 2012).

Figure 5 displays the results. The upper panel depicts the estimated effect of Catholicism if one has no prior information on the sign or distribution of γ. As is apparent from the graph, without information on the direction of the direct effect of rulers' choices in the aftermath of 1555, one obtains identical point estimates as in the standard 2SLS setup. The confidence intervals, however, widen. The dotted line, labeled "Union," corresponds to the theoretical 95%-confidence interval when we only impose the restriction that the support of γ is equal to $[-\delta, \delta] \times [-\delta, \delta]$. Since Conley et al. (2012) show that the resulting confidence intervals are often too conservative (because they "overweight" highly unlikely cases, leading them to include the true causal effect more than 95% of the time), we also explore assumptions that rely on more prior information to produce ex ante correct coverage.

The dashed line depicts confidence intervals under the assumption that γ is distributed uniformly on the interval $[-\delta, \delta] \times [-\delta, \delta]$. That is, δ still denotes the maximal allowable violation of the exclusion restriction, but the econometrician believes all scenarios to be equally likely. No matter how standard errors are ultimately calculated, as long as one is willing to rule out direct effects larger than about 10 percentage points, one would still reject the null hypothesis of no causal effect of religion.

In the lower panel of Figure 5 we explore the more "damning" case of prior information that leads one to believe that rulers' choices themselves had a negative impact on NSDAP vote shares. More specifically, we impose the assumption that each element of γ is distributed uniformly on $[-\delta, 0]$ and plot the resulting estimate of β as well as the 90%- and 95%-confidence intervals. While the size of the point estimates declines as we allow for potentially larger violations of the exclusion restriction, they do remain economically meaningful for all values of δ that we consider. Moreover, the figure shows that one would not reject the null

of no causal effect if one were only willing to rule out direct effects larger than about 12.5 percentage points.

To put this into perspective, 12.5 percentage points corresponds to almost one-half of all NSDAP supporters (among eligible voters) in the November elections of 1932, or (taking the point estimates in Table 3 at face value) to the estimated impact of moving almost the entire workforce from agriculture into manufacturing, or to more than four times the difference between urban and rural counties. Whatever the true direct impact of princes' choices in the sixteenth century on NSDAP vote shares may have been, we suspect that it was smaller than that.

Remarkably, the point estimate corresponding to the case of $\delta = .125$ still implies that Protestants were almost twice as likely to vote for the NSDAP as Catholics. Thus, even after allowing for sizeable violations of the exclusion restriction, the evidence indicates that Catholics were much less susceptible to the allure of the Nazis.

4.4. *Additional Sensitivity and Robustness Checks*

In the remainder of this section we conduct ancillary sensitivity and robustness checks in order to demonstrate that our results do not depend on the choice of election, level of aggregation, or the inclusion of particular regions of the Weimar Republic.

Table 7 contains the first set of results. For each specification and each sample restriction, we provide OLS point estimates based on equation (1) as well as 2SLS estimates based on our IV approach in equation (4). The top row contains the baseline estimates from Tables 3 and 6. As the numbers in the remaining rows demonstrate, our results are quite robust to the choice of regions included in the sample, the weighting scheme, whether we calculate vote shares as a fraction of all eligible voters or only relative to valid votes cast, whether we include even more detailed controls regarding the composition of the labor force and that of the unemployed, and to controlling for Voigtländer and Voth's (2012) proxy for historically rooted anti-Semitism, as well as the (endogenous) distribution of preferences over parties in 1920. We also show that the estimated effect remains essentially unchanged when we use the religious situation directly after the Peace of Augsburg as an instrument (as opposed to that at the eve of the Thirty Years' War). Moreover, our results are qualitatively and quantitatively similar if we replace the left-hand side variable with NSDAP vote shares in the (free) election of July 1932 or with those in the (only partially free) election of March 1933. Only when relying on Nazi votes shares in 1930 do we obtain significantly smaller point estimates. Note, however, that only 14.8% of eligible voters chose the NSDAP in 1930. Thus, the estimates remain economically very large.

Lastly, Table 8 shows that the results do not depend on the level of aggregation. Since

municipality-level election results are not available for either of the two elections in 1932, we focus on those in 1933 (upper panel) and 1930 (lower panel) instead—noting that only the latter was fully free. Within each set of regressions, the leftmost column contains the county-level baseline estimate. The middle column estimates the same model, but on the municipality-level, while the last column adds county fixed effects. That is, the rightmost column uses only variation across villages within the same county for identification.

To be able to pursue our instrumental variables strategy while using county fixed effects, we have created an additional mapping that differentiates as much as possible between the religion of lords who ruled over different municipalities within the same counties. Since counties in the Weimar Republic are, on average, fairly small—less than 190 square miles or about the area of a square with 13.8 mile sides—and because there are fewer cases of princes with *different* religions controlling villages within the same county, this last specification is fairly demanding on the data (as evidenced by the low first stage F-statistic). Nevertheless, the results in Table 8 allow us to rule out that local idiosyncrasies or differences in economic conditions between Protestant and Catholic regions are driving our conclusions.

5. Conformity and Alternative Explanations

The findings above suggest that Catholicism exerted a causal effect on NSDAP vote shares. They are silent, however, on *why* Catholics were so much more resistant to the allure of the Nazis than their Protestant counterparts.

In order to shed light on the causes of religious differences in Nazi support, we first provide evidence on which parties Catholics voted for instead. The results in Table 9 are based on our IV approach, i.e. equation (4), with the vote shares of other major parties serving as the dependent variable. With the resulting point estimates in hand, we calculate vote shares by religion.

To illustrate the mechanics of the exercise, let v_p denote the national vote share of party p, while letting v_p^P, v_p^C, v_p^O be the respective counterparts among Protestants, Catholics, and "others." Since vote shares have been calculated as a fraction of all eligible voters, the following identity must always hold:

$$v_p = s_P v_p^P + s_C v_p^C + (1 - s_P - s_C)\, v_p^O, \tag{6}$$

where s_P and s_C are the population shares of Protestants and Catholics, respectively. Note, v_p, s_P, and s_C are given in the raw data, and $v_p^C = v_p^P + \widehat{\beta}_{2SLS}$. Thus, if v_p^O were known, vote shares of Catholics and Protestants would be exactly identified. As we do not have causal estimates of v_p^O, we report two related statistics. First, we report estimates for v_p^P and v_p^C, assuming that $v_p^O = v_p$, i.e. that "others" voted in the same way as the national average.

Second, we provide bounds on v_p^P and v_p^C by letting v_p^O vary between 0 and 1. Given that the population share of "others" is only about 4.6%, these bounds are fairly tight. Even more importantly for our purposes, while the levels of v_p^P and v_p^C do vary with v_p^O, their *difference* will not.[29]

In line with much anecdotal evidence, our estimates imply that the electorate of the Zentrum was composed almost entirely of Catholics. Furthermore, until the very end of the Weimar Republic, the fraction of Catholics voting for the Zentrum remained at over 40%, down by some 10% from its peak in 1920. Compared to Catholics, Protestants were initially much more likely to vote for the SPD, DDP, DVP as well as the right-wing DNVP. But with the exception of the SPD, support for these parties dwindled dramatically after the onset of the World Economic Crisis and the ensuing radicalization of the electorate.

Interestingly, there are *no* religious differences in the far left of the political spectrum—despite the Catholic Church's persistent warnings about the dangers of Socialism. That is, Catholics and Protestants are estimated to have supported the communist KPD with equal probability.

With respect to the far right, however, our results indicate meaningful differences between Protestants and Catholics as early as 1924, when Hitler was still imprisoned and the *völkisch* movement had scattered across different parties. Although the share of Nazi voters grew rapidly among both groups, Protestants were always at least two and a half—often three or four—times as likely to vote for the Nazis as their Catholic counterparts.[30]

The patterns in Table 9 give rise to the following three questions: (i) Why were Catholics so much more likely to vote for the Zentrum than for any other party? (ii) Why did Catholics remain relatively loyal to the Zentrum, while Protestants abandoned their traditional parties in much greater numbers and flocked toward the Nazis? (iii) Why were there important religious differences in Nazi vote shares—even very early on—but no differences in support for the Communists?

In this last part of the paper we argue that the influence of the Catholic Church and its dignitaries provides the most parsimonious answer to all of these questions. In support of this assertion, we present additional empirical evidence.

[29]Strictly speaking, this holds only at interior solutions, i.e. when v_c^P and v_c^C lie within the unit interval. Due to the linearity assumptions underlying the 2SLS estimates, implied vote shares are sometimes slightly smaller than 0. In such cases we report $\max\{v, 0\}$.

[30]As noted by Falter (1991), religious differences in Nazi vote shares decline in March of 1933. As these elections were not fully free, we are hesitant to interpret too much into the narrowing of the gap.

5.1. *Conformity and the Influence of the Church*

To structure the discussion we develop a simple model of voting decisions in the face of pressure by the Church. Building on formal theories of conformity (e.g., Akerlof 1980 and Bernheim 1994), we assume that there exists a social norm among Catholics (i.e. what it means to a "good Catholic") that is dictated by the prescriptions of the Church and its dignitaries. By contrast, Protestants act solely based on their own preferences—consistent with the Protestant Church not taking an official stand.

More specifically, let $P = \{A, B, C, D, E, Z\}$ denote the set of political parties, with their positions on the political spectrum given by the respective lowercase letters. All voters care about parties' positions relative to their own continuously distributed bliss points t, i.e. their type. Catholics and Protestants share the same distribution of types, but the former also worry about adhering to the prescriptions set forth by the Church. That is, Protestants derive utility $g(x-t)$ from choosing party X, while that of Catholics is given by

$$g(x-t) - \lambda 1[X \neq Z]. \tag{7}$$

The function $g(\cdot)$ is continuously differentiable, strictly concave, and symmetric around its maximum at 0. The key assumption is that Catholics suffer a penalty $\lambda > 0$ from supporting a party other than Z, the Zentrum.

Bernheim (1994) provides a model of conformity in which such norms arise endogenously because individuals care about how they are perceived by others. Here, we assume that the Church is able to dictate the norm, i.e. it is exogenously given, but note that similar conclusions would follow from a more general setup.

Since the Zentrum was perceived as the political arm of the Catholic Church and targeted its messages towards Catholic voters, we also assume that Protestants did not consider voting for it—consistent with the evidence in Table 9.[31] When it comes to the remaining parties, Protestants choose whichever one is positioned closest to their personal bliss point. Catholics, however, must trade off political congruence with social stigma or "punishment" by the Church. Thus, as long as λ is strictly positive, some Catholics will vote for the Zentrum despite the fact that another party is politically closer to their own ideal point. That is, the set of types who will find it optimal to vote for the Zentrum is a strict superset of those who

[31]It is straightforward to microfound this assumption, while retaining the qualitative predictions of the model. For instance, with parties located sufficiently close to the Zentrum on either side of the political spectrum, very few Protestants would vote for Z, while Catholics would continue to prefer the Zentrum. Alternatively, Protestants might suffer a penalty, τ, from indirectly supporting the goals of the Catholic Church. That is, their utility function could be written as $g(x-t) - \tau 1[X = Z]$. If τ is large enough, no Protestant votes for the Zentrum. Since it is not the goal of this section to explain the lack of Protestant support for the Zentrum, we abstract from these possibilities.

would do so in the absence of pressure by the Church. To see this, consider a voter who is equidistant from parties D and Z, i.e. $|d-t| = |z-t|$. Since $\lambda > 0$, such a voter will end up supporting Z. Continuity and strict concavity of $g(\cdot)$ then imply that the set of types who vote for Z is strictly increasing in λ. Thus, if the social norm set forth by the Church is sufficiently important relative to agents' own preferences, then the model above is able to explain why Catholics overwhelmingly favored the Zentrum.

More importantly, the model is able to rationalize why there were always religious differences in support of right-wing parties but not the communist KPD. Consider the upper panels of Figure 6, which depict the model's predictions for the case of $g = -(x-t)^2$, $x, t \in [0,1]$, and $\lambda = .09$. Although there are no religious differences in the distribution of types, Catholics are initially less likely to vote for E, the party on the far right; but they are equally likely to vote for party A, which is located at the opposite extreme of the spectrum.[32] They key to this asymmetry is that the Zentrum was—despite its name—located to the right of the political middle (see, e.g., Mommsen 1989, or Anderson 2000). Thus, for intermediate levels of λ, some "right-wing types" will adhere to the norm and support the Zentrum, but the influence of the Church will not be enough to force "left-wing types" (who are further away from Z) to conform. These types will vote for whichever party is closest to them, regardless of whether they are Catholic or Protestant.

Clearly, the exact locations of the cutoff points depend on parties' positions as well as the specifics of the parameterization, but it is straightforward to verify that this prediction continues to go through as long as λ is large but no too large relative to $g(\cdot)$ and as long as the Zentrum is located to the right of the actual center.

As shown in the lower panels of Figure 6, our conformity theory is also able to rationalize why Protestants flocked toward the Nazis (and to a lesser extent the Communists), while Catholics remained relatively loyal to the Zentrum. Following much anecdotal evidence, we model the World Economic Crisis and the ensuing radicalization of the electorate as bifurcation of voters' preferences relative to the positions of parties.[33] This produces an increase of extremist parties' vote shares amongst Protestants *and* Catholics, but the continued pressure of the Church limits the latter.

Thus, for intermediate values of λ, our model predicts a greater increase in NSDAP vote

[32]Note that for large enough values of λ, Catholics will not vote for any party located close to the Zentrum, i.e. C and D. To explain the strictly positive vote shares of the DVP and DNVP, even among Catholics, it suffices to augment individuals' utility functions with an idiosyncratic, party-specific random shock.

[33]To achieve an increase in the vote share of extremist parties, one could also hold the distribution of preferences fixed while letting parties' positions move closer together. Since parties' positions are only defined relative to the distribution of types, both assumptions are isomorphic. The historical record, however, suggests that voters radicalized much more than parties, most of which moved somewhat to the right (see, e.g., Childers 1983).

shares among Protestants than among Catholics, but no religious differences in the growth of the left-wing KPD—despite the Church's strong anticommunist stand. The model's predictions are, therefore, fully consistent with the results in Table 9.[34]

Another a priori plausible rationalization of the findings above might be that Catholics and Protestants differed in the distribution of preferences and that the Zentrum party was somehow better than other parties at catering to their core constituencies. While simple, such an explanation has trouble rationalizing some of the results we present next.

In Table 10 we test our conformity theory by presenting empirical evidence on the model's comparative statics. That is, we split our data according to different proxies for λ, the parameter that governs the influence of the Church, and estimate religious differences in NSDAP vote shares for each of the samples. If our theory is correct, we expect to see smaller differences in settings in which the Church and its dignitaries yielded less influence over Catholics.

For instance, one might think that the word of the Church carried more weight in rural villages where the local priest knew all of his parishioners personally (and was able to monitor their political activities) than in urban, more anonymous settings. Consistent with the predictions of our theory, we estimate that in the November election of 1932 the religious difference in NSDAP vote shares was about 10–14 percentage smaller in cities than in rural environments.

One might also expect that the Church's official political position was less credible and, therefore, less influential when it was directly contradicted by a local priest who openly sympathized with the Nazis. We test this prediction using data on Catholic priests who are known to have collaborated with the Nazis.

In a decade-long research project, Spicer (2008) collected the names and biographical information of 138 Catholic priests (or ordained members of religious orders) who officially joined the NSDAP or made their Nazi convictions otherwise publicly known. We digitize this information and say that a given village had a "brown priest" if one of the priests named in Spicer (2008) resided within a 10 kilometer radius. Using municipality-level election results for 1933, we find that the religious *difference* in NSDAP vote shares was at least 10 percentage points smaller in villages where the local priest openly sympathized with the Nazis.[35] Since the data are unlikely to contain every single priest who spoke out in favor of the NSDAP,

[34]In light of the historical record, especially the quotes in Section 2, a similar, a priori reasonable model would have been to assume that Catholics suffered a penalty from abandoning the Zentrum but directly from voting the NSDAP. Given parties' positions on the political spectrum, such a model would predict Catholics to substitute from the NSDAP to DNVP. The results in Table 9, however, suggest that very few Catholics voted for the DNVP.

[35]We obtain qualitatively and quantitatively similar results when using alternative radii of 5 or 15 kilometers or when focusing on the 1930 elections instead.

our estimates are likely to *understate* the true discrepancy.

Note that the preceding results cannot be readily explained by differences in the distribution of types across cities and rural villages or across municipalities with and without a "brown priest." In the absence of pressure by the Catholic Church, shifts in the distribution of preferences should have a similar effect on NSDAP vote shares among Protestants and Catholics. Our results, however, demonstrate that the *difference* between the two varies with proxies for the influence of the Church.

Moreover, Appendix Table A.2 shows that in 1924—when the NSDAP first participated in national elections—religious differences in Nazi vote shares were equally large in villages with and without a "brown priest" at the end of the Weimar Republic. That is, comparing muncipalities that ended up having a "brown priest" in 1933 with those that did not, there is no evidence of preexisting differences in Catholics' support for the Nazis.

The final piece of evidence comes from the *Reichstag* elections in 1920, when the NSDAP still had only a few hundred members and was little more than a niche party in the Bavarian capital of Munich. Following the practices of statisticians during the German Empire (e.g., Stolle 1893, among others), we calculate for each county the fraction of Catholics voting for the Zentrum as the total number of Zentrum votes divided by the number of voting-eligible Catholics. We then divide our sample into quartiles.[36] Applying the model above to the November elections in 1932, one would expect to see much smaller differences between Protestants and Catholics in areas in which the latter paid initially little attention to the positions of the Church, i.e. in the lowest quartile. By contrast, there should be large differences wherever Catholics did conform, i.e. in the upper quartiles. These predictions conform exactly to the findings in the bottom half of Table 10. Although point estimates for the "nonconformist" group of counties are not very precise, we can nevertheless rule out equality of coefficients at the 1%-confidence level. The predictions of our theory are, therefore, consistent with these additional results.

Of course, the last piece of evidence can be equally well explained by the Zentrum being more adept at retaining its initial followers than other parties. However, any theory focused on the actions of the Zentrum (as opposed to those of the Catholic Church and its dignitaries) would not only have to explain why the Zentrum was more successful at preventing defection to the NSDAP than to the left-wing KPD, but it would also have to rationalize why religious differences in Nazi support were larger in rural villages than in urban environments, and why the political leanings of the local priest should have had any effect on parishioners' votes.

[36]The population share of Catholics varies widely within these subsamples. For instance, Catholics make up between .4 and 99.8 percent of the residents of counties in the lowest quartiles, while their share ranges from .3 to 99.5 percent in the highest one.

5.2. *Testing Alternative Explanations*

Peer Effects, Culture, and the Catholic Milieu Perhaps the most common explanation put forth by scholars arguing for a causal effect of religion is that Catholics lived in a culturally distinct environment, the Catholic milieu, which made them less susceptible to the messages of political extremists (see, e.g., Burnham 1972; Falter 1991; Kuropka 2012; Lepsius 1966). While it was undoubtedly true that life in predominantly Catholic regions was very different from that in majoritarian Protestant ones, we question this explanation for three reasons.

