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CESIFO WORKING PAPER NO. 5799
CATEGORY 2: PUBLIC CHOICE
MARCH 2016

ISSN 2364-1428

CESifo
Center for Economic Studies & Ifo Institute

CESifo *Working Paper No. 5799*

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Abstract

We show that migrating extremists shape political landscapes toward their ideology in the long run. We exploit the unexpected division of the state of Upper Austria into a US and a Soviet occupation zone after WWII. Zoning prompts large-scale Nazi migration to US occupied regions. Regions that witnessed a Nazi influx exhibit significantly higher voting shares for the right-wing Freedom Party of Austria (FPÖ) throughout the entire post-WWII period, but *not* before WWII. We can exclude other channels that may have affected post-war elections, including differences in US and Soviet denazification and occupation policies, bomb attacks, *Volksdeutsche* refugees and suppression by other political parties. We show that extremism is transmitted through family ties and local party branches. We find that the surnames of FPÖ local election candidates in 2015 in the former US zone are more prevalent in 1942 phonebook data (*Reichstelefonbuch*) of the former Soviet zone compared to other parties.

JEL-Codes: R230, D720, N440, Z130.

Keywords: political economy, migration, extremism, voting, geonomastics, Austria.

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This version: February 25, 2016

1. Introduction

Can an influx of political extremism shape a region in the long run? We show that Nazi migration in the aftermath of WWII still impacts right-wing voting in Austria. In doing so, we contribute to the recent literature that convincingly links past events and institutions to present socio-economic spatial patterns. The historical roots of present economic figures are well documented in Acemoglu et al. (2011), Dell (2010), Glaeser and Shleifer (2002), Hall and Jones (1999) or Hornbeck and Naidu (2014). Other studies examine how historical events affect cultural norms (Putnam 1993, Tabellini 2008 and 2010; for a general discussion see Spolaore and Wacziarg 2013). In developing countries, the missionary activities (Caicedo 2014, Nunn 2010), colonialization (Acemoglu et al. 2001) and slave trade (Nunn 2008, Nunn and Wantchekon 2011) of the past shape current cultural norms and attitudes toward trust. In Europe, current values, beliefs and attitudes toward trust and corruption have been shown to rely on events or institutions from decades or even centuries ago, e.g., medieval pogroms (Voigtländer and Voth 2012), the long-gone Habsburg Empire (Becker et al. 2016), Italian city states (Guiso et al. 2013), the Holocaust (Grosfeld et al. 2013) or the division and reunification of Germany (Alesina and Fuchs-Schündeln 2007, Brosig-Koch et al. 2011, Ockenfels and Weimann 1999).

In this paper, we show that Austrian regions that witnessed a Nazi influx after WWII exhibit significantly higher right-wing voting shares throughout the entire post-WWII period. We exploit the quasi-random assignment of occupation zones in the Austrian state of Upper Austria after WWII. Most parts of Upper Austria were initially liberated by US troops in May 1945. Military considerations on the part of the Soviet Union, however, allocated US liberated regions in Northern Upper Austria to a Soviet occupation zone. Figure 1 shows Upper Austria within the realized occupation zones in Austria from August 1945 to 1955. After rumors of this occupation re-assignment began to circulate, people fled the arrival of the Red Army for the US zone in the South (Leimlehner 1974). The US Office of Strategic Services (OSS) reported the mass exodus in the following way:

> *"On 2 July 1945 a rumor circulated in Linz that the Russians were to take over the area north of the Danube. That night people started crossing the Linz bridge into what was believed would be the future American zone. […] One MP officer estimates that 25,000 persons crossed over, but informant claims that 4,000–5,000 is a more accurate figure. Informant estimates that another 4,000–5,000 crossed on July 4. […] Two informants who made a trip to the area north of the Danube report that what appears to be a general exodus is in progress."*[1]

[1] Cited after Beer (1991, pp. 206-207).