First, given that the Catholic milieu is usually described as anti-Nazi *and* anti-Communist, it cannot easily rationalize why there were no religious differences in support for the communist KPD, while there were large differences on the opposite end of the political spectrum.

Second, if social milieus were responsible for Catholics' relative immunity to the Nazis, then the point estimates in Table 8 should decline markedly with the inclusion of county fixed effects. After all, cultural differences were almost certainly smaller within than across counties (which on average were no larger than a 14 by 14 mile square). Yet, our point estimates remain quite stable.

One way to rectify this finding with an explanation based on different milieus would be to argue that there are large cultural disparities even within counties. For instance, as long as there is some critical mass, Catholics might be able to socialize mainly with other Catholics, and it could be those "peer effects" that create a micromilieu which shields them from the allure of the Nazis. In order to subject the milieu theory to a more rigorous test, we allow for nonlinearities in the effect of religion on NSDAP vote shares by estimating semiparametric versions of our baseline model in equation (1). More specifically, we estimate the following econometric model:

$$v_c = \mu_d + f\left(Catholic_c\right) + X_c'\theta + \varepsilon_{c.} \tag{8}$$

By construction, the impact of religion, i.e. the analogue to β in equation (1), is now given by the *slope* of $f(\cdot)$, which we only restrict to be continuous. If social milieus or "peer effects" really mattered for Catholics' voting decisions, then compared to "mixed" social environments, the gap between Protestants and Catholics should be much wider when the latter constitute the clear majority. That is, the relationship between Nazi vote shares and a constituencies' religious composition should be highly nonlinear.

Figure 7 shows that this is not the case. The upper two panels are based on county-level data for the elections in November 1932 (left) and those in March 1933 (right). The lower panels use municipality-level data for 1933 instead, with the one on the right excluding all villages and towns with more than two thousand inhabitants. Although estimates of $f(\cdot)$ are

reasonably precise, one cannot reject the null hypothesis of a linear relationship in any of the four plots. If anything, it appears that religious differences in Nazi vote shares *decrease* as the share of Catholics rises above 80%. There is, therefore, no evidence to conclude that religious differences in Nazi vote shares varied according to the social milieu.[37]

Viewed through the lense of a Berheim-type conformity model, it appears that the importance of the "norm", i.e. λ, does not vary with the religious composition of the population. This finding is incompatible with an explanation emphasizing social mileus, but it does not contradict our theory of elite influence—at least if one believes that the Catholic Church had ways to enforce its proscriptions even in "mixed" and predominantly Protestant areas.

Our third reason for dismissing explanations that hinge on social milieus is based on the results of Satyanath et al. (2013). Contrary to the claims of Heilbronner (1998) and others who emphasize the importance of close-knit social clubs and similar civic entities in immunizing Catholics against the allure of the Nazis, Satyanath et al. (2013) show that the NSDAP received *higher* vote shares in cities with more social capital, i.e. more of these organizations.

Luther, the Kulturkampf, and Obedience to Worldly Authority Some early scholars, e.g., von Kuehnelt-Leddhin (1952), speculate that Hitler had greater appeal to Protestants because the Protestant Church had been traditionally very close to German rulers (as in the epithet *Thron und Altar*). After all, in an attempt to make the Reformation more palatable to princes, Martin Luther had taught obedience to secular rule—even if it was unjust—whereas the Catholic Church was highly dismissive of worldly powers. Others have argued that Bismarck's *Kulturkampf* with its persecutions of Church officials sensitized Catholics to the dangers of authoritarian regimes, and that it made them wary of the Hitler movement very early on (e.g., Cremer 1999). Both hypotheses are testable.

If Catholics' experiences during the *Kulturkampf* had any impact on NSDAP vote shares, then the effect should be larger in Prussia, where the *Kulturkampf* was considerably more intense than in the remainder of the German Empire (Anderson 2000; Gross 2004). Similarly, if Luther's teachings made Protestants more susceptible to the allure of the Nazis, then one would expect to see smaller religious differences in areas that are rooted in the Reformed tradition of John Calvin, whose treatment of worldy authority differed sharply from that of Luther (see, e.g., Höpfl 1991).

But again, Table 11 shows that neither of these predictions are borne out in the data. If anything, religious differences in NSDAP vote shares are greater in historically Calvinist than Lutheran areas, and the point estimates for Prussia and the remainder of Weimar Germany

[37]OLS estimates that allow for β to vary with the religious composition of the electorate support this assertion. That is, it is generally not possible to reject the null hypothesis of a constant effect.

are statistically indistinguishable. Theories based on Catholics' wariness of secular authority receive, therefore, no support.

Religiosity A priori one of the most natural explanations might have been that Catholics were, on average, more pious, and that religiosity per se reduces the appeal of the "pagan" Nazis. In order to test this explanation (despite its difficulty in explaining the absence of religious differences in support for the antireligious KPD), we have gathered additional data on Catholics' reception of the Easter Communion, church attendance throughout the year, the number of religiously mixed marriages, christenings, etc. (see Amtliche Zentralstelle für kirchliche Statistik des katholischen Deutschlands 1924, 1931). We factor analyze these data to extract a measure of religiosity (see the descriton in the Data Appendix) and divide our sample into terciles.[38] However, contrary to the predictions of this theory, we do not observe smaller differences between Protestants and Catholics when the latter are less religious. In fact, the opposite appears to be true.

Religious Differences in Human Capital Becker and Woessmann (2009) contend that Protestantism had a causal effect on literacy rates in nineteenth century Prussia and that compared to Catholics, Protestants in contemporary Germany still obtain about .8 additional years of education. If correct, this argument does not necessarily invalidate our claim of a causal effect of religion. It merely points to a different mechanism, i.e. the effect of religion on NSDAP vote shares might have operated through education as opposed to the influence of the Church.

Although we do not possess direct measures of educational attainment in the Weimar Republic, we would expect that the detailed occupational covariates in Table 7 (where we control for the occupational composition of the work force *by sector*) account for at least some, if not most, of the potential mean difference between Protestants and Catholics. Moreover, we see no compelling theoretical reason for why the educated should have been more susceptible to the allure of the Nazis. If anything, the historical record as well as the results in Tables 3 and 6 suggest that relatively more educated white collar workers were *less* likely to vote for the NSDAP than their less educated counterparts in agriculture. Lastly, without assigning a role to the Catholic Church and its dignitataries, an explanation based on religious differences in human capital acquisition cannot account for the fact that religious differences in Nazi vote shares depend on the politcal leanings of the local priest. It is, of course, possible that lower education made Catholics more inclined to follow the prescriptions of the Church.

In sum, the evidence suggests that the effect of religion operated through the Catholic Church

[38]Reassuringly, our measure correlates positively with rates of church attendance and negatively with the fraction of religiously mixed marriages as well as out-of-wedlock births. See Appendix B and Table A.3 for details.

leaning on believers to vote for the Zentrum Party, while the Protestant Church remained politically neutral. None of the alternative explanations we consider are supported by the data.

6. Concluding Remarks

Social scientists have long been interested in the role of elites in democratic transitions and breakdowns. In this paper we study the role of the Catholic Church during the fall of the Weimar Republic and Adolf Hitler's ensuing rise to power. Contrary to most of Germany's traditional elites, the Catholic Church remained supportive of the new democracy—especially the Zentrum Party—and took an explicit anti-Nazi position until March 1933.

To obtain the first causal estimates we exploit plausibly exogenous variation in the geographic distribution of Catholics and Protestants due to a peace treaty in the sixteenth century. Even after allowing for sizeable violations of the exclusion restriction, our results indicate that Catholics were significantly *less* likely to vote for the NSDAP than Protestants. Critically, religious differences in NSDAP vote shares are smaller where, prior to the rise of the Nazis, parishioners were less likely to follow the Church's "recommendation" to vote for the Zentrum, and where a local priest contradicted the Church's official position by publically supporting the NSDAP. We argue that these as well as several other findings are most naturally rationalized by a model in which the Catholic Church leaned on believers to vote for the Zentrum party, whereas the Protestant Church remained politically neutral. Although the Catholic Church could not prevent the rise of the Nazis, our results suggest that its ability to "steer" the masses yielded it considerable influence in Germany's first democracy.

* * *

In March 1933, the German bishops reversed course and took a position favorable to Hitler. Did ordinary Catholics follow their lead? Drawing on the data of Falter and Kater (1993) and Voigtländer and Voth (2012), Table 12 presents some suggestive evidence based on several proxy variables for anti-Semitism and Nazi ideology before and during the Third Reich.[39] While Catholics were initially vastly underrepresented among members of the NSDAP and despite the fact that predominantly Catholic cities had, if anything, fewer pogroms during the 1920s, after the Church leadership abandoned its opposition to the Nazi government, Catholics were somewhat *more* likely than Protestants to write letters to the editor of the Nazi newspaper *Der Stürmer*, and cities with larger Catholic populations saw *more* depor-

[39]When using the data of Voigtländer and Voth (2012), we rely on their set of covariates and their extended sample. Results controlling for additional observable characteristics, even prefecture fixed effects, are qualitatively similar, but less precise. All other results in Table 12 are based on our OLS and IV specifications in equations (1) and (4), respectively, and use our standard set of controls.

tations and *more* attacks on synagogues during the *Reichskristallnacht*.

References

Abel, T. F. (1938). *Why Hitler Came into Power: An Answer Based on the Original Life Stories of Six Hundred of His Followers*. New York: Prentice-Hall.

Acemoglu, D., and J. Robinson (2000). "Why Did the West Extend the Franchise? Democracy, Inequality, and Growth in Historical Perspective." *Quarterly Journal of Economics*, 115(4): 1167–1199.

——— , and ——— (2001). "A Theory of Political Transitions." *American Economic Review*, 91(4): 938–963.

——— , and ——— (2005). *Economic Origins of Dictatorship and Democracy*. Cambridge, UK: Cambridge University Press.

Adena, M., R. Enikolopov, M. Petrova, V. Santarosa, and K. Zhuravskaya (2013). "Radio and the Rise of the Nazis in Prewar Germany." mimeographed, Universitat Pompeu Fabra.

Akerlof, G. A. (1980). "A Theory of Social Custom, of Which Unemployment May Be One Consequence." *Quarterly Journal of Economics*, 94(4): 749–775.

Altonji, J. G., T. E. Elder, and C. R. Taber (2005). "Selection on Observed and Unobserved Variables: Assessing the Effectiveness of Catholic Schools." *Journal of Political Economy*, 113(1): 151–183.

Amtliche Zentralstelle für kirchliche Statistik des katholischen Deutschlands (1924). *Kirchliches Handbuch für das katholische Deutschland, 11. Band: 1922/23–1923/24*. Freiburg i. Br.: Herder.

——— (1931). *Kirchliches Handbuch für das katholische Deutschland, 17. Band: 1930–1931*. Cologne: Gilde Verlag.

Anderson, M. L. (2000). *Practicing Democracy: Elections and Political Culture in Imperial Germany*. Princeton, NJ: Princeton University Press.

Barro, R. J., and R. M. McCleary (2005). "Which Countries Have State Religions?" *Quarterly Journal of Economics*, 120(4): 1331–1370.

——— , and ——— (2006). "Religion and Economy" *Journal of Economic Perspectives*, 20(2): 49–72.

Basten, C., and F. Betz (2013). "Beyond Work Ethic: Religion, Individual, and Political Preferences." *American Economic Journal: Economic Policy*, 5(3): 67–91.

Becker, J. (1968). "Das Ende der Zentrumspartei und die Problematik des politischen Katholizismus in Deutschland," (pp. 344–376) in G. Jasper (ed.), *Von Weimar zu Hitler, 1930–1933*. Cologne: Kiepenhauer & Witsch.

Becker, S. O., and L. Woessmann (2009). "Was Weber Wrong? A Human Capital Theory of Protestant Economic History." *Quarterly Journal of Economics*, 124(2): 531–596.

Bernheim, B. D. (1994). "A Theory of Conformity." *Journal of Political Economy*, 102(5): 841–

877.

Borchardt, K. (1980). "Zwangslagen und Handlungsspielräume in der großen Wirtschaftskrise der frühen Dreßigerjahre," (pp. 318–339) in M. Stürmer (ed.), *Die Weimarer Republik: Belagerte Civitas.* Königstein i. T.: Athenäum.

Bracher, K. D. (1956). *Nationalsozialistische Machtergreifung und Reichskonkordat.* Wiesbaden: C. Ritter.

——— , W. Sauer, and G. Schulz (1960). *Die nationalsozialistische Machtergreifung.* Cologne: Westdeutscher Verlag.

Brown, C. (1982). "The Nazi Vote: A National Ecological Study." *American Political Science Review*, 76(2): 285–302.

Burnham, W. D. (1972). "Political Immunization and Political Confessionalism. The United States and Weimar Germany." *Journal of Interdisciplinary History*, 3(1): 1–30.

Büttner, U. (1989). "Politische Alternativen zum Brüningschen Deflationskurs." *Vierteljahreshefte für Zeitgeschichte*, 37(2): 209–251.

——— (2008). *Weimar: Die überforderte Republik, 1918–1933.* Stuttgart: Klett-Cotta.

Campante, F., and D. Yanagizawa-Drott (2013). "Does Religion Affect Economic Growth and Happiness? Evidence from Ramadan." NBER Working Paper No. 19768.

Cantoni, D. (2010). "The Economic Effects of the Protestant Reformation: Testing the Weber Hypothesis in the German Lands." mimeographed, Harvard University.

——— (2012). "Adopting a New Religion: The Case of Protestantism in 16th Century Germany." *Economic Journal*, 122(560): 502–531.

Childers, T. (1983). *The Nazi Voter: The Social Foundations of Fascism in Germany, 1919–1933.* Chapel Hill, NC: University of North Carolina Press.

Conley, J. P., and A. Temimi (2001). "Endogenous Enfranchisement when Groups' Preferences Conflict." *Journal of Political Economy*, 109(1): 79–102.

Conley, T. G., C. B. Hansen, and P. E. Rossi (2012). "Plausibly Exogenous." *Review of Economics and Statistics*, 94(1): 260–272.

Cremer, D. J. (1999). "To Avoid a New Kulturkampf: The Catholic Workers' Associations and National Socialism in Weimar-era Bavaria." *Journal of Church and State*, 41(4): 739–760.

Deuerlein, E. (1963). *Der deutsche Katholizismus 1933.* Osnabrück: A. Fromm.

Dittmar, J. E. (2011). "Information Technology and Economic Change: The Impact of the Printing Press." *Quarterly Journal of Economics*, 126(3): 1133–1172.

Dixon, C. S. (2002). *The Reformation in Germany.* Oxford: Blackwell.

Ekelund, R. B., R. F. Hérbert, and R. Tollison (2006). *The Marketplace of Christianity.* Cambridge, MA: MIT Press.

Falter, J. (1991). *Hitlers Wähler.* Munich: C.H. Beck.

——— , and D. Hänisch (1990). "Wahl- und Sozialdaten der Kreise und Gemeinden des Deutschen Reiches von 1920 bis 1933." GESIS Datenarchiv.

——— , and M. Kater (1993). "Wähler und Mitglieder der NSDAP. Neue Forschungsergebnisse zur Soziographie des Nationalsozialismus 1925 bis 1933." *Geschichte und Gesellschaft*, 19(2): 155–177.

Fandel, T. (1997). *Konfession und Nationalsozialismus: Evangelische und katholische Pfarrer in der Pfalz 1930–1939.* Paderborn: Schöningh.

——— (2002). "Konfessionalismus und Nationalsozialismus," (pp. 299–314) in O. Blaschke (ed.), *Konfessionen im Konflikt. Deutschland zwischen 1800 und 1970: Ein zweites konfessionelles Zeitalter*. Göttingen: Vandenhoeck und Ruprecht.

Ferguson, T., and H.-J. Voth (2008). "Betting on Hitler: The Value of Political Connections in Nazi Germany." *Quarterly Journal of Economics*, 123(1): 101–137.

Fest, J. C. (1973). *Hitler: Eine Biographie*. Berlin: Propyläen.

Gill, T. (1998). *Rendering unto Caesar: The Catholic Church and the State in Latin America*. Chicago: University of Chicago Press.

Gross, M. B. (2004). *The War Against Catholicism: Liberalism and the Anti-Catholic Imagination in Nineteenth-Century Germany*. Ann Arbor, MI: University of Michigan Pres.

Gruber, H. (2005) *Katholische Kirche und Nationalsozialismus 1930–1945. Ein Bericht in Quellen*. Paderborn: Schöningh.

Gumbel, E. J. (1922). *Vier Jahre politischer Mord*. Berlin: Verlag der Neuen Gesellschaft.

Hamilton, R. F. (1982). *Who Voted for Hitler?* Princeton, NJ: Princeton University Press.

Hänisch, D. (1983). *Sozialstrukturelle Bestimmungsgründe des Wahlverhaltens in der Weimarer Republik: Eine Aggregatdatenanalyse der Ergebnisse der Reichtagswahlen 1924 bis 1933*. Duisburg: SOKOOP.

——— (1988). "Wahl- und Sozialdaten der Kreise und Gemeinden des Deutschen Reiches, 1920–1933: Benutzer-Handbuch." Zentralinstitut für sozialwissenschaftliche Forschung, Freie Universität Berlin.

Heilbronner, O. (1998). *Catholicism, Political Culture, and the Countryside: A Social History of The Nazi Party in South Germany*. Ann Arbor, MI: University of Michigan Press.

Höpfl, H. (ed.) (1991). *Luther and Calvin on Secular Authority*. Cambridge, UK: Cambridge University Press.

Iannaccone, L. R. (1992) "Sacrifice and Stigma: Reducing Free-Riding in Cults, Communes, and other Collectives." *Journal of Political Economy*, 100(2): 271–292.

——— (1998) "Introduction to the Economics of Religion." *Journal of Economic Literature*, 36(3): 1465–1496.

Kershaw, I. (1985). *The Nazi Dictatorship. Problems and Perspectives of Interpretation*. London: Edward Arnold.

King, G., O. Rosen, M. Tanner, and A. Wagner (2008). "Ordinary Economic Voting Behavior in the Extraordinary Election of Adolf Hitler." *Journal of Economic History*, 68(4): 951–996.

Kissener, M. (2009). "Katholiken im Dritten Reich: Eine hitsorische Einführung," (pp. 13–36) in

K.-J. Hummel and M. Kissener (eds.), *Die Katholiken und das Dritte Reich: Kontroversen und Debatten*. Paderborn: Schöningh.

Kolb, E. (1984). *Die Weimarer Republik*. Munich: Oldenbourg.

von Kuehnelt-Leddhin, E. M. (1952). *Liberty or Equality*. Caldwell, ID: Caxton Printers.

Kunz, A. (ed.) (1996). "IEG-Maps." Institut für Europäische Geschichte Mainz.

Kuropka, J. (ed.) (2012). *Grenzen des katholischen Milieus: Stabilität und Gefährdung katholischer Milieus in der Endphase der Weimarer Republik und in der NS-Zeit*. Münster: Aschendorff.

Lepsius, R. M. (1966). *Extremer Nationalismus. Strukturbedingungen vor der nationalsozialistischen Machtergreifung*. Stuttgart: Kohlhammer.

Lipset, S. M. (1963). *Political Man: The Social Bases of Politics*. Garden City, NY: Anchor Books.

——— , and S. Rokkan (1967). "Cleavage Structures, Party Systems and Voter Alignments," (pp. 1–64) in S. M. Lipset, and S. Rokkan (eds.), *Party Systems and Voter Alignments. Cross-National Perspectives*. New York: Free Press.

Lizzeri, A., and N. Persico (2004). "Why Did the Elites Extend the Suffrage? Democracy and the Scope of Government, With an Application to Britain's Age of Reform." *Quarterly Journal of Economics*, 119(2): 707–765.

Lutz, H. (1997). *Reformation und Gegenreformation* (4th ed.). Munich: Oldenbourg.

Michels, R. (1911). *Zur Soziologie des Parteiwesens in der modernen Demokratie: Untersuchungen über die oligarchischen Tendenzen des Gruppenlebens*. Leipzig: Verlag von Dr. Werner Klinkhardt.

Mills, C. W. (1956). *The Power Elite*. New York: Oxford University Press.

Mommsen, H. (1989). *Die verspielte Freiheit: Der Weg der Republik von Weimar in den Untergang, 1918 bis 1933*. Berlin: Propyläen.

Morsey, R. (1988). *Katholizismus, Verfassungsstaat und Demokratie*. Paderborn: Schöningh.

Mosca, G. (1896). *Elementi Di Scienza Politica*. Rome: Fratelli Bocca.

Müller, H. (1963). *Katholische Kirche und Nationalsozialismus, Dokumente 1930–1935*. Munich: Nymphenburger Verlagshandlung.

Muprhy, K. M., and R. H. Topel (1990). "Efficiency Wages Reconsidered," (pp. 204–240) in Y. Weiss and G. Fishelson (eds.), *Advances in the Theory and Measurement of Unemployment*. London: Macmillan.

Nowak, K. (1995). *Geschichte des Christentums in Deutschland: Religion, Politik und Gesellschaft vom Ende der Aufklärung bis zur Mitte des 20. Jahrhunderts*. Munich: C.H. Beck.

O'Loughlin, J. (2002). "The Electoral Geography of Weimar Germany." *Political Analysis*, 10(3): 217–243.

Oster, E. (2013). "Unobservable Selection and Coefficient Stability: Theory and Evidence." NBER Working Paper No 19054.

Pareto, V. (1916). *Trattato Di Sociologia Generale*. Florence: G. Barbéra.

Rubin, J. (2014). "Printing and Protestants: An Empirical Test of the Role of Printing in the

Reformation." *Review of Economics and Statistics*, forthcoming.

Satyanath, S., N. Voigtländer, and H.-J. Voth (2013). "Bowling for Fascism: Social Capital and the Rise of the Nazi Party." NBER Working Paper No. 19201.

Schindling, A., and W. Ziegler (eds.) (1992a). *Die Territorien des Reichs im Zeitalter der Reformation und Konfessionalisierung: Land und Konfession 1500–1650, Band 1: Der Südosten* (2nd rev. ed.). Münster: Aschendorff.

——— , and ——— (eds.) (1992b). *Die Territorien des Reichs im Zeitalter der Reformation und Konfessionalisierung: Land und Konfession 1500–1650, Band 4: Mittleres Deutschland*. Münster: Aschendorff.

——— , and ——— (eds.) (1993a). *Die Territorien des Reichs im Zeitalter der Reformation und Konfessionalisierung: Land und Konfession 1500–1650, Band 2: Der Nordosten* (3rd rev. ed.). Münster: Aschendorff.

——— , and ——— (eds.) (1993b). *Die Territorien des Reichs im Zeitalter der Reformation und Konfessionalisierung: Land und Konfession 1500–1650, Band 5: Der Südwesten*. Münster: Aschendorff.

——— , and ——— (eds.) (1995). *Die Territorien des Reichs im Zeitalter der Reformation und Konfessionalisierung: Land und Konfession 1500–1650, Band 3: Der Nordwesten* (2nd rev. ed.). Münster: Aschendorff.

——— , and ——— (eds.) (1996). *Die Territorien des Reichs im Zeitalter der Reformation und Konfessionalisierung: Land und Konfession 1500–1650, Band 6: Nachträge*. Münster: Aschendorff.

Scheider-Haase, D. T. (1991). "Beschreibung der Stichprobenziehung zu den Mitgliedern der NSDAP vom 27. März – 7. September 1989 im Berlin Document Center." *Historical Social Research*, 16(3): 113–151.

Scholder, K. (1977). *Die Kirchen und das Dritte Reich. Band 1: Vorgeschichte und Zeit der Illusionen 1918–1934*. Berlin: Propyläen.

Schulze, H. (1983). *Weimar: Deutschland, 1917–1933*. Berlin: Siedler.

Scribner, R. W., and C. S. Dixon (2003). *The German Reformation* (2nd ed.), New York: Palgrave Macmillan.

Spenkuch, J. (2011) "Protestantism and Work: Microevidence from Contemporary Germany." mimeographed, University of Chicago.

Spicer, K. P. (2008) *Hitler's Priests: Catholic Clergy and National Socialism*. DeKalb, IL: Northern Illinois University Press.

Stickler, M. (2009). "Kolloboration oder weltanschauliche Distanz? Katholische Kirche und der NS-Staat," (pp. 83-100) in K.-J. Hummel and M. Kissener (eds.), *Die Katholiken und das Dritte Reich: Kontroversen und Debatten*. Paderborn: Schöningh.

Stolle, J. (1893). *Der Ultramontanismus innerhalb der katholischen Bevölkerung Deutschlands*. Berlin: Verlag des Bibliographischen Bureaus.

Voigtländer, N., and H.-J. Voth (2012). "Persecution Perpetuated: The Medieval Origins of Anti-Semitic Violence in Nazi Germany." *Quarterly Journal of Economics*, 127(3): 1339–1392.

Warner, C. M. (2000). *Confessions of an Interest Group: The Catholic Church and Political Parties in Europe.* Princeton, NJ: Princeton University Press.

Weingast, B. R. (1997). "The Political Foundations of Democracy and the Rule of Law." *American Political Science Review*, 91(2): 245–263.

Yatchew, A. (1998). "Nonparametric Regression Techniques in Economics." *Journal of Economic Literature*, 36(2): 669–721.

APPENDIX MATERIALS

Appendix A: Alternative Instrumental Variable Estimates

Becker and Woessmann (2009) as well as Cantoni (2010) propose distance to the city of Wittenberg—the origin of the Reformation movement—as an instrument for Protestantism. While we explicitly control for distance to Wittenberg in our main results, in this section we explore the implications of using it as an alternative instrument. Although the distance to Wittenberg turns out to be a weak instrument, our results are qualitatively and quantitatively very similar when using it instead of, or in combination with, territorial lords' religion.

Why should the distance to Wittenberg be a valid instrument? Becker and Woessmann (2009) argue that the approximately concentric diffusion of Protestantism around Wittenberg in Lutheran times introduces exogenous variation in Protestantism in late-nineteenth-century Prussia. "The main reasons for a circular dispersion around Wittenberg may have been the costs of traveling and of information diffusion through space, and these transportation and transaction costs played a crucial role at the time. Electoral Saxony, the principality around Wittenberg, was an early leader in implementing Luther's visions of reform [...]. This gives places closer to Wittenberg the advantage of being able to observe the Reformation ideals put in practice and to more easily form alliances of Protestant territories against Catholic powers. Furthermore, thousands of students came to Wittenberg to hear Luther's sermons and speeches [...]" (Becker and Woessmann 2009, pp. 557). Moreover, Becker and Woessmann (2009) present empirical evidence suggesting that "distance to Wittenberg is indeed unrelated to a series of proxies for economic and educational development before 1517, including the pre-Luther placement of schools, universities, monasteries, and free imperial and Hanseatic cities and urbanization" (Becker and Woessmann 2009, pp. 532). If the argument of Becker and Woessmann (2009) is, indeed, correct, *and* if it extends to the Weimar Republic, then distance to Wittenberg constitutes an alternative instrumental variable to estimate the causal impact of religion on Nazi vote shares.

Table A.1 displays the results. Columns (1)–(2) present first-stage estimates from the following empirical model:

$$Catholic_c = \kappa_d + \alpha Distance\,to\,Wittenberg_c + X_c'\phi + \eta_c, \tag{A.1}$$

while the remaining columns show 2SLS results for the second stage, i.e.

$$v_c = \mu_d + \beta \widehat{Catholic}_c + X_c'\theta + \varepsilon_c \tag{A.2}$$

with $\widehat{Catholic}_c$ denoting the *predicted* share of Catholics based on the first-stage equation above.

As in Becker and Woessmann (2009) as well as Cantoni (2010) distance to Wittenberg is heavily correlated with counties' share of Catholics, although the correlation declines markedly once we also include territorial lords' choices of religion. Importantly for our purposes, the 2SLS estimates

of the impact on Nazi vote shares in columns (4)–(5) are qualitatively very similar to our main results in Table 6. Taken at face value, the estimates in these columns imply that Protestants were about three times as likely to vote for the NSDAP in the November election of 1932 as their Catholic counterparts. This alternative instrumental variables strategy, therefore, supports our main conclusions.

At the same time, it is important to point out that according to the critical values in Stock and Yogo (2005) distance to Wittenberg is a weak instrument—at least in this particular setting. Column (6) shows that this continues to hold when we inlcude higher order terms. Lastly, columns (7) and (8) demonstrate that results from instrumenting with distance to Wittenberg *and* territorial lords' choices of religion are quantitatively indistinguishable from those in the main text, and that it is not possible to reject the overidentification test. That is, one cannot reject the null hypothesis that instrumenting with distance to Wittenberg delivers the same estimate of the causal effect of religion as using territorial lords' choices instead.

Appendix B: Data Appendix

This appendix provides a description of all data used in the paper, as well as precise definitions together with the sources of all variables.

B.1. *Election Results*

Using official publications by the *Statistische Reichsamt*, Falter and Hänisch (1990) compile information on the official results of the Weimar Republic's parliamentary elections. Since this is widely regarded as the most carefully constructed data set on the topic—taking, for instance, the frequent redistricting into account—we rely on it as our primary source of information. For most elections (i.e. for June 1920, May 1924, December 1924, May 1928, September 1930, and March 1933) results are available at the county as well as the municipality levels. Since the *Statistische Reichsamt* released official numbers only for municipalities with more than 2,000 inhabitants, Falter and Hänisch (1990) create "residual entities" called *Restkreise*, which pool all muncipalities in a given county that have less than 2,000 residents (see Hänisch 1988 for additional details). We keep these observations when conducting analyses at the municipality level.[1] Unfortunately, the *Statistische Reichsamt* never released municipality-level results for the last undoubtedly free elections in July and November of 1932, which is why most of our empirical work is on the county level. Throughout the analysis, the following variables are used:

Number of Eligible Voters is defined as the number of individuals residing in a given county or municipality who had the right to vote. In order to derive representative estimates, we use, unless otherwise noted, Number of Eligible Voters as the weighting variable in our regressions.

Major Parties' Vote Shares are defined as the number of votes cast for a particular party (i.e.

[1] In fact, the lower-right panel in Figure 7 is based on entirely on these observations.

KPD, SPD, DDP, Zentrum, DVP, DNVP, or NSDAP) over the number of *eligible* voters, *not* the total number of valid votes. This lets us avoid issues of endogenous turnout. Vote shares for the Zentrum always include those of the BVP, its Bavarian sister party. Note that the Nazis formed an electoral alliance with other parties in the *völkisch* bloc for both elections in 1924, running as NSFP in May 1924 and as NSFB in December 1924. For simplicitly we continue to use the label "NSDAP." Also, in 1933 the DNVP campaigned together with the *Stahlhelm* and *Landbund* as *Kampffront Schwarz-Weiß-Rot*. We use the label "DNVP."

Turnout is defined as the number of votes cast for all parties over the number of eligible voters.

B.2. *Socioeconomic Characteristics*

Data containing socioeconomic characteristics of counties and municipalities in the Weimar Republic come from Falter and Hänisch (1990). These data were transribed by Falter and Hänisch (1990) from the 1925 and 1933 Censuses as well as other official publications by the *Statistische Reichsamt* and the statistical offices of the *Länder*. While the data detailed below are almost always available at the county level, coverage of municipalities (especially smaller ones) varies due to changes in the publication practices of the *Statistische Reichsamt* (see Hänisch 1988). To preserve as much of the sample as possible, we supplement the data of Falter and Hänisch (1990) with hand-coded information on the religious composition of counties from the 1933 Census. Unless otherwise noted, our analysis restricts attention to the 982 counties with nonmissing information on religious composition and election results in November 1932. This entails losing 3 counties due to missing information on residents' religion. Below is a brief description of all variables used throughout the paper. For additional details regarding the raw data, see Hänisch (1988).

Percent Catholic is defined as the number of Catholics living in a county (or municipality) as of the 1925 Census divided by the county's population. For 22 counties we use information from the 1933 Census, as the data of Falter and Hänisch (1990) do not contain information on religious composition.

Percent Protestant is defined as the number of Protestants living in a county (or municipality) as of the 1925 Census divided by the county's population. For 22 counties we use information from the 1933 Census, as the data of Falter and Hänisch (1990) do not contain information on religious composition.

Percent Jewish is defined as the number of Jews living in a county (or municipality) as of the 1925 Census divided by the county's population. For 22 counties we use information from the 1933 Census, as the data of Falter and Hänisch (1990) do not contain information on religious composition.

Percent Nonreligious is defined as as the residual category, i.e. the share of a county's (or municipality's) population that is not classified as either Catholic, Protestant, or Jewish.

Percent Female is defined as the number of women living in a county (or municipality) as of the 1933 Census divided by the county's total population.

Urban County is an indicator variable equal to one if a county (or municipality) is officially classified as *Stadtkreis*.

Rural County is an indicator variable equal to one if a county (or municipality) is *not* officially classified as *Stadtkreis*.

Population denotes the number of individuals residing within a county (or municipality), as reported in the 1925 Census (in 1,000s). And *Log Population* is defined as its natural logarithm.

Female Labor Force Participation Rate is defined as the share of females whom the 1933 Census includes in the labor force.

Unemployment Rate is defined as the percentage of labor force particpants who are out of work, as reported in the 1933 Census.

Percent in Agriculture is defined as the percentage of employed labor force particpants who work in agriculture or forestry (*Land- und Forstwirtschaft*), as reported in the 1933 Census. In our regressions, *Percent in Agriculture* serves as the omitted category for Sectoral Composition of the Workforce.

Percent in Manufacturing and Artisanry is defined as the percentage of employed labor force particpants who work in manufacturing and artisanry (*Industrie und Handwerk*), as reported in the 1933 Census.

Percent in Trade and Commerce is defined as the percentage of employed labor force particpants who work in trade and commerce (*Handel und Verkehr*), as reported in the 1933 Census.

Percent in Services is defined as the percentage of employed labor force particpants who work in the public or private service sectors (*öffentlicher Dienst und private Dienste*), as reported in the 1933 Census.

Percent in Domestic Labor is defined as the percentage of employed labor force particpants who perform domestic services (*häusliche Dienste*), as reported in the 1933 Census.

Percent Helping Family Members is defined as the percentage of employed labor force particpants who work in their family's business or on the family farm (*mithelfende Familienangehörige*), as reported in the 1933 Census.

Percent White Collar Workers is defined as the percentage of employed labor force particpants who are reported as *Angestellte* in the 1933 Census.

Percent Civil Servants is defined as the percentage of employed labor force particpants who are reported to be civil servants (*Beamte*) in the 1933 Census.

Percent Blue Collar Workers is defined as the percentage of employed labor force particpants who are reported as *Arbeiter* in the 1933 Census.

Percent Domestic Servants is defined as the percentage of employed labor force particpants who are reported to be domestic servants (*Hausangestellte*) in the 1933 Census.

Percent Self-Employed is defined as the percentage of employed labor force particpants who are reported to be self-employed (*Selbstständige*) in the 1933 Census.

Additional Labor Force Controls are taken from the 1925 Census. The 1925 Census lists the number of individuals in a specific sector *and* occupation. That is, it includes the number of self-employed in agriculture, in industry and artisanry, in the service sector, and in domestic labor. Similarly, it lists the number of helping family members, civil servants, and white collar workers as well as blue collar workers in each of these sectors. For each sector-occupation-cell, we calculate the corresponding percentage among all employed labor force participants and use the resulting variables as additional controls in Table 7.

White Collar Workers Among Unemployed is defined as the percentage of unemployed labor force particpants who are reported to be *Angestellte* in the 1933 Census.

Blue Collar Workers Among Unemployed is defined as the percentage of unemployed labor force particpants who are reported to be *Arbeiter* in the 1933 Census.

Domestic Servants Among Unemployed is defined as the percentage of unemployed labor force particpants who are reported to be domestic servants (*Hausangestellte*) in the 1933 Census.

Fraction of Catholics Voting for the Zentrum Party in 1920 is defined as the share of votes that the Zentrum obtained in a given county during the 1920 parliamentary elections divided by the share of Catholics among that county's residents.

Catholic Heartland is defined as the regions of Rhineland, Westphalia, Baden, as well as South-East Bavaria.

Catholic Diaspora is defiend as the complement to *Catholic Heartland*, i.e. the remainder of Germany.

B.3. *Territories' Official Religion after the Peace of Augsburg*

In creating a mapping between counties at the end of the Weimar Republic and the religion of the prince who reigned over the corresponding area in the aftermath of the Peace of Augsburg, this paper relies on several historical accounts (e.g., Dixon 2002; Lutz 1997; among others).[2] The primary source of information, however, are the regional histories by Schindling and Ziegler (1992a,b, 1993a,b, 1995, 1996), which summarize the available research on each of the territories of the Holy

[2]Spenkuch (2011) uses the same approach to create a mapping between counties in contemporary Germany and the religion of the respective territorial lord at the eve of the Thirty Years' War.

Roman Empire for the period from 1500 to 1650. While the work of Schindling and Ziegler (1992a,b, 1993a,b, 1995, 1996) is based on a comprehensive body of historical research, the Reformation period has been studied more extensively for some regions than others. Consequently, information on some small independent territories, such as Isenburg, Hoya, or Barby, is relatively scarce.

The primary mapping used in this paper is based on the religious situation around 1624—the "normal year" for territories' official religion set in the Peace of Westphalia, which ended princes' influence over the religion of their subjects. Since territories' official religion was not constant from 1555 until 1624, there exists the possibility that the results depend on the choice of base year. To mitigate this possibility a secondary mapping based on the situation directly after the Peace of Augsburg in 1555 has been created as well. The robustness checks in Table 7 show that our results are robust to using this alternative mapping instead.