Historians, political scientists and contemporaneous newspaper articles, however, indicate that primarily former Nazis migrate across the intra-Upper Austrian zone border (e.g., Hindinger 1968, Schuster 2004, Slapnicka 1986, Stiefel 1981; see also Section 3.2, and Table 9 in the Appendix). For example, Leimlehner (1974) states:

> *"[...] Nazis in particular feared being punished more severely by the Russians and took their belongings to southern Upper Austria."*[2]

The selection of the US zone by Nazi refugees yields a region characterized by a low density of Nazis (Soviet zone) and a region characterized by a high density of Nazis (US zone) within an otherwise historically, culturally, politically and economically homogeneous region. We investigate whether migrating Nazis changed right-wing voting in national elections. The high level of continuity in Austria's right-wing camp (Ignazi 2003, Luther 1997, Staeuber 1974) allows us to compare pre-WWII voting results to post-war elections. Upper Austria thus provides a unique setting to study the long-run impact of migrating extremists.

We apply a spatial regression discontinuity (RD) approach to identify regional differences in right-wing votes in national elections. We use the exogenously drawn zone border between US and Soviet occupied municipalities as the discontinuity threshold in our RD specification. Voting shares for the right-wing Freedom Party of Austria (FPÖ)[3] appear to be well suited as an indicator for extreme political attitudes because the post-war FPÖ is influenced by a strong faction of neo-fascist and neo-Nazi persuasion (Ignazi 2003, Luther 2000, Pelinka 2002, Staeuber 1974). Our RD results indicate a permanent and highly significant shift in right-wing voting in the former US zone after WWII. Seventy years after the Nazi influx and sixty years after the abolishment of the occupation zones, voting shares for right-wing parties at the threshold are still 37% higher in the former US zone compared to the former Soviet zone. By contrast, right-wing voting varies smoothly along the temporary zone border prior to WWII. Furthermore, we do not find geographical discontinuities for the other two main political parties in Austria, the social-democratic SPÖ and the conservative ÖVP, across the temporary zone border. Therefore, voting shares for moderate parties remain unaffected by migration and differ only slightly for nearly a century.

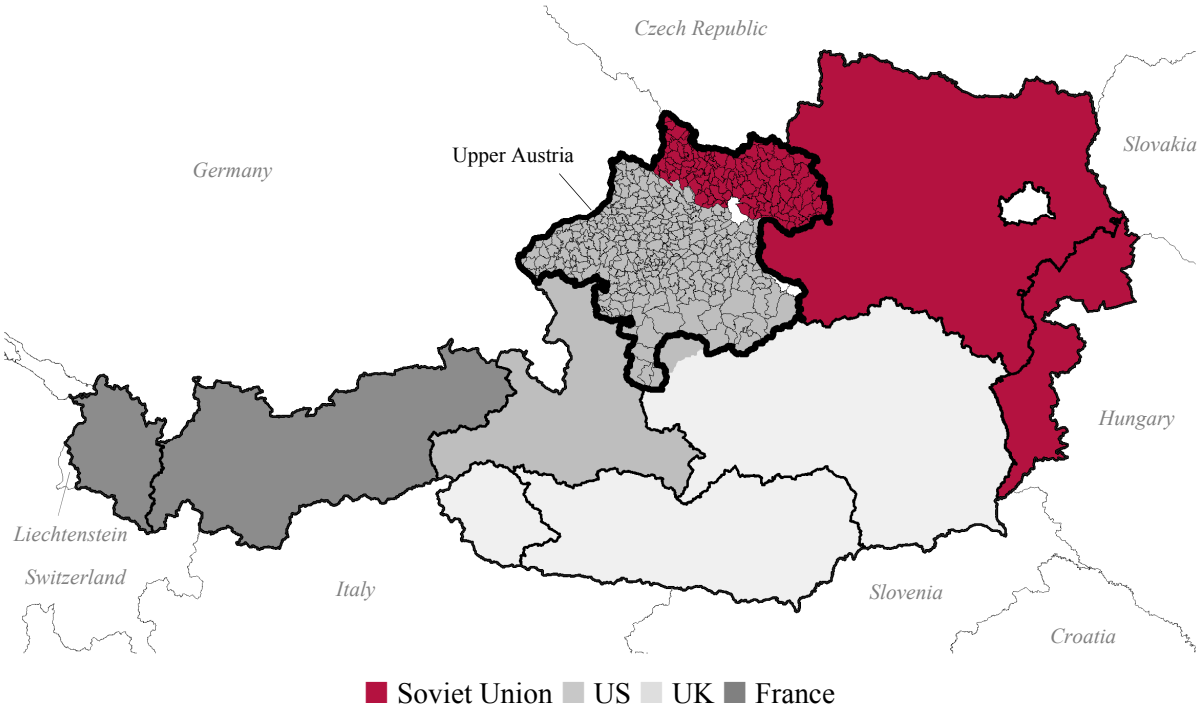
[2] Translation by the authors. The original text (in German language) is as follows: "*Insbesondere Nationalsozialisten fürchteten eine Bestrafung durch die Russen weit mehr und begaben sich mit ihrer Habe ins südliche Oberösterreich*" (Leimlehner 1974, p. 69).