Despite notable differences between and within different Protestant denominations, i.e. Lutherans, Calvinists, and Zwinglians, as a whole their teachings were much closer to each other than to the doctrines of the Catholic Church. Thus, our primary mapping differentiates only between Protestant and Catholic regions. Another reason is that during the Second Reformation a number of territorial lords converted from Protestantism to Calvinism, but did not require their subjects to adopt their new religion. That is, most subjects remained Protestant. We have also created an ancillary mapping that differentiates between regions in which subjects remained Protestant and those in which they were forced to convert to Protestantism. This mapping is used in Table 11, when we split our sample by the historical religion of people in the area.

In only a few instances does the area of a county or county equivalent at the end of the Weimar Republic correspond exactly to the area of some state at the beginning of the seventeenth century. Moreover, until the secularization in 1803 abbots and bishops were not only religious but also worldly rulers in the Holy Roman Empire. This entails that a handful of cities were divided between a religious and a worldly lord. Multiple rulers make it, of course, more difficult to determine an "official religion," and necessitate the use of guidelines by which to assign a religion to the county corresponding to a given area.

Whenever Catholic and Protestant lords reigned simultaneously over different parts of a county's area, or whenever this area contained an Imperial City, the religion assigned to this county corresponds to the likely religion of the majority of subjects. While Imperial Cities were not bound by princes' *ius reformandi*, political power in these towns often lay in the hands of local elites who would virtually impose the Reformation on residents (Dixon 2002). While the mapping is in a strict sense based on the likely religion of the majority of subjects in a given area, most variation comes from the fact that princes or local elites could dictate the religion of ordinary people.

A complicating factor is that population estimates are often not available for this time period. In cases in which relative populations cannot be determined with certainty, they are gauged by comparing the size of the areas in question assuming equal population densities. For 10% of counties this procedure yielded ambiguous results. The counties in question are classified as neither "histor-

ically Protestant" nor "historically Catholic," but as "mixed." Our results are robust to classifying all of these counties as either historically Protestant or historically Catholic.

Absent reliable high-resolution GIS data for the late sixteenth and early seventeenth centuries, the mappings described above had to be constructed by visually comparing the borders of counties (as of the end of 1932) with the principalities in the maps of Schindling and Ziegler (1992a,b, 1993a,b, 1995, 1996). Naturally, the information in their verbal description was used as well, and proved often much more useful than any map—especially when a territory's official religion changed multiple times. Given that names of cities and places vary little over time, it was feasible to relate whole text passages to modern-day areas and counties.

For Table 8 we have created an additional mapping that takes (as much as possible given the level of detail in Schindling and Ziegler 1992a,b, 1993a,b, 1995, 1996 and other sources) differences *within* counties into account. That is, the mapping used in the municpality level specifications in Table 8 assigns different historical religions to villages within the same county whenever princes with different religions are known to have controlled these villages.

The process of gathering and analyzing the historical information, as well as the creation of the mapping itself, was carried out by a German research assistant, who holds the equivalent of a graduate degree in history.

B.4. *Geographical Control Variables*

We geocode the centroid of each county in our data using ArcGIS. We also geocode the location of each municipality with help of an automated script to query Google Maps. In cases in which our script delivers no or ambigious results—as, for instance, the name of a village might have changed over time, or because Google Maps is unable to distinguish two villages with the same name—we determine the location of a municipality using all available information in the raw data, such as the county in which it is located, population, etc., coupled with other public sources and hand-code latitude and longitude. With these geocodes in hand, we then calculate the following geographical control variables.

Latitude is the north-south position in degrees north.

Longitude is the east-west position in degrees east.

Distance to Berlin denotes the linear distance (in kilometers) to the city of Berlin.

Distance to Major City denotes the linear distance (in kilometers) to the nearest of the Weimar Republic's ten largest cities, i.e. Berlin, Hamburg, Cologne, Munich, Leipzig, Dresden, Breslau, Essen, Frankfurt, and Düsseldorf.

Distance to Border denotes the linear distance (in kilometers) to the nearest border of the Weimar Republic.

Distance to Major Port denotes the county's / municiaplity's linear distance (in kilometers) to the

nearest important port, i.e. Bremen, Emden, Hamburg, Wilhemlshaven, Rostock, Kiel, Wismar, Lübeck, and Flensburg.

Distance to Major River denotes the linear distance (in kilometers) to the nearest major navigable river, i.e. Rhine, Main, Mosel, Neckar, Danube, Fulda, Werra, Weser, Elbe, Saale, Havel, Oder, Ems, Wista, and Warta.

Distance to Ore or Coal Deposits denotes the linear distance (in kilometers) to the nearest of the following deposits of ore or coal: Lower Rhine Embayment, Lausatia, Bitterfeld, Upper Palatinate, Bergheim, Borken, Aachen, Freital, Ibbenbüren, Zwickau, Ruhr Area, Saarlouis.

B.5. *Historical Control Variables*

In order to account for as many potential confounds as possible, our empirical work explicitly controls for the variables that Cantoni (2012) and Rubin (2014) have shown to have had an effect on territorial lords' choice of religion. In mapping information on the territories in Cantoni (2012) onto counties in the Weimar Republic, we use the same approach as in constructing our mapping of counties' historical religion (see Section B.3). Merging the data of Rubin (2014) with our main data set is more straightforward. We associate each city in Rubin's data with the county in which it lies as of the November elections of 1932. Below is a brief description of all historical controls used throughout the analysis.

Distance to Wittenberg denotes the linear distance (in kilometers) to the small city of Wittenberg—the origin of the Reformation movement. This variable is calculated based on the latitude and longitude of each county (as explained in Section B.4).

Ecclesiastical Status is an indicator variable equal to one if the data of Cantoni (2012) indicate that a prince-bishop or another clergyman ruled over the area corresponding to a given county.

Contribution to Reichsmatrikel denotes the contribution to the Imperial War Tax (*Reichsmatrikel*) averaged over the princes who governed over the area corresponding to a given county. The data used to construct this variable come from Cantoni (2012).

Printing Press is an indicator variable equal to one if the data of Rubin (2014) indicate that at least one of the cities in a given county had a printing press at the beginning of the sixteenth century.

As part of our set of geographical covariates we also control for *latitude*, which Cantoni (2012) shows to be an important predictor for the adoption of Protestantism.

B.6. *Information on "Brown Priests"*

Our data on "brown priests" come from Spicer (2008). In a decade-long research project, Spicer (2008) collected the names and biographical information of 138 Catholic priests (or ordained members of religious orders) who officially joined the NSDAP or made their Nazi convictions otherwise publicly known, i.e. by speaking at party meetings, blessing SA cadres, etc. A typical entry reads:

Schürmeister, Wilhelm
born Munich, December 21, 1899
ordained May 30, 1926 (Munich)
Kooperator, Fresing St. Georg, July, 1926 (supports NSDAP through his pastoral ministry)
Expositus, Gröbenzell, September 16, 1936
Pfarrkurat, Gröbenzell, February 1, 1938
date of death unkown
Source: ALMU Studenten-Karte, EAM NL Faulhaber 5402, *Schematismus München*.
(Spicer 2008, p. 290)

We digitize this information, in particular where these priests resided at the time of each of the Weimar Republic's elections (assuming that they remained in the last known locality until a new one is listed in the description of Spicer 2008). We then geocode the location of each priest using an automated script to query Google Maps. In cases in which the script delivers no or ambigious results—as, for instance, Google Maps is unable to distinguish two villages with the same name—we determine the location of a priest using all available information in the description of Spicer (2008) coupled with other public sources and hand-code latitude and longitude. With the geocodes in hand, we say that a given village had a "brown priest" if one of the priests named in Spicer (2008) resided within a 10 kilometer radius at the time of the election.

B.7. *Measures of Religiosity*

In order to test explanations based on Catholics' piety, we have gathered additional data on Catholics' reception of the Easter Communion, church attendance throughout the year, the number of mixed marriages, christenings, etc. The sources of these data are Amtliche Zentralstelle für kirchliche Statistik des katholischen Deutschlands (1924) and Amtliche Zentralstelle für kirchliche Statistik des katholischen Deutschlands (1931). We factor analyze the variables described below to extract a measure of religiosity and divide our sample of counties into terciles.

Easter Communion is defined as the share of Catholics who satisfied their Easter Duty, i.e. who received the Holy Eucharist at least once during the Easter season. To construct this variable we devide the number of Catholics who satisfied their Easter Duty in 1929 by the total number of Catholics in the same year. Both variables come from Amtliche Zentralstelle für kirchliche Statistik des katholischen Deutschlands (1931) and are available at the level of the diocese. We match counties with diocese by electronically mapping the centroids of the former into the boundaries of the latter.

Mass Attendance is defined as the share of Catholics who (regularly) attend Sunday Mass. To construct this variable we devide the number of Catholics who did so in 1929 by the total number of Catholics in the same year. Both variables come from Amtliche Zentralstelle für kirchliche Statistik des katholischen Deutschlands (1931) and are available at the level of the diocese. We match counties with diocese by electronically mapping the centroids of the former into the boundaries of the latter.

Mixed Marriages is defined as the number of times a Catholic married someone of another faith in

1923 divided by the total number of marriages in the same year. Both variables come from Amtliche Zentralstelle für kirchliche Statistik des katholischen Deutschlands (1924) and are available at the state level, with Prussia subdivided into provinces. We match counties with states/provinces by electronically mapping the centroids of the former into the boundaries of the latter.

Babies from Mixed Marriages is defined as the number of babies born in 1923 to a couple in which only one parent was Catholic divided by the total number of births to Catholics in the same year. Both variables come from Amtliche Zentralstelle für kirchliche Statistik des katholischen Deutschlands (1924) and are available at the state level, with Prussia subdivided into provinces. We match counties with states/provinces by electronically mapping the centroids of the former into the boundaries of the latter.

Out-of-Wedlock Births is defined as the number of babies born in 1923 to a single Catholic mother divided by the total number of births to Catholics in the same year. Both variables come from Amtliche Zentralstelle für kirchliche Statistik des katholischen Deutschlands (1924) and are available at the state level, with Prussia subdivided into provinces. We match counties with states/provinces by electronically mapping the centroids of the former into the boundaries of the latter.

Christenings is defined as the number of babies christened in 1923 divided by the total number of births to Catholics in the same year. Both variables come from Amtliche Zentralstelle für kirchliche Statistik des katholischen Deutschlands (1924) and are available at the state level, with Prussia subdivided into provinces. We match counties with states/provinces by electronically mapping the centroids of the former into the boundaries of the latter.

Church Burials is defined as the number of Catholics who received a church burial in 1923 divided by the total number of Catholics who died in the same year. Both variables come from Amtliche Zentralstelle für kirchliche Statistik des katholischen Deutschlands (1924) and are available at the state level, with Prussia subdivided into provinces. We match counties with states/provinces by electronically mapping the centroids of the former into the boundaries of the latter.

We factor analyze the variables described above to extract a measure of religiosity. This measure, i.e. the first factor (which has an eigenvalue of 4.75), explains 79.6% of the variance in the underlying components.

Table A.3 displays the factor loadings for the first four factors (i.e. those with positive eigenvalues). As one would expect, our measure of religiosity correlates positively with Mass Attendance, Easter Communion, Christenings, and Church Burrials; and it is negatively correlated with Mixed Marriages, Babies from Mixed Marriages, as well as Out-of-Wedlock Births. Moreover, the same table shows that the remaining, unexplained variation in each of these variables is fairly low.

B.8. *NSDAP Membership Data*

Our data on NSDAP membership come from Falter and Kater (1993). Together with W. Burstein, Falter supervised members of the Arbeitsbereich Faschismusforschung at the Free University of

Berlin and of the Department of Sociology at the University of Minnesota, who randomly sampled 42,018 membership cards for individuals who had at some point joined the Nazi Party before 1933/34. The sampling universe were the two original masterfiles of the NSDAP, containing a total of about 11.6 million membership cards, then stored at the Berlin Document Center (see Scheider-Haase 1991 for for a detailed description of the sampling procedures and for a comparison with other membership data).

Restricting attention to those who had joined the Nazi Party before 1933, we geocode the location of each member (based on the *Ortsgruppe*) using an automated script to query Google Maps. In cases in which our script delivers no or ambigious results—as, for instance, the name of a village might have changed over time, or because Google Maps is unable to distinguish two villages with the same name—we determine the location of an *Ortsgruppe* using all available information in the raw data (primarily the *Gau*) coupled with other public sources and hand-code latitude and longitude. This lets us geocode the location of about 98.4% of observations in the raw data. With the geocodes in hand, we sum across all cities and villages within a county in order to determine the number of NSDAP members as of December 1932. Since it is often difficult to determine whether a suburb was part of a city and, therefore, part of a *Stadtkreis* in 1932, we include all *Stadtkreise* with the county that surrounds them, which leaves us with 712 "aggregated counties." To obtain an estimate of NSDAP membership *rates*, we divide by the "aggregated county's" adult population and inflate the resulting number by 33.33.[3] The NSDAP membership rate then serves as one of the dependent variables in Table 12, the results in which refer to the coefficients on Share Catholic from estimating our OLS and IV specifications, i.e. equations (1) and (4).

B.9. *Data of Voigtländer and Voth (2012)*

Information on historically rooted anti-Semitism, pogroms during the 1920s, attacks on synagogues during the *Reichskristallnacht*, letters to the editor of the Nazi newspaper *Der Stürmer*, and the number of deportations come from the city-level data set of Voigtländer and Voth (2012). Whenever using one of their proxies for Nazi ideology as an outcome variable, we employ their original set of covariates, i.e. cities' religious composition, an indicator variable for whether a city experienced pogroms during the Black Death (1348–50), and log population, but use their extended sample to preserve as much information as possible.

Relying on Alicke (2008), Voigtländer and Voth (2012) collect information on all municipalities within the 1938 borders of Germany that have twentieth-century data on Jewish settlements and on at least one of their anti-Semitic outcome variables. This procedure yields a sample of 1,427 towns. As there exists direct evidence of fourteenth-century Jewish settlements for only 325 of these cities, Voigtländer and Voth (2012) restrict attention to this subset. For our purposes it is irrelevant

[3]At the end of 1932 the NSDAP is believed to have had about 1.2 million members, while the data of Falter and Kater (1993) contain approximately 36,000 individuals who joined the party before January 1933 and who have a valid entry for *Ortsgruppe*. This results in a sampling factor of about 33.33.

whether a given city had a Jewish settlement in the fourteenth century, which is why we rely on their extended sample.

Below are brief definitions of all of their variables we use throughout the paper. For more-detailed descriptions, see Voigtländer and Voth (2012), especially their Data Appendix.

Historical Anti-Semitism is an indicator variable equal to one if at least one city in a given county experienced pogroms of Jews during the Black Death (1348-50). Voigtländer and Voth (2012) construct this variable based on the *Germania Judaica* from Avneri (1968). We take this variable from Voigtländer and Voth (2012) and use it as an additional control in one of the specifications in Table 7.

Pogroms during the 1920s is an indicator varibale equal to one if Alicke (2008) reports that a violent outrage involving physical violence occured against a city's Jewish population during the 1920s. If Alicke (2008) mentions no outrage or no physical violence, it takes on a value of zero. We take this variable directly from Voigtländer and Voth (2012) and use it as one of the outcomes in Table 12.

Letters to Der Stürmer denotes the number of letters to the editor of the Nazi newspaper *Der Stürmer* that were written by residents of a locality in the data set of Alicke (2008) and published between 1935 and 1938. To ensure comparability across municipalities, the variable is scaled by population in 1933. Voigtländer and Voth (2012) construct the variable by counting the number of letters that (i) were published as articles, (ii) denounced individuals as interacting/doing business with Jews, or (iii) asked questions about Jews (such as "How many Jews live in town X?"). We take this variable directly from Voigtländer and Voth (2012) and use it as one of the outcomes in Table 12.

Attacks on Synagogues During the Reichskristallnacht is an indicator variable equal to one if a city's synagogue was in use in 1933 and either destroyed or damaged during the "Night of Broken Glass" in 1938. Destruction is said to have occurred if the synagogue was ravaged to at least the point where it became unusable, whereas damage is defined to have taken place if some of the synagogues inventory was broken or if the building was impaired but remained usable. Voigtländer and Voth (2012) transcribe this information from Alicke (2008). We take the variable directly from Voigtländer and Voth (2012) and use it as one of the outcomes in Table 12.

Deportations is the number of deportations of a city's Jewish (or presumably Jewish) residents recorded in the German Federal Archives (Bundesarchiv 2007) scaled by the city's Jewish population in 1933. Voigtländer and Voth (2012) construct this variable by searching the second (and improved) version of the database for each town in their data set, recording the number of deportees for the years 1933–1945. We take the variable directly from Voigtländer and Voth (2012) and use it as one of the outcomes in Table 12.

References

Alicke, K.-D. (2008). *Lexikon der jüdischen Gemeinden im deutschen Sprachraum*. Gütersloh: Gütersloher Verlagshaus.

Amtliche Zentralstelle für kirchliche Statistik des katholischen Deutschlands (1924). *Kirchliches Handbuch für das katholische Deutschland, 11. Band: 1922/23–1923/24*. Freiburg i. Br.: Herder.

——— (1931). *Kirchliches Handbuch für das katholische Deutschland, 17. Band: 1930–1931*. Cologne: Gilde Verlag.

Avneri, Z. (1968). *Germanica Judaica, Bd. 2: Von 1238 bis zur Mitte des 14. Jahrhunderts*. Tübingen: Mohr.

Becker, S. O., and L. Woessmann (2009). "Was Weber Wrong? A Human Capital Theory of Protestant Economic History." *Quarterly Journal of Economics*, 124(2): 531–596.

Bundesarchiv (2007). "Opfer der Verfolgung der Juden unter der national-sozialistischen Gewaltherrschaft in Deutschland 1933-1945." available online at `http://www.bundesarchiv.de/gedenkbuch/`.

Cantoni, D. (2010). "The Economic Effects of the Protestant Reformation: Testing the Weber Hypothesis in the German Lands." mimeographed, Harvard University.

——— (2012). "Adopting a New Religion: The Case of Protestantism in 16th Century Germany." *Economic Journal*, 122(560): 502–531.

Dixon, C. S. (2002). *The Reformation in Germany*. Oxford: Blackwell.

Falter, J., and D. Hänisch (1990). "Wahl- und Sozialdaten der Kreise und Gemeinden des Deutschen Reiches von 1920 bis 1933." GESIS Datenarchiv.

——— , and M. Kater (1993). "Wähler und Mitglieder der NSDAP. Neue Forschungsergebnisse zur Soziographie des Nationalsozialismus 1925 bis 1933." *Geschichte und Gesellschaft*, 19(2): 155–177.

Hänisch, D. (1988). "Wahl- und Sozialdaten der Kreise und Gemeinden des Deutschen Reiches, 1920–1933: Benutzer-Handbuch." Zentralinstitut für sozialwissenschaftliche Forschung, Freie Universität Berlin.

Lutz, H. (1997). *Reformation und Gegenreformation* (4th ed.), Munich: Oldenbourg.

Rubin, J. (2014). "Printing and Protestants: An Empirical Test of the Role of Printing in the Reformation." *Review of Economics and Statistics*, forthcoming.

Schindling, A., and W. Ziegler (eds.) (1992a). *Die Territorien des Reichs im Zeitalter der Reformation und Konfessionalisierung: Land und Konfession 1500–1650, Band 1: Der Südosten* (2nd rev. ed.). Münster: Aschendorff.

——— , and ——— (eds.) (1992b). *Die Territorien des Reichs im Zeitalter der Reformation und Konfessionalisierung: Land und Konfession 1500–1650, Band 4: Mittleres Deutschland*. Münster: Aschendorff.

——— , and ——— (eds.) (1993a). *Die Territorien des Reichs im Zeitalter der Reformation und*

Konfessionalisierung: Land und Konfession 1500–1650, Band 2: Der Nordosten (3rd rev. ed.). Münster: Aschendorff.

——— , and ——— (eds.) (1993b). *Die Territorien des Reichs im Zeitalter der Reformation und Konfessionalisierung: Land und Konfession 1500–1650, Band 5: Der Südwesten*. Münster: Aschendorff.

——— , and ——— (eds.) (1995). *Die Territorien des Reichs im Zeitalter der Reformation und Konfessionalisierung: Land und Konfession 1500–1650, Band 3: Der Nordwesten* (2nd rev. ed.). Münster: Aschendorff.

——— , and ——— (eds.) (1996). *Die Territorien des Reichs im Zeitalter der Reformation und Konfessionalisierung: Land und Konfession 1500–1650, Band 6: Nachträge*. Münster: Aschendorff.

Scheider-Haase, D. T. (1991). "Beschreibung der Stichprobenziehung zu den Mitgliedern der NSDAP vom 27. März – 7. September 1989 im Berlin Document Center." *Historical Social Research*, 16(3): 113–151.

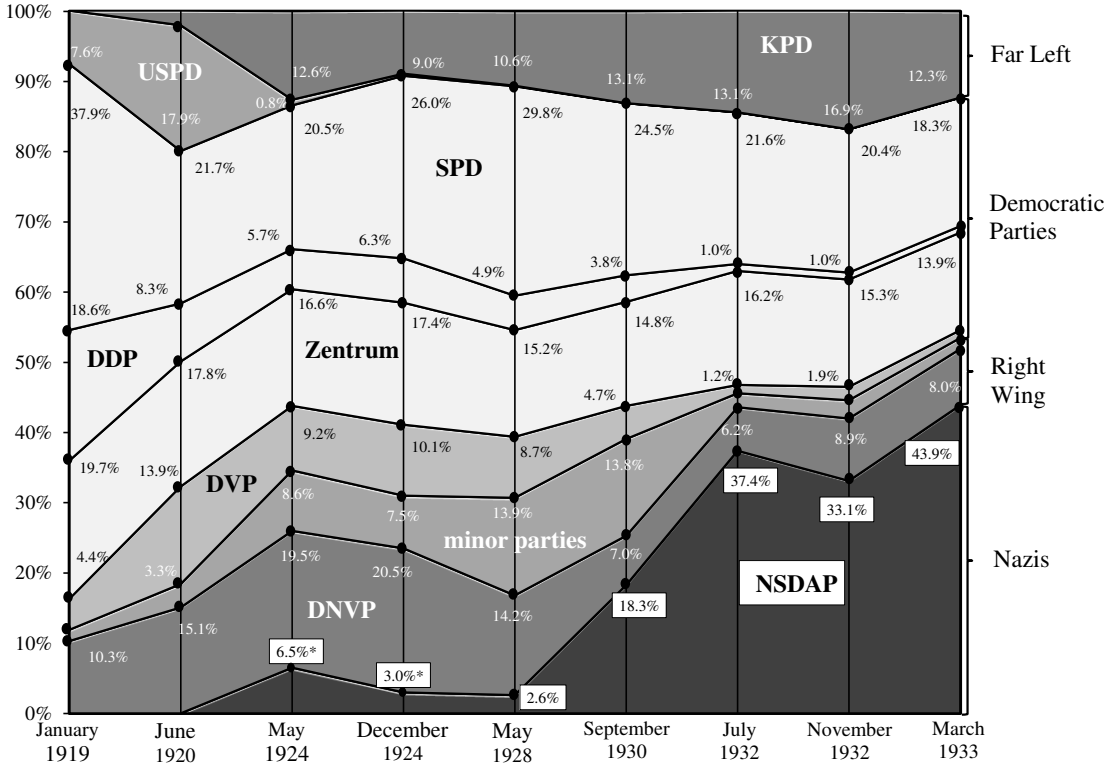
Spenkuch, J. (2011) "Protestantism and Work: Microevidence from Contemporary Germany." mimeographed, University of Chicago.

Spicer, K. P. (2008) *Hitler's Priests: Catholic Clergy and National Socialism*. DeKalb, IL: Northern Illinois University Press.

Stock, J. H., and M. Yogo (2005). "Testing for Weak Instruments in Linear IV Regression," (pp. 80-108) in J. H. Stock and D. W. K. Andrews (eds.), *Identification and Inference for Econometric Models: Essays in Honor of Thomas J. Rothenberg*. Cambridge, UK: Cambridge University Press.

Voigtländer, N., and H.-J. Voth (2012). "Persecution Perpetuated: The Medieval Origins of Anti-Semitic Violence in Nazi Germany." *Quarterly Journal of Economics*, 127(3): 1339–1392.

Figure 1: Election Results in Weimar Germany, January 1919 – March 1933

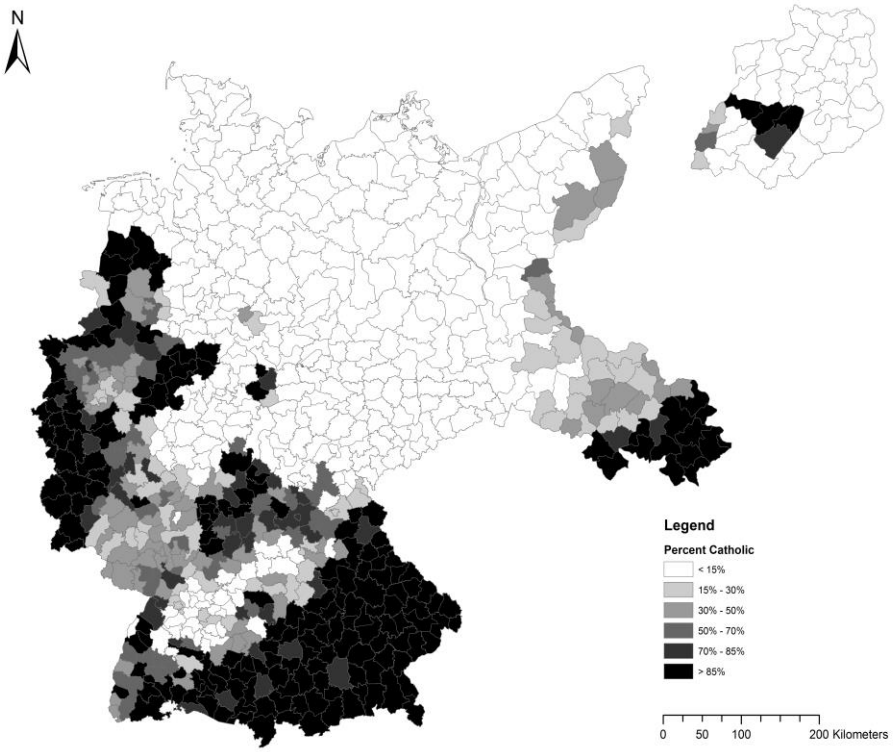


Notes: Figure depicts vote shares of major parties in each election to the Reichstag (1920–1933) and Nationalversammlung (1919). Asterisks mark years in which the NSDAP was officially outlawed. In these years the Nazis formed an electoral alliance with other parties in the *völkisch* bloc, running as NSFP in May 1924 and as NSFB in December 1924. Results for the Zentrum include the BVP.

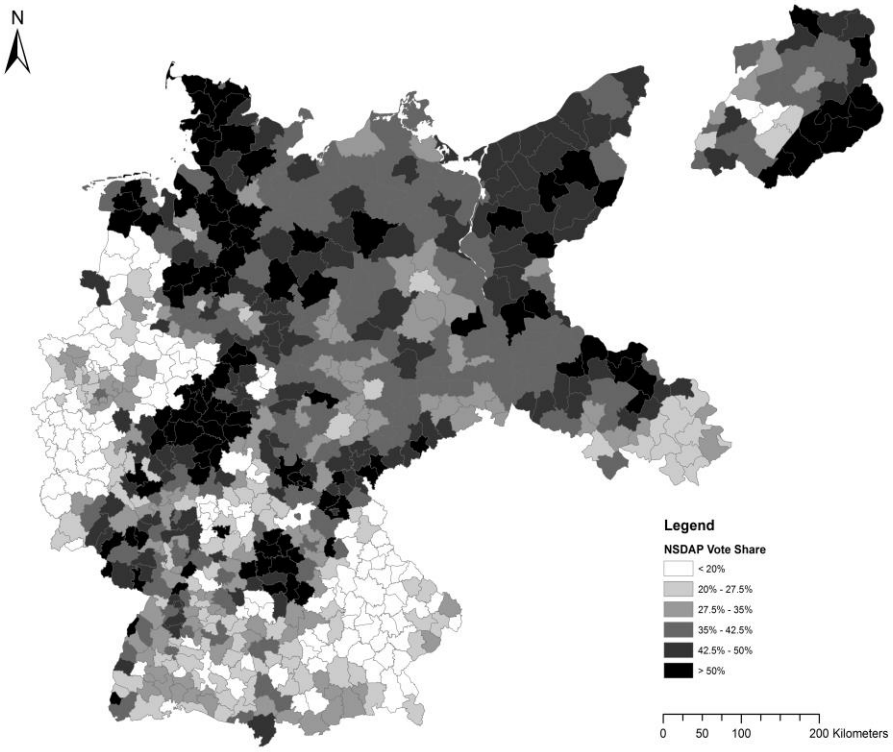
Sources: Based on Falter (1991).

Figure 2: Religion and Nazi Vote Shares

A. Geographic Distribution of Protestants and Catholics

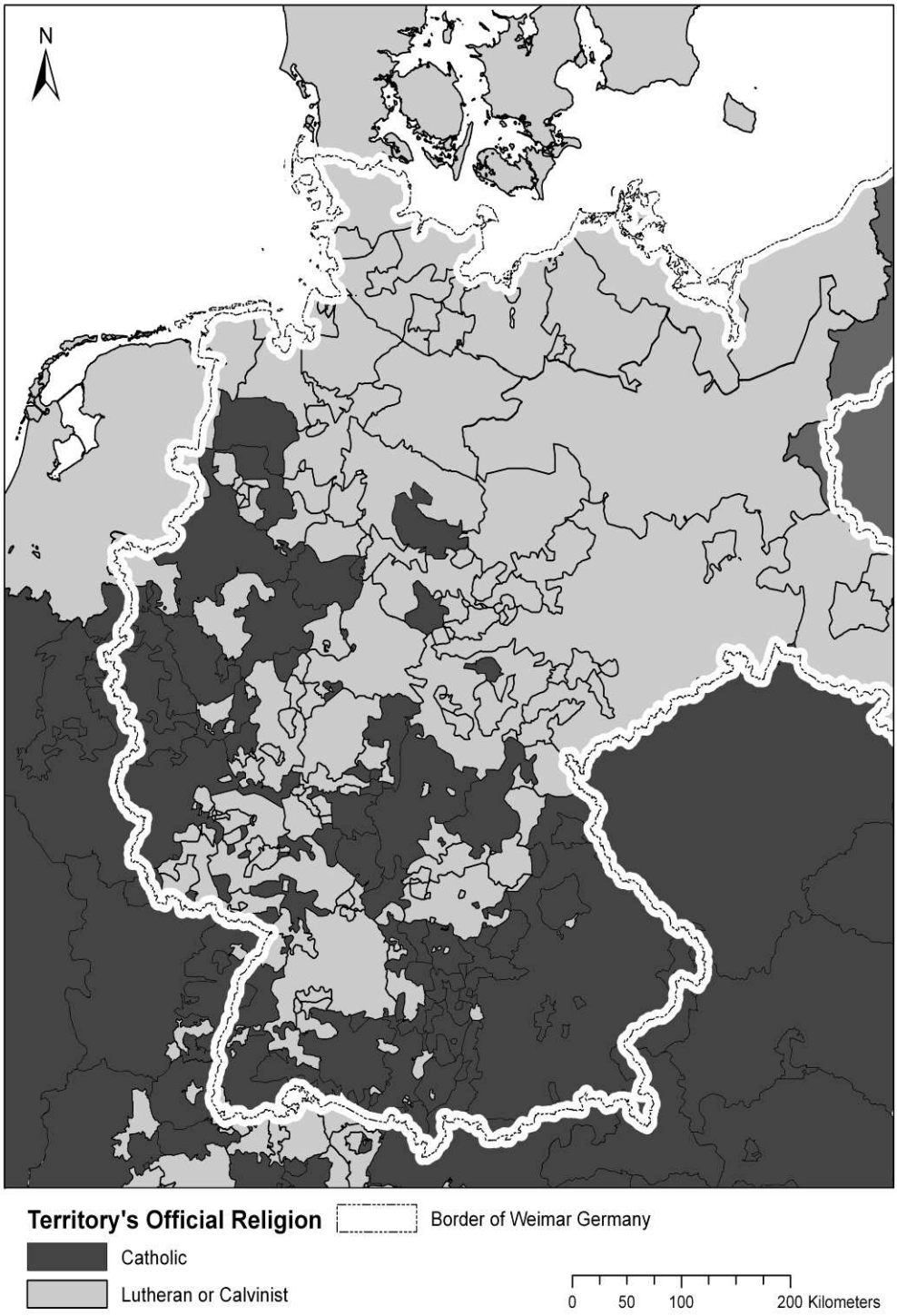


B. Geographic Distribution of the Nazi Vote, November 1932



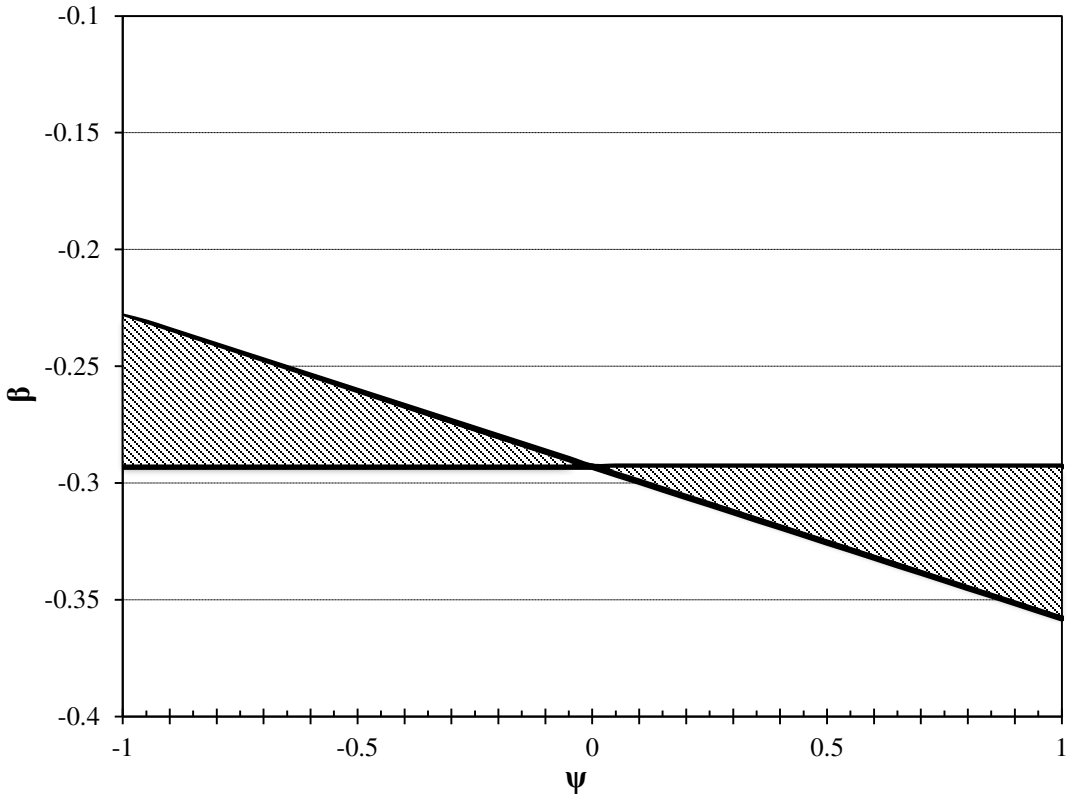
Sources: Based on von Kuehnelt-Leddihn (1952)

Figure 3: Religion in the Holy Roman Empire Before the Thirty Years' War



Sources: Based on Kunz (1996) and the information in Schindling and Ziegler (1992a,b, 1993a,b, 1995, 1996). See also Spenkuch (2011).

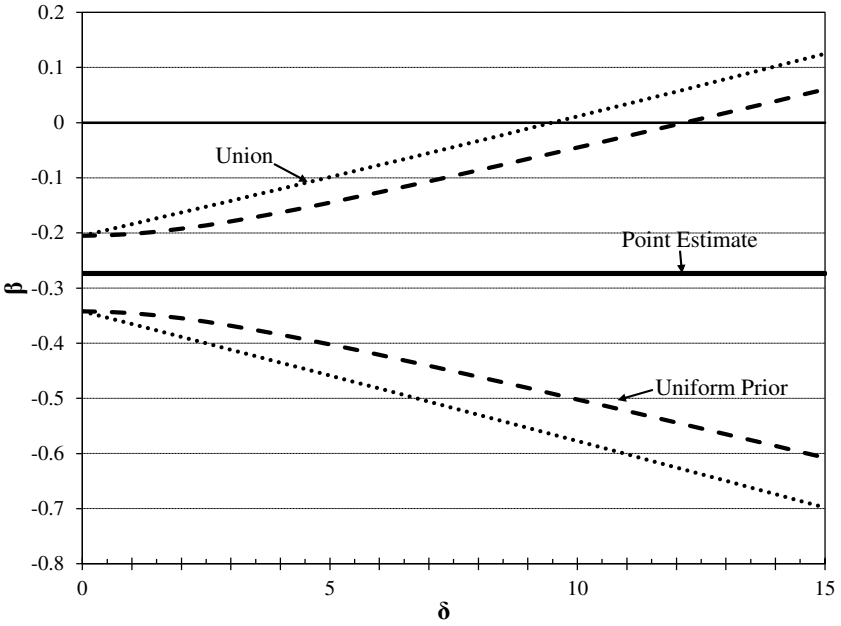
Figure 4: Assessing the Potential Impact of Omitted Variables Bias



Notes: Figure depicts the identified set for the causal effect of religion on NSDAP vote shares in the November election of 1932, given different assumptions about ψ, the coefficient of proportionality in Oster (2013). Intuitively, ψ bounds how correlated unobserved covariates may be with the independet variable of interest, relative to those included in the regression, i.e. X in equation (1). The shaded region, thefore, includes all values of β that are consistent with a coefficient of proportionality between 0 and ψ. The bounds are derived for a maximal R^2 of 1. See the description in the main text or Oster (2013) for additional detail.