[3] Within this paper, FPÖ (Freiheitliche Partei Österreich) denotes the entire right-wing camp in Austria since 1919. Right-wing parties in Austria include the following: Deutschnationale parties (before WWII), Verband der Unabhängigen (VdU), Bündnis Zukunft Österreich (BZÖ) and the Freedom Party of Austria (FPÖ) (after WWII). See Section 2 or the Appendix for a detailed description.

These results are robust for different RD polynomials, different regional subsamples and pseudo-border assignments.

We can exclude channels other than the Nazi influx that may have affected post-war elections. We find no explanatory power of *Volksdeutsche* refugees and expellees, Allied bombings during WWII, or tactical considerations of other parties. Furthermore, potential differences in the enforcement of denazification policies by the respective occupation force have no influence on the variation in FPÖ voting shares across the temporary zone border. Finally, we can exclude differences in the occupation policy of the Allies as an additional source of variation in right-wing votes. To reach this conclusion, we used a panel of data from US and Soviet occupied districts in Austria's capital of Vienna.

FIGURE 1. ALLIED OCCUPATION OF POST-WWII AUSTRIA, 1945–1955



Notes: This figure shows Austria and the four occupation zones from 1945 to 1955. The state of Upper Austria is highlighted with the boldest dark line. Black lines indicate state borders. Thin lines within Upper Austria depict municipal borders. The white areas within Austria indicate municipalities which were divided among the Allies. These are Austria's capital city Vienna, Upper Austria's capital city Linz and two small municipalities in the southwest of Upper Austria (Maria Neustift, Gaflenz). Maps of occupation plan proposals and the initial demarcation line at the end of WWII are provided in Figure 5 for Austria, and the municipal level for Upper Austria is shown in Figure 6.

We present evidence for two channels to explain persistent differences in right-wing votes across the former zone border. First, we corroborate previous findings that right-wing attitudes are inherited within families over generations (Avdeenko and Siedler 2016, Dohmen et al. 2012, Necker and Voskort 2014). We rely on *geonomastics* as a novel approach to trace back current right-wing affiliation to past migration patterns. We compare more than 17,000 candidates' surnames from municipal council elections in

Upper Austria in September 2015 with the pre-war spatial distribution of surnames based on phonebook entries from 1942 (*Reichstelefonbuch*). We find that the surnames of current FPÖ candidates in the former US zone are significantly more prevalent in the 1942 phonebook for regions that were occupied by the Soviets than the surnames of the candidates of other parties. Migrant clans from the former Soviet zone are thus more engaged in political activity in the populist right-wing party than in moderate political parties. We further document the impact of an early formation of a local FPÖ party branch on current FPÖ success. Municipalities where a local party branch was in place in 1949 still exhibit higher FPÖ voting shares in recent elections. Persistency is thus triggered by an individual channel (intergenerational transmission within families) and an institutional channel (early formation of a local party branch).

Our findings contribute to the literature as follows. First, we aim to present *causal* evidence for the historical roots of right-wing party voting. In recent decades, populist movements and right-wing parties all over Europe have gained increasing electoral support (Mudde 2013).[4] Well-established parties in power have been forced to make concessions in favor of the far right. Economists and political scientists