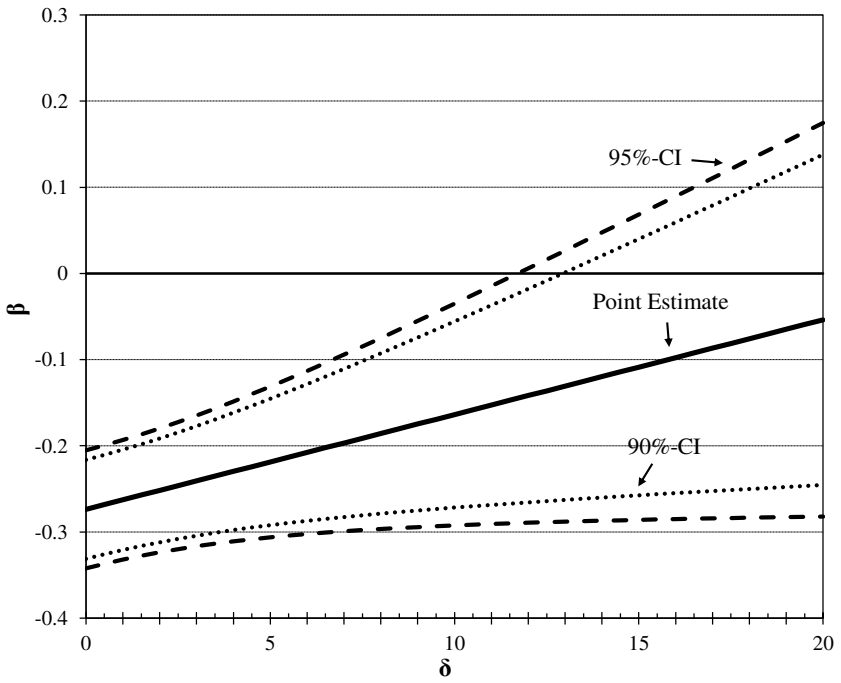
Figure 5: Inference Allowing for Violations of the Exclusion Restriction

A. 95%-Confidence Interval Estimates with Mean-Zero Prior



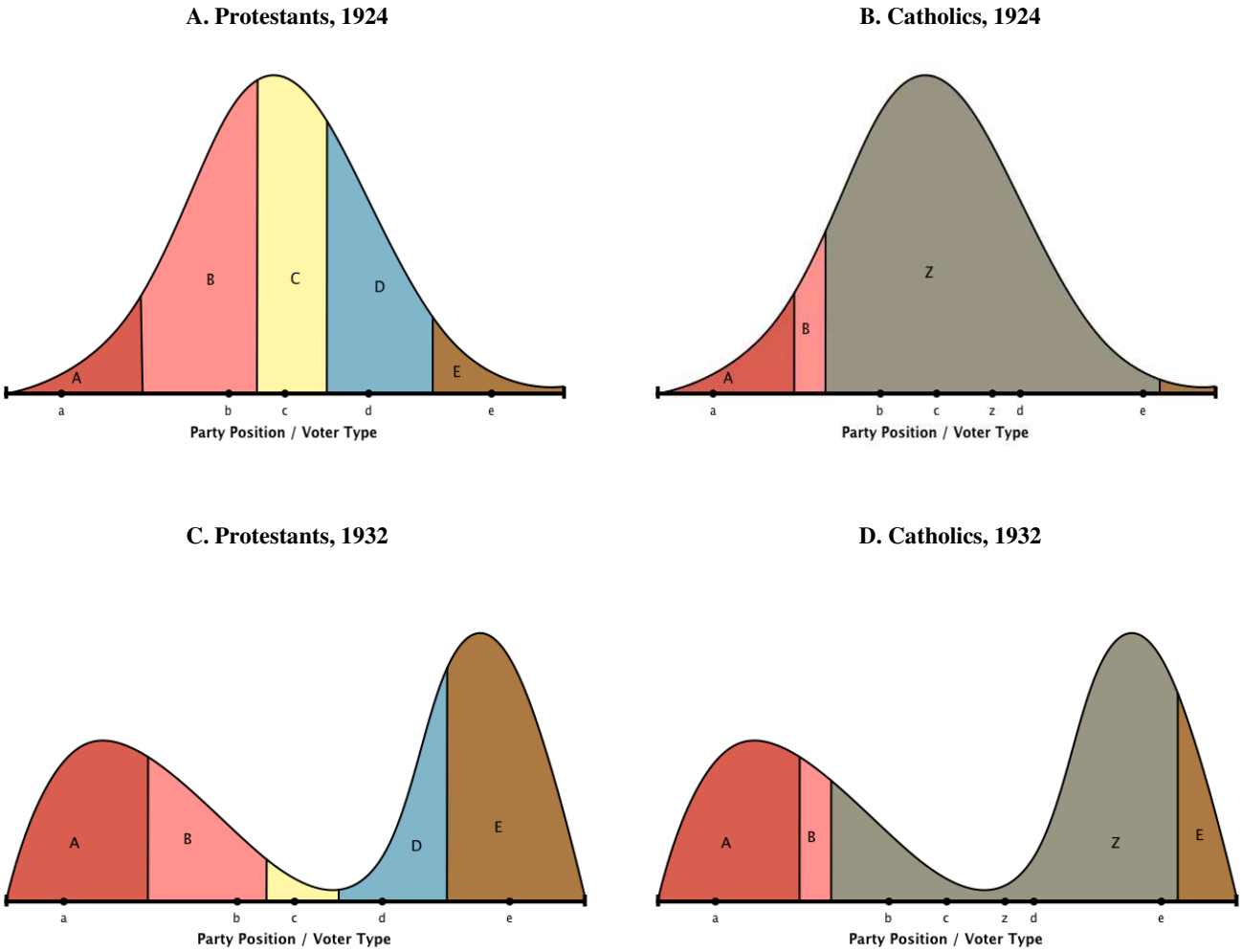
Notes: Figure depicts point estimates and 95%-confidence intervals for the effect of Catholicism on NSDAP vote shares in the November elections of 1932. The intervals labeled "Union" impose only the prior information that the support of γ in equation (6) is $[-\delta,\delta] \times [-\delta,\delta]$. Intervals labeled "Uniform Prior" are based on the assumption that each element of γ is distributed $U(-\delta,\delta)$. The solid line shows the respective point estimate. See the main text as well as Conley et al. (2012) for details on the estimation procedure.

B. 90%- and 95%-Confidence Interval Estimates with Negative Prior



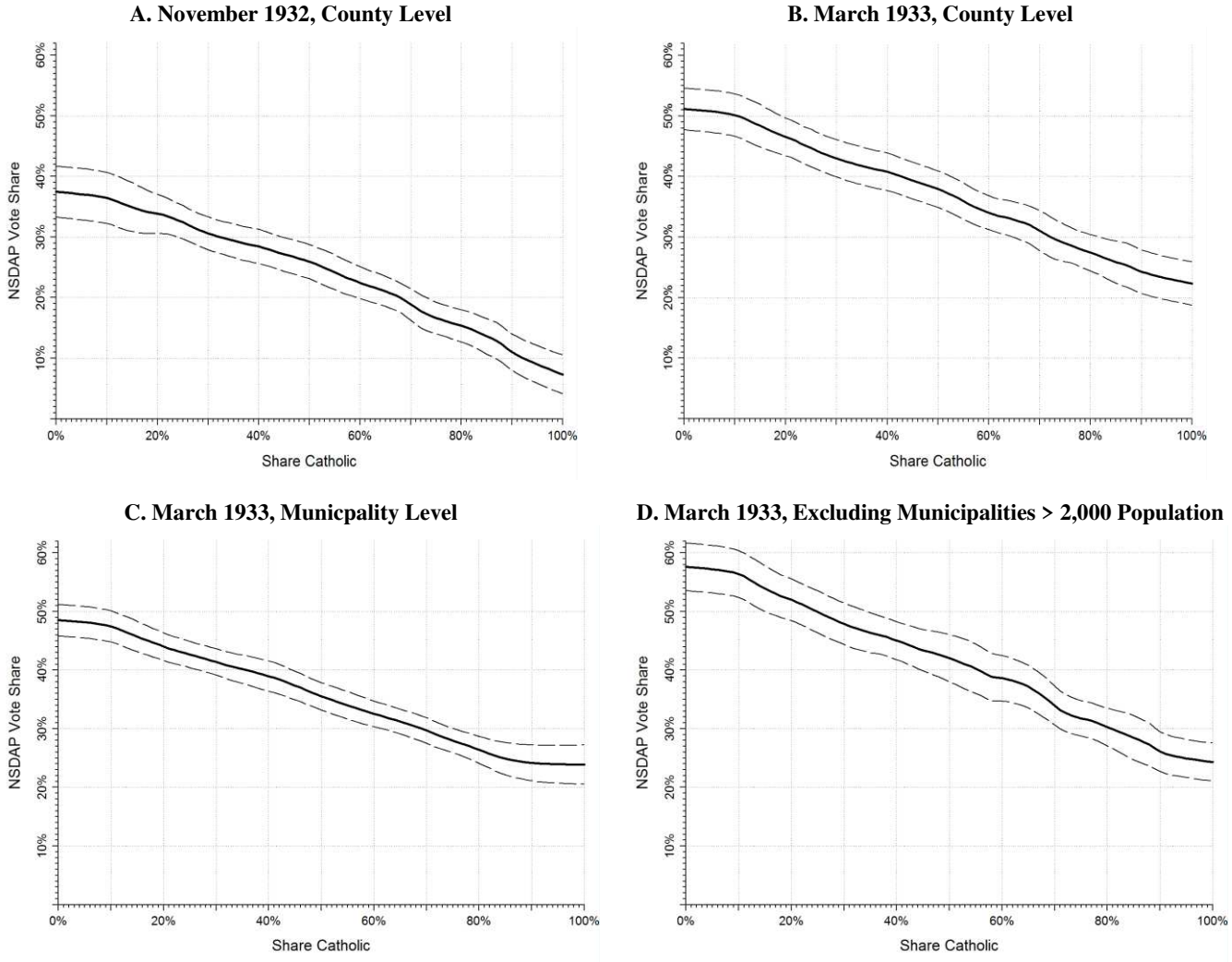
Notes: Figure depicts point estimates as well as 90% (dotted line) and 95% (dashed line) confidence intervals for the effect of Catholicism on NSDAP vote shares in the November elections of 1932. Estimates are based on the assumption that each element of γ in equation (6) is distributed $U(-\delta,0)$. See the main text as well as Conley et al. (2012) for details on the estimation procedure.

Figure 6: Predictions of a Non-Stochastic Conformity Model



Notes: Graphs depict the predictions of the conformity model in Section V for the following parameterization: $g=-(x-t)^2$, $x,t \in [0,1]$, and $\lambda=.09$. Parties' positions equal $a=.1$, $b=.4$, $c=.5$, $d=.65$, $e=.87$, and $z=.6$.

Figure 7: Semiparametric Estimates of the Relationship between Religion and Nazi Vote Shares



Notes: Graphs show semiparametric estimates of the relationship between NSDAP vote shares and voters' religion, i.e. $f(\cdot)$ in equation (8), as well as the associated asymptotic 95%-confidence intervals. The upper two panels are based on county-level data, whereas the one on the bottom left relies on municipality-level data instead. The panel on the bottom right uses only data on geographic units, which include no municipalities with more than 2,000 inhabitants. See the Data Appendix for a detailed description of the data. $f(\cdot)$ is estimated according to the differencing method in Yatchew (1998). Standard errors account for clustering at the electoral district and have been caclulated using the block bootstrap with 1,000 iterations.

Table 1: Key Events in the Fall of the Weimar Republic

Years of Crisis:		
1918	November	Revolution & proclamation of the German Republic
1919	January	Spartacus uprising; Elections to the National Assembly
	June	Treaty of Versailles
	August	Constition of Weimar signed into law
1920	March / April	Kapp-Lüttwitz-Putsch; Communist uprisings
	June	Elections to the first Reichstag
1921 – 1922		Political assisinations of M. Erzberger and W. Rathenau, among others
1923	January	Allied Rhineland occupation
	November	Beer Hall Putsch; Introduction of Rentenmark to end hyperinflation
Golden Era:		
1924	August	Dawes Plan
1925	April	Ultra-conservative P. v. Hindenburg elected Reichspresident
	October	Treaty of Locarno
1926	September	Germany admitted to League of Nations
Decline and Downfall:		
1929	October	Stock market crash & beginning of economic crisis
	December	Young Plan & Referendum on "Law Against the Enslavement of the German People"
1930	March	H. Brüning appointed Chancellor, first "presidential cabinet" governs by emergency decree
	Septmeber	Parliamentary elections: radical parties experience massive gains
1932	April	P. v. Hindeburg reelected as Reichspresident; A. Hitler gets 36.8% of votes
	June / July	F. v. Papen appointed new Chancellor; Nazis gain further ground in parlimanetary elections
	November	NSDAP experinces first setback in parliamentary elections
	December	General v. Schleicher appointed new Chancellor
1993	January	A. Hitler appointed new Chancellor
	February	Reichstag Fire; Weimar Constitution suspended indefinitely
	March	NSDAP achieves 43.9% of popular vote in parliamentary elections; passage of Enabling Act

Sources: Based in part on the description in Mommsen (1989).

Table 2A: NSDAP Vote Shares by Religion, 1924–1933

Variable	Full Sample	Religion of Majority	
		Catholic	Protestant
NSDAP Vote Share (in %):			
May 1924*	5.181	3.837	5.663
	(4.765)	(4.935)	(4.611)
December 1924*	2.384	1.426	2.727
	(2.528)	(1.943)	(2.624)
May 1928	2.025	1.803	2.106
	(2.242)	(2.165)	(2.265)
September 1930	14.80	10.40	16.46
	(6.04)	(4.66)	(5.66)
July 1932	30.99	19.66	35.28
	(11.07)	(6.37)	(9.31)
November 1932	26.42	16.65	30.06
	(9.99)	(5.93)	(8.66)
March 1933	38.65	30.74	41.62
	(10.00)	(6.87)	(9.36)

Notes: Entries are population-weighted means and standard deviations of county-level NSDAP vote shares (calculated as percentage of all eligible voters) for those counties with nonmissing information on religous composition. Asterisks (*) mark years in which the NSDAP was officially outlawed. In these years the Nazis formed an electoral alliance with other parties in the *völkisch* bloc, running as NSFP in May 1924 and as NSFB in December 1924. See the Data Appendix for the precise definition and source of each variable.

Table 2B: Summary Statistics

Variable	Full Sample	Religion of Majority: Catholic	Religion of Majority: Protestant	Source
Demographics:				
Percent Catholic	31.28	81.21	12.65	1925 Census
	(33.40)	(14.60)	(13.21)	
Percent Protestant	64.12	16.74	81.79	1925 Census
	(32.03)	(13.32)	(13.87)	
Percent Jewish	.97	.69	1.07	1925 Census
	(1.60)	(.68)	(1.82)	
Percent Nonreligious	3.64	1.36	4.49	1925 Census
	(3.47)	(1.65)	(3.58)	
Percent Female	51.29	51.26	51.30	1933 Census
	(1.19)	(1.18)	(1.20)	
Urban County	.424	.348	.452	Official County Classification
	(.494)	(.477)	(.498)	
Population (in 1,000)	179.0	167.0	183.6	1925 Census
	(220.5)	(215.9)	(222.2)	
Employment (in %):				
Female Labor Force Participation Rate	37.28	37.96	36.99	1933 Census
	(9.30)	(11.39)	(8.24)	
Unemployment Rate	18.87	16.80	19.68	1933 Census
	(9.24)	(9.16)	(9.14)	
Sectoral Composition of Workforce (in %):				
Agriculture	29.14	35.44	26.68	1933 Census
	(26.71)	(27.56)	(25.98)	
Manufacturing and Artisanry	35.22	33.02	36.08	1933 Census
	(13.73)	(13.66)	(13.67)	
Trade and Commerce	21.06	17.82	22.32	1933 Census
	(12.18)	(10.87)	(12.43)	
Services	10.17	9.39	10.48	1933 Census
	(6.26)	(5.83)	(6.40)	
Domestic Labor	4.41	4.32	4.45	1933 Census
	(2.32)	(2.28)	(2.34)	
Occupational Composition (in %):				
Helping Family Members	17.46	22.72	15.41	1933 Census
	(13.86)	(15.61)	(12.53)	
White Collar Workers	13.40	11.59	14.11	1933 Census
	(8.54)	(8.05)	(8.62)	
Civil Servants	6.16	5.53	6.41	1933 Census
	(3.94)	(3.79)	(3.98)	
Blue Collar Workers	39.25	35.63	40.67	1933 Census
	(9.66)	(10.48)	(8.93)	
Domestic Servants	4.26	4.17	4.30	1933 Census
	(2.21)	(2.20)	(2.21)	
Self-Employed	19.46	20.36	19.11	1933 Census
	(4.17)	(5.11)	(3.68)	
Composition of Unemployed (in %):				
White Collar Workers	13.62	11.74	14.35	1933 Census
	(7.37)	(6.47)	(7.57)	
Blue Collar Workers	83.40	85.26	82.68	1933 Census
	(7.75)	(6.83)	(7.97)	
Domestic Servants	2.98	3.00	2.97	1933 Census
	(1.43)	(1.31)	(1.35)	
Geography:				
Latitude (in degrees North)	51.24	50.22	51.62	Own Calculations
	(1.64)	(1.55)	(1.50)	
Longitude (in degrees East)	11.00	9.67	11.50	Own Calculations
	(3.27)	(3.48)	(3.07)	
Distance to Berlin (in km)	323.2	460.1	272.2	Own Calculations
	(161.5)	(79.4)	(154.5)	
Distance to Major City (in km)	90.94	86.14	92.74	Own Calculations
	(85.60)	(70.78)	(90.49)	
Distance to Border (in km)	73.94	50.90	82.54	Own Calculations
	(52.56)	(40.40)	(53.99)	
Distance to Major Port (in km)	308.8	394.1	277.0	Own Calculations
	(169.0)	(177.8)	(154.0)	
Distance to Major River (in km)	36.69	31.03	38.79	Own Calculations
	(57.75)	(37.69)	(63.53)	
Distance to Ore or Coal Deposits (in km)	102.1	91.8	106.0	Own Calculations
	(99.3)	(84.3)	(104.2)	
Number of Counties	982	331	651	

Notes: Entries are population-weighted means and standard deviations of county-level data. The sample consists of counties with nonmissing information on religious composition and election results in November 1932. See the Data Appendix for the precise definition and source of each variable.

Table 3: Religion and Nazi Vote Shares in the November Election of 1932

	NSDAP Vote Share						
Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Percent Catholic	-.190	-.243	-.243	-.250	-.255	-.280	-.293
	(.019)	(.017)	(.015)	(.017)	(.020)	(.028)	(.025)
Demographics:							
Percent Jewish		.125	.206	.195	.157	.531	.145
		(.367)	(.414)	(.430)	(.409)	(.461)	(.284)
Percent Nonreligious		-.978	-.971	-.913	-.875	-.774	-.666
		(.139)	(.152)	(.155)	(.152)	(.155)	(.121)
Percent Female		.912	.599	1.304	1.280	1.783	.585
		(.524)	(.491)	(.559)	(.530)	(.557)	(.476)
Urban County		-2.166	-1.589	.094	-.206	-.785	.312
		(1.225)	(1.020)	(1.224)	(1.197)	(1.345)	(1.114)
Log Population		-1.217	-1.274	-.945	-.429	-.636	-.433
		(.427)	(.391)	(.370)	(.452)	(.454)	(.398)
Employment:							
Female Labor Force Participation Rate			.131	.059	.021	.001	.044
			(.073)	(.109)	(.163)	(.107)	(.067)
Unemployment Rate			.091	.247	.277	.214	-.070
			(.104)	(.143)	(.163)	(.127)	(.074)
Sectoral Composition of Workforce (in %):							
Manufacturing and Artisanry				-.136	-.095	-.113	-.048
				(.084)	(.127)	(.104)	(.066)
Trade and Commerce				-.218	-.283	-.385	-.102
				(.083)	(.133)	(.141)	(.132)
Services				.032	-.391	-.458	-.146
				(.077)	(.136)	(.119)	(.107)
Domestic Labor				-.133	-.412	-.812	-1.851
				(.249)	(2.153)	(1.647)	(1.557)
Occupational Composition (in %):							
White Collar Workers					-.020	.087	-.102
					(.201)	(.204)	(.162)
Civil Servants					.682	.901	.432
					(.244)	(.259)	(.191)
Blue Collar Workers					-.101	-.092	-.121
					(.149)	(.121)	(.103)
Domestic Servants					.474	.587	1.724
					(2.317)	(1.875)	(1.657)
Self-Employed					.109	.096	-.060
					(.326)	(.300)	(.202)
Constant	32.365	5.735	15.64	-15.671	-18.133	88.923	
	(1.311)	(23.900)	(23.933)	(24.990)	(24.413)	(96.606)	
Geographical Controls	No	No	No	No	No	Yes	Yes
Electoral District Fixed Effects	No	No	No	No	No	No	Yes
R-Squared	.405	.609	.616	.633	.647	.664	.815
Number of Observations	982	982	982	982	982	982	982

Notes: Entries are coefficients and standard errors from estimating equation (1) by weighted least squares. The dependent variable is a county's NSDAP vote share in the November elections of 1932. Heteroskedasticity robust standard errors are clustered by electoral district and reported in parentheses. The omitted category in Sectoral Composition of Workforce is Agriculture, and that in Occupational Composition is Helping Family Members. The set of Geographical Controls includes all geographical covariates shown in Table 2B. In addition to the variables shown in the table, indicator variables for missing values on each covariate are also included in the regressions. See the Data Appendix for the precise definition and source of each variable.

Table 4: First-Stage Regressions

	Percent Catholic						
Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
County's Religion in 1624:							
Catholic	70.807	65.568	65.501	64.895	61.266	49.555	42.513
	(2.912)	(3.284)	(3.233)	(3.168)	(3.504)	(2.999)	(3.707)
Mixed	39.715	37.966	37.671	35.982	32.911	25.820	21.932
	(5.176)	(5.032)	(5.289)	(5.639)	(5.664)	(3.824)	(3.377)
Demographics:							
Percent Jewish		.744	.659	.647	.410	.445	.460
		(.831)	(.796)	(.769)	(.497)	(.418)	(.358)
Percent Nonreligious		-2.084	-2.345	-2.170	-2.161	-1.451	-1.044
		(.557)	(.609)	(.500)	(.493)	(.448)	(.476)
Percent Female		.080	-.333	1.085	1.378	.187	.022
		(1.253)	(1.210)	(1.268)	(1.132)	(.959)	(.890)
Urban County		4.344	3.364	8.754	7.232	6.561	4.993
		(4.120)	(4.036)	(6.298)	(5.940)	(3.038)	(3.320)
Log Population		1.700	.878	2.236	2.161	.882	1.011
		(1.462)	(1.240)	(1.530)	(1.425)	(1.103)	(.882)
Employment:							
Female Labor Force Participation Rate			.128	.001	-.160	-.393	-.207
			(.183)	(.227)	(.261)	(.216)	(.149)
Unemployment Rate			.364	.641	.655	.494	.411
			(.240)	(.241)	(.240)	(.200)	(.180)
Sectoral Composition of Workforce (in %):							
Manufacturing and Artisanry				-.194	.130	-.358	-.247
				(.125)	(.153)	(.154)	(.117)
Trade and Commerce				-.633	-.580	-.467	-.439
				(.264)	(.274)	(.210)	(.220)
Services				-.033	.009	.050	.241
				(.243)	(.293)	(.331)	(.419)
Domestic Labor				.215	9.728	6.523	1.923
				(.765)	(5.574)	(3.752)	(2.694)
Occupational Composition (in %):							
White Collar Workers					-.130	.314	.205
					(.494)	(.333)	(.424)
Civil Servants					-.824	-1.047	-1.084
					(.543)	(.533)	(.614)
Blue Collar Workers					-1.136	-.758	-.665
					(.327)	(.267)	(.266)
Domestic Servants					-10.709	-8.254	-3.075
					(5.723)	(4.291)	(3.025)
Self-Employed					-1.648	-1.988	-3.075
					(.653)	(.591)	(3.025)
Constant	12.499	-5.249	15.264	-56.652	11.131	635.78	
	(2.001)	(60.707)	(58.544)	(56.752)	(56.496)	(166.20)	
Geographical Controls	No	No	No	No	No	Yes	Yes
Historical Controls	No	No	No	No	No	Yes	Yes
Electoral District Fixed Effects	No	No	No	No	No	No	Yes
R-Squared	.751	.774	.776	.784	.799	.858	.891
Number of Observations	982	982	982	982	982	982	982

Notes: Entries are coefficients and standard errors from estimating equation (2) by weighted least squares. The dependent variable is the share of Catholics (in percent) among a county's population. Heteroskedasticity robust standard errors are clustered by electoral district and reported in parentheses. The omitted category in Sectoral Composition of Workforce is Agriculture, and that in Occupational Composition is Helping Family Members. The set of Geographical Controls includes all geographical covariates shown in Table 2B, and Historical Controls includes the variables that Cantoni (2012) and Rubin (2014) have shown to be correlated with territorial lords' choices. In addition to the variables shown in the table, indicator variables for missing values on each covariate are also included in the regressions. See the Data Appendix for the precise definition and source of each variable.

Table 5: Reduced Form Results

	NSDAP Vote Share						
Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
County's Religion in 1624:							
Catholic	-13.540	-16.602	-16.620	-16.667	-15.842	-13.249	-11.739
	(1.390)	(1.184)	(1.216)	(1.246)	(1.514)	(1.690)	(1.552)
Mixed	-7.805	-8.105	-7.760	-7.565	-7.174	-6.260	-5.653
	(1.483)	(1.834)	(1.872)	(1.987)	(1.950)	(1.520)	(1.144)
Demographics:							
Percent Jewish		-.032	.067	.055	.083	.383	-.005
		(.261)	(.308)	(.325)	(.411)	(.441)	(.301)
Percent Nonreligious		-.498	-.424	-.382	-.329	-.371	-.333
		(.146)	(.181)	(.187)	(.188)	(.203)	(.186)
Percent Female		.944	.732	1.044	.941	1.646	.500
		(.643)	(.603)	(.628)	(.623)	(.634)	(.577)
Urban County		-3.313	-2.407	-2.331	-2.245	-2.662	-1.327
		(1.581)	(1.429)	(1.903)	(2.022)	(1.514)	(1.683)
Log Population		-1.658	-1.491	-1.562	-1.043	-.830	-.875
		(.554)	(.475)	(.510)	(.610)	(.5270)	(.482)
Employment:							
Female Labor Force Participation Rate			.109	.070	.075	.120	.098
			(.068)	(.089)	(.099)	(.119)	(.082)
Unemployment Rate			-.003	.081	.106	.043	-.195
			(.123)	(.154)	(.166)	(.107)	(.097)
Sectoral Composition of Workforce (in %):							
Manufacturing and Artisanry				-.088	-.131	-.011	.023
				(.089)	(.122)	(.098)	(.068)
Trade and Commerce				-.046	-.116	-.196	.036
				(.091)	(.131)	(.138)	(.148)
Services				.060	-.374	-.437	-.188
				(.085)	(.167)	(.150)	(.148)
Domestic Labor				-.215	-2.810	-2.858	-2.237
				(.281)	(2.264)	(1.966)	(1.784)
Occupational Composition (in %):							
White Collar Workers					.001	-.055	-.164
					(.242)	(.212)	(.210)
Civil Servants					.890	1.153	.684
					(.267)	(.249)	(.241)
Blue Collar Workers					.192	.107	.068
					(.184)	(.140)	(.127)
Domestic Servants					3.098	3.136	2.447
					(2.565)	(2.200)	(1.946)
Self-Employed					.515	.611	.490
					(.407)	(.336)	(.294)
Constant	30.031	4.776	9.056	-2.009	-21.378	-117.29	
	(1.168)	(30.199)	(29.878)	(28.759)	(29.590)	(120.52)	
Geographical Controls	No	No	No	No	No	Yes	Yes
Historical Controls	No	No	No	No	No	Yes	Yes
Electoral District Fixed Effects	No	No	No	No	No	No	Yes
R-Squared	.309	.475	.483	.490	.504	.555	.711
Number of Observations	982	982	982	982	982	982	982

Notes: Entries are coefficients and standard errors from estimating equation (3) by weighted least squares. The dependent variable is a county's NSDAP vote share in the November elections of 1932. Heteroskedasticity robust standard errors are clustered by electoral district and reported in parentheses. The omitted category in Sectoral Composition of Workforce is Agriculture, and that in Occupational Composition is Helping Family Members. The set of Geographical Controls includes all geographical covariates shown in Table 2B, and Historical Controls includes the variables that Cantoni (2012) and Rubin (2014) have shown to be correlated with territorial lords' choices. In addition to the variables shown in the table, indicator variables for missing values on each covariate are also included in the regressions. See the Data Appendix for the precise definition and source of each variable.

Table 6: 2SLS Estimates of the Effect of Religion on Nazi Vote Shares in the November Election of 1932

	NSDAP Vote Share						
Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Percent Catholic	-.192	-.248	-.248	-.252	-.255	-.265	-.275
	(.020)	(.016)	(.015)	(.017)	(.020)	(.027)	(.027)
Demographics:							
Percent Jewish		.119	.199	.193	.156	.495	.120
		(.362)	(.407)	(.422)	(.400)	(.429)	(.267)
Percent Nonreligious		-1.008	-1.001	-.926	-.879	-.749	-.622
		(.144)	(.157)	(.159)	(.153)	(.156)	(.112)
Percent Female		.912	.597	1.309	1.282	1.701	.512
		(.513)	(.481)	(.548)	(.520)	(.531)	(.456)
Urban County		-2.112	-1.544	.139	-.193	-.863	.074
		(1.198)	(.997)	(1.197)	(1.199)	(1.277)	(1.109)
Log Population		-1.190	-1.254	-7.482	-.424	-.579	-.598
		(.417)	(.379)	(4.206)	(.441)	(.397)	(.336)
Employment:							
Female Labor Force Participation Rate			.131	.059	.020	.012	.039
			(.072)	(.107)	(.114)	(.107)	(.060)
Unemployment Rate			.093	.248	.277	.175	-.080
			(.102)	(.140)	(.159)	(.102)	(.070)
Sectoral Composition of Workforce (in %):							
Manufacturing and Artisanry				-.136	-.094	-.107	-.044
				(.082)	(.126)	(.099)	(.063)
Trade and Commerce				-.221	-.283	-.328	-.085
				(.080)	(.130)	(.126)	(.122)
Services				.032	-.390	-.433	-.126
				(.076)	(.136)	(.110)	(.103)
Domestic Labor				-.135	-.400	-1.144	-1.709
				(.245)	(2.137)	(1.623)	(1.581)
Occupational Composition (in %):							
White Collar Workers					-.021	.035	-.112
					(.199)	(.183)	(.152)
Civil Servants					.680	.883	-.112
					(.244)	(.237)	(.152)
Blue Collar Workers					-.103	-.093	.391
					(.149)	(.117)	(.179)
Domestic Servants					.459	.968	1.601
					(2.303)	(1.851)	(1.698)
Self-Employed					.107	.092	-.029
					(.316)	(.270)	(.203)
Constant	32.415	5.648	15.646	-15.958	-18.118	49.431	
	(1.344)	(23.393)	(23.450)	(24.494)	(23.780)	(102.73)	
Geographical Controls	No	No	No	No	No	Yes	Yes
Historical Controls	No	No	No	No	No	Yes	Yes
Electoral District Fixed Effects	No	No	No	No	No	No	Yes
First Stage F-Statistic	313.79	201.10	209.11	213.45	165.05	142.24	71.91
Overidentification Test [p-value]	.861	.181	.146	.156	.245	.523	.464
Number of Observations	982	982	982	982	982	982	982

Notes: Entries are coefficients and standard errors from estimating equation (4) by weighted two-stage least squares. The dependent variable is a county's NSDAP vote share in the November elections of 1932, and the share of Catholics is considered endogenous. Heteroskedasticity robust standard errors are clustered by electoral district and reported in parentheses. The omitted category in Sectoral Composition of Workforce is Agriculture, and that in Occupational Composition is Helping Family Members. The set of Geographical Controls includes all geographical covariates shown in Table 2B, and Historical Controls includes the variables that Cantoni (2012) and Rubin (2014) have shown to be correlated with territorial lords' choices. In addition to the variables shown in the table, indicator variables for missing values on each covariate are also included in the regressions. See the Data Appendix for the precise definition and source of each variable.

Table 7: Additional Sensitivity Analysis and Robustness Checks

Specification / Sample	OLS	IV
Baseline	-.293	-.275
	(.025)	(.027)
As Percentage of Valid Votes	-.361	-.338
	(.024)	(.028)
Sample:		
Unweighted	-.291	-.281
	(.033)	(.032)
Excluding Prussia	-.284	-.273
	(.047)	(.037)
Excluding Bavaria	-.282	-.261
	(.026)	(.028)
Above Average Share of Catholics	-.327	-.339
	(.027)	(.059)
Below Average Share of Catholics	-.256	-.414
	(.066)	(.141)
Additional Controls:		
Additional Labor Force Controls	-.286	-.268
	(.026)	(.028)
Composition of Unemployed	-.291	-.277
	(.025)	(.027)
Major Parties' Vote Shares in 1920	-.261	-.223
	(.023)	(.035)
Proxy for Historical Anti-Semitism	-.295	-.278
	(.025)	(.027)
Instrument:		
Based on Religious Situation in 1555	--	-.274
		(.026)
Dependent Variable:		
NSDAP Vote Share July 1930	-.145	-.133
	(.019)	(.022)
NSDAP Vote Share July 1932	-.335	-.318
	(.027)	(.029)
NSDAP Vote Share 1933	-.293	-.279
	(.019)	(.023)
Δ NSDAP Vote Share	-.267	-.253
November 1932 − May 1928	(.022)	(.023)

Notes: Entries are coefficients and standard errors on Percent Catholic from estimating the empirical models in equations (1) and (4) by weighted least squares and weighted two-stage least squares, respectively. The respective sample restriction, set of additional controls, alternative instrument, or dependent variable is shown in the column on the left. Heteroskedasticity robust standard errors are clustered by electoral district and reported in parentheses. To ensure comparability with the baseline results in Tables 3 and 6, all results also control for the covariates used in the most inclusive specifications in those tables. See the Data Appendix for the precise definition and source of each variable.

Table 8: Comparison of County- and Municipality-Level Results

A. Results for 1933

	NSDAP Vote Share 1933					
	OLS	OLS	OLS	2SLS	2SLS	2SLS
Percent Catholic	-.294	-.292	-.309	-.279	-.276	-.239
	(.020)	(.019)	(.019)	(.023)	(.022)	(.052)
Unit of Observation	County	Municipality	Municipality	County	Municipality	Municipality
Standard Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Electoral District Fixed Effects	Yes	Yes	No	Yes	Yes	No
County Fixed Effects	No	No	Yes	No	No	Yes
First Stage F-Statistic	--	--	--	71.75	42.77	4.55
R-Squared	.821	.764	.919	--	--	--
Number of Observations	981	3,502	3,502	981	3,502	3,502

B. Results for 1930

	NSDAP Vote Share 1930					
	OLS	OLS	OLS	2SLS	2SLS	2SLS
Percent Catholic	-.145	-.144	-.140	-.133	-.139	-.157
	(.019)	(.018)	(.023)	(.022)	(.022)	(.048)
Unit of Observation	County	Municipality	Municipality	County	Municipality	Municipality
Standard Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Electoral District Fixed Effects	Yes	Yes	No	Yes	Yes	No
County Fixed Effects	No	No	Yes	No	No	Yes
First Stage F-Statistic	--	--	--	65.64	44.75	5.05
R-Squared	.633	.545	.853	--	--	--
Number of Observations	977	3,577	3,577	977	3,577	3,577

Notes: Entries are coefficients and standard errors on Percent Catholic from estimating the empirical models in equations (1) and (4) by weighted least squares and weighted two-stage least squares, respectively. The dependent variable in the upper panel is the NSDAP's vote share in the elections of March 1933. The lower panel uses that in September of 1930 instead. Within each set of regressions the leftmost specification is based on county-level data, whereas the middle and right most ones rely on municipality-level data instead. Heteroskedasticity robust standard errors are clustered by electoral district and reported in parentheses. See the Data Appendix for the precise definition and source of each variable.

Table 9: Major Parties' Vote Shares, by Religion

	1920		May 1924		December 1924		1928		1930		July 1932		November 1932		1933	
Party	Catholics	Protestants	Catholics	Protestants	Catholics	Protestants	Catholics	Protestants	Catholics	Protestants	Catholics	Protestants	Catholics	Protestants	Catholics	Protestants
Far Left:																
KPD	.015	.017	.085	.096	.063	.070	.077	.079	.113	.108	.124	.120	.137	.134	.109	.109
	[.000, .016]	[.000, .017]	[.042, .090]	[.052, .100]	[.018, .066]	[.025, .074]	[.032, .081]	[.035, .083]	[.070, .118]	[.065, .113]	[.082, .130]	[.078, .126]	[.095, .144]	[.092, .140]	[.066, .114]	[.066, .114]
Democratic Parties:																
SPD	.108	.199	.077	.197	.122	.244	.136	.267	.109	.242	.103	.218	.096	.196	.091	.195
	[.068, .116]	[.159, .207]	[.036, .085]	[.157, .205]	[.083, .131]	[.205, .253]	[.098, .146]	[.229, .278]	[.070, .118]	[.204, .252]	[.064, .112]	[.118, .226]	[.055, .104]	[.156, .204]	[.050, .099]	[.155, .203]
DDP	.015	.090	.018	.057	.024	.064	.020	.046	.014	.040	.006	.010	.005	.009	.005	.009
	[.000, .019]	[.045, .093]	[.000, .020]	[.011, .060]	[.000, .026]	[.018, .066]	[.000, .022]	[.000, .049]	[.000, .015]	[.000, .042]	[.000, .006]	[.000, .010]	[.000, .005]	[.000, .009]	[.000, .005]	[.000, .009]
Zentrum / BVP	.545	.000	.456	.000	.474	.000	.402	.000	.453	.000	.463	.000	.425	.000	.427	.000
	[.504, .553]	[.000, .000]	[.414, .463]	[.000, .000]	[.433, .481]	[.000, .000]	[.359, .407]	[.000, .000]	[.410, .458]	[.000, .000]	[.421, .469]	[.000, .000]	[.382, .431]	[.000, .000]	[.384, .433]	[.000, .000]
DVP	.045	.137	.043	.080	.048	.092	.039	.077	.027	.042	.005	.012	.007	.019	.005	.012
	[.002, .051]	[.094, .142]	[.000, .046]	[.035, .083]	[.003, .052]	[.048, .096]	[.032, .042]	[.032, .081]	[.000, .028]	[.000, .043]	[.000, .006]	[.000, .013]	[.000, .008]	[.000, .019]	[.000, .005]	[.000, .013]
Right Wing:																
DNVP	.000	.196	.000	.228	.000	.243	.000	.159	.019	.075	.012	.067	.018	.090	.025†	.092†
	[.000, .000]	[.153, .202]	[.000, .002]	[.187, .235]	[.000, .000]	[.203, .251]	[.000, .003]	[.116, .165]	[.000, .022]	[.030, .078]	[.000, .014]	[.021, .070]	[.000, .022]	[.045, .094]	[.000, .029]	[.047, .096]
Far Right:																
NSDAP	--	--	.016*	.070*	.003*	.034*	.005	.028	.058	.191	.095	.413	.079	.354	.199	.478
			[.000, .018]	[.024, .072]	[.000, .004]	[.000, .035]	[.000, .006]	[.000, .029]	[.017, .065]	[.150, .198]	[.061, .110]	[.379, .428]	[.044, .092]	[.319, .367]	[.170, .218]	[.448, .496]

Notes: Tables show estimated vote shares among Catholics and Protestants for each major party in every parliamentary election during the Weimar Republic. Values in brackets are theoretical bounds. The discussion in Section 5 describes the derivation of these numbers. Vote shares do not generally add up to unity, as they are calcuted as a fraction of all eligible voters. Asterisks (*) mark years in which the NSDAP was officially outlawed. In these years the Nazis formed an electoral alliance with other parties in the *völkisch* bloc, running as NSFP in May 1924 and as NSFB in December 1924. Daggers (†) mark years in which the DNVP campaigned together with the Stahlhelm and Landbund as Kampffront Schwarz-Weiß-Rot. Results for the Zentrum include the BVP.

Table 10: Religious Differences in NSDAP Vote Shares by Social Environment

Restriction / Sample	OLS	IV	Chow Test for Equality of OLS Coefficients *p* -value
Baseline	-.293	-.275	
	(.025)	(.027)	
By Attitude of Catholic Priest:			
Villages with "Brown Priest"	-.203	-.149	
	(.023)	(.040)	.014
Villages without "Brown Priest"	-.299	-.291	
	(.020)	(.023)	
By Structure of Environment:			
Urban County	-.205	-.161	
	(.025)	(.024)	.005
Rural County	-.309	-.304	
	(.027)	(.032)	
By Fraction of Catholics Voting for the Zentrum Party in 1920:			
Lowest Quartile	-.198	-.170	
	(.054)	(.054)	
Second Quartile	-.261	-.244	.008
	(.028)	(.026)	
Third Quartile	-.333	-.362	
	(.050)	(.045)	
Highest Quartile	-.320	-.339	
	(.024)	(.034)	

Notes: Entries are coefficients and standard errors on Percent Catholic from estimating the empirical models in equations (1) and (4) by weighted least squares and weighted two-stage least squares, respectively. The respective sample description is shown in the column on the left. Heteroskedasticity robust standard errors are clustered by electoral district and reported in parentheses. To ensure comparability with the baseline results in Tables 3 and 6, the set of covariates is the same as in the most inclusive specifications in those tables. The column on the very right displays *p* -values from a Chow test for equality of the coefficients estimated by lest squares, i.e. those in the column labeled "OLS." See the Data Appendix for the precise definition and source of each variable.

Table 11: Testing Alternative Explanations for the Effect of Religion on Nazi Vote Shares

Restriction / Sample	OLS	IV	Chow Test for Equality of OLS Coefficients *p* -value
Baseline	-.293	-.275	
	(.025)	(.027)	
By Region:			
Prussia	-.305	-.288	
	(.017)	(.020)	.585
Remainder of Germany	-.284	-.273	
	(.047)	(.037)	
Catholic Heartland	-.300	-.235	
	(.024)	(.028)	.784
Catholic Diaspora	-.288	-.282	
	(.039)	(.032)	
By Historical Religion of Area (c. 1624):			
Catholic	-.264	--	
	(.070)		
Lutheran	-.272	--	.017
	(.034)		
Calvinist	-.397	--	
	(.055)		
By Reliogiosity of Parishoners:			
Lower Tercile	-.343	-.331	
	(.025)	(.027)	
Middle Tercile	-.322	-.320	.198
	(.025)	(.042)	
Upper Tercile	-.278	-.232	
	(.040)	(.030)	

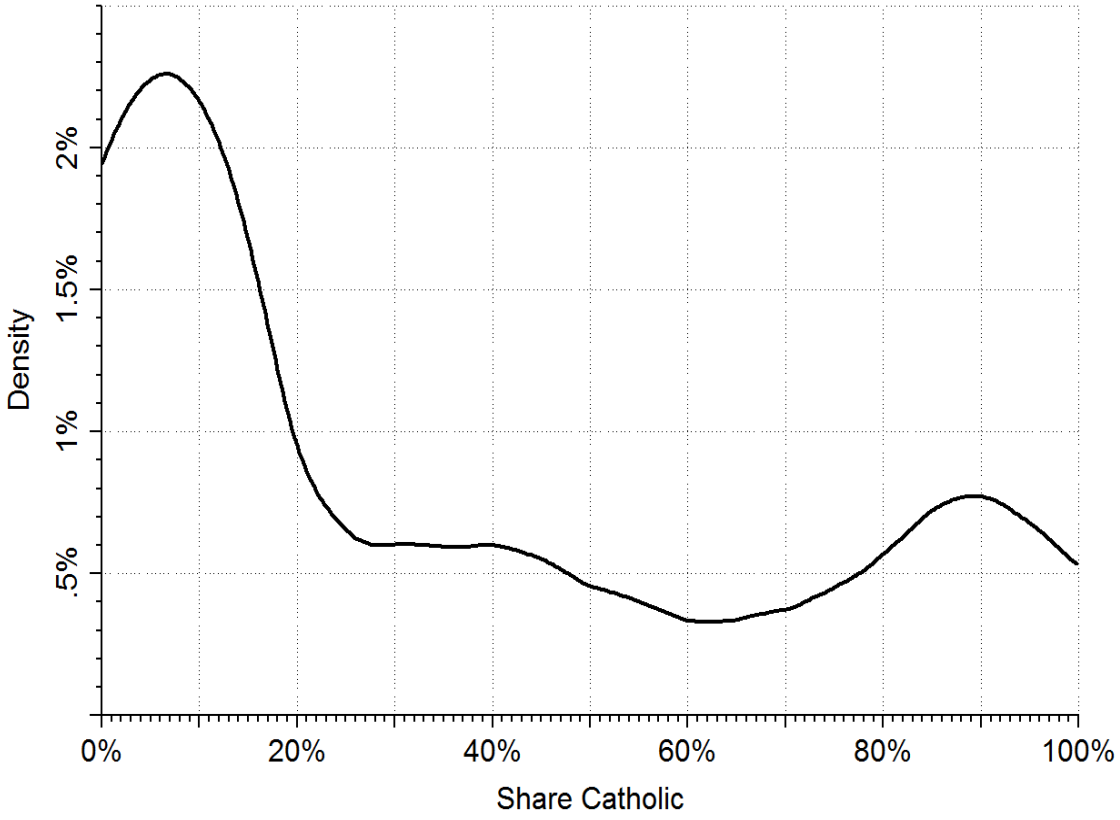
Notes: Entries are coefficients and standard errors on Percent Catholic from estimating the empirical models in equations (1) and (4) by weighted least squares and weighted two-stage least squares, respectively. The respective sample description is shown in the column on the left. Heteroskedasticity robust standard errors are clustered by electoral district and reported in parentheses. To ensure comparability with the baseline results in Tables 3 and 6, the set of covariates is the same as in the most inclusive specifications in those tables. The column on the very right displays *p* -values from a Chow test for equality of the coefficients estimated by lest squares, i.e. those in the column labeled "OLS." We define "Catholic Heartland" as the regions of Rhineland, Westphalia, Baden, as well as South-East Bavaria, and "Catholic Diaspora" as the remainder of Germany. See the Data Appendix for the precise definition and source of all remaining variables.

Table 12: Religious Differences in Proxies for Anti-Semitism and Nazi Ideology, Before and After March 1933

Outcomes	OLS	IV	Sample Mean and Standard Deviation	Number of Observations
Before March 1933:				
NSDAP Party Membership, December 1932	-.023	-.022	2.66	712
(as percentage of population)	(.006)	(.007)	(1.88)	
Pogrom in the 1920s	-.013	-.010	2.67	1,199
(× 100)	(.013)	(.017)	(16.13)	
After March 1933:				
Attack on Synagogues During the *Reichskristallnacht,* 1938	.136	.173	81.40	989
(× 100)	(.040)	(.056)	(38.93)	
Letters to *Der Stürmer* , 1935–1938	.007	.011	1.88	1,222
(per 10,000 residents)	(.004)	(.007)	(5.02)	
Deportations, 1933–1945	.205	.149	34.21	930
(as percentage of Jewish population)	(.062)	(.073)	(52.29)	

Notes: Columns labeled OLS and IV display coefficients and standard errors on Percent Catholic. The respective dependent variable is shown in the column on the left. Measures of counties' NSDAP party membership rates have been constructed based on the nationally representative data set of Falter and Kater (1993). All other outcomes come from the city-lelvel data set constructed by Voigtländer and Voth (2012). When using their data we employ Voigtländer and Voth's (2012) original set of covariates, i.e. cities' religious composition, an indicator vairbale for whether a city experienced pogroms during the Black Death (1348–50), and log population, but rely on their extended sample to preserve as much information as possible. All other specifications use our standard set of covariates, i.e. those contained in the most inclusive specifications in Tables 3 and 6. The instrumental variable used for the 2SLS estimates is always territorial lords' religion, as described in Section 4.1. For a detailed description of the data used in this table, see Schneider-Haase (1991), Voigtländer and Voth (2012), or the Data Appendix to this paper.

Figure A.1: Distribution of Catholics Across Counties



Notes: Figure depicts a population-weighted kernel density estimate of the distribution of counties' share of Catholics. Estimates use an Epanechnikov kernel with a bandwidth of 7.5.

Table A.1: Alternative Instrumental Variable Estimates

	Percent Catholic			NSDAP Vote Share, November 1932				
Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Percent Catholic				-.229	-.255	-.223	-.275	-.274
				(.060)	(.112)	(.076)	(.027)	(.026)
Distance to Wittenberg (in km)	.084	.130	.046					
	(.031)	(.046)	(.029)					
County's Religion in 1624:								
Catholic			42.513					
			(3.707)					
Mixed			21.932					
			(3.377)					
Demographics:								
Percent Jewish	-1.280	.366	.460	.215	.112	.095	.123	.122
	(1.336)	(.563)	(.358)	(.431)	(.279)	(.271)	(.264)	(.264)
Percent Nonreligious	-4.341	-1.877	-1.044	-.724	-.584	-.524	-.620	-.618
	(1.185)	(.673)	(.476)	(.417)	(.217)	(.175)	(.111)	(.110)
Percent Female	3.209	.928	.022	1.191	.493	.453	.517	.516
	(2.018)	(1.374)	(.890)	(.540)	(.509)	(.455)	(.445)	(.444)
Urban County	15.930	4.916	4.993	-.768	-.026	-.219	.092	.085
	(4.943)	(3.556)	(3.320)	(1.810)	(1.367)	(1.313)	(1.086)	(1.088)
Log Population	5.306	.495	1.011	-.635	-.608	-.616	-.603	-.603
	(1.800)	(.909)	(.882)	(.530)	(.342)	(.349)	(.337)	(.337)
Employment:								
Female Labor Force Participation Rate	-.349	-.392	-.207	.041	.047	.059	.039	.039
	(.515)	(.182)	(.149)	(.125)	(.086)	(.068)	(.061)	(.061)
Unemployment Rate	.631	.249	.411	.267	-.085	-.093	-.080	-.081
	(.388)	(.191)	(.180)	(.174)	(.074)	(.073)	(.070)	(.070)
Sectoral Composition of Workforce (in %):								
Manufacturing and Artisanry	.814	-.023	-.247	-.120	-.044	-.042	-.045	-.045
	(.388)	(.155)	(.117)	(.107)	(.064)	(.062)	(.062)	(.062)
Trade and Commerce	-.102	-.200	-.439	-.273	-.081	-.073	-.086	-.085
	(.429)	(.304)	(.220)	(.126)	(.134)	(.125)	(.120)	(.120)
Services	1.742	.961	.241	-.444	-.146	-.175	-.128	-.129
	(.724)	(.625)	(.419)	(.182)	(.111)	(.105)	(.100)	(.100)
Domestic Labor	27.735	4.463	1.923	-.982	-1.799	-1.932	-1.719	-1.723
	(10.161)	(3.030)	(2.694)	(3.048)	(1.453)	(1.519)	(1.564)	(1.564)
Occupational Composition (in %):								
White Collar Workers	-1.840	-.324	.205	.026	-.106	-.092	-.114	-.114
	(.771)	(.590)	(.424)	(.233)	(.147)	(.160)	(.155)	(.155)
Civil Servants	-3.724	-2.201	-1.084	.808	.435	.503	.394	.397
	(1.129)	(.702)	(.614)	(.371)	(.231)	(.213)	(.173)	(.173)
Blue Collar Workers	-2.592	-1.340	-.665	-.017	-.090	-.047	-.116	-.114
	(.666)	(.390)	(.266)	(.235)	(.155)	(.147)	(.104)	(.104)
Domestic Servants	-31.385	-7.272	-3.075	1.134	1.749	1.973	1.613	1.620
	(10.706)	(3.525)	(3.025)	(3.413)	(1.578)	(1.642)	(1.679)	(1.678)
Self-Employed	-3.625	-2.853	-1.881	.216	.029	.123	-.028	-.025
	(1.129)	(.874)	(.657)	(.452)	(.337)	(.309)	(.203)	(.204)
Constant	-21.539			-18.794				
	(100.333)			(24.892)				
Geographical Controls	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Remaining Historical Controls	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Electoral District Fixed Effects	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Instruments:								
Distance to Wittenberg	--	--	--	Yes	Yes	Yes	Yes	Yes
Distance to Wittenberg Squared	--	--	--	No	No	Yes	No	Yes
Distance to Wittenberg Cubed	--	--	--	No	No	Yes	No	Yes
Historically Catholic	--	--	--	No	No	No	Yes	Yes
Historically Mixed	--	--	--	No	No	No	Yes	Yes
First Stage F-Statistic	--	--	--	7.51	7.88	7.68	56.49	35.34
Overidentification Test [p-value]	--	--	--	--	--	.924	.750	.753
Number of Observations	982	982	982	982	982	982	982	982

Notes: Entries are coefficients and standard errors from estimating equations (A.1) and (A.2) by weighted least squares and weighted two-stage least squares, respectively. The dependent variable in columns (1)–(3) is a county's share of Catholics, and that in columns (4)–(8) is a county's NSDAP vote share in the November elections of 1932. Heteroskedasticity robust standard errors are clustered by electoral district and reported in parentheses. The omitted category in Sectoral Composition of Workforce is Agriculture, and that in Occupational Composition is Helping Family Members. The set of Geographical Controls includes all geographical covariates shown in Table 2B, and Historical Controls includes the variables that Cantoni (2012) and Rubin (2014) have shown to be correlated with territorial lords' choices. In addition to the variables shown in the table, indicator variables for missing values on each covariate are also included in the regressions. See the Data Appendix for the precise definition and source of each variable.

Table A.2: Religious Differences in NSDAP Vote Shares, by Attitude of Catholic Priest in 1933

	Religious Difference in NSDAP Vote Share		
Attidude of Catholic Priest	May 1924	December 1924	March 1933
Villages with "Brown Priest" in 1933	-.064	-.034	-.203
	(.019)	(.013)	(.023)
Villages without "Brown Priest" in 1933	-.063	-.032	-.299
	(.013)	(.006)	(.020)
Chow Test for Equality of Coefficients [*p* -value]	.942	.909	.014

Notes: Entries are coefficients and standard errors on Percent Catholic from estimating equation (1) by weighted least squares for the parliamentary elections in May 1924, December 1924, and March 1933. Villages are said to have had a "brown priest" in 1933 if a priest listed in Spicer (2008) lived within a 10 kilometer radius. Heteroskedasticity robust standard errors are clustered by electoral district and reported in parentheses. To ensure comparability of results the set of covariates is the same as in Table 10. The last row displays *p* -values from a Chow test for equality of the coefficients for villages with and without a "brown priest." See the Data Appendix for the precise definition and source of each variable.

Table A.3: Factor Analysis of Proxy Variables for Catholics' Religiosity

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Uniqueness
Mass Attendance	.846	.356	-.180	.110	.113
Easter Communion	.879	.306	-.176	.088	.095
Religiously Mixed Marriages	-.905	.316	.106	.192	.033
Babies from Religiously Mixed Marriages	-.865	.476	.103	.008	.014
Out-of-Wedlock Births	-.470	-.625	-.091	.195	.343
Christenings	.908	-.269	.202	.057	.060
Church Burrials	.804	.098	.331	.062	.231

Notes: Entries are factor loadings and uniquenesses from factor analyzing the variables listed in the column on the left. We retain the first factor as our measure of Catholics' religiosity. The first four factors have eigenvalues of 4.75, 1.02, .24, and .10, respectively. But the first factor alone explains 79.6% of the variance in its components. See the Data Appendix for the precise definition and source of each variable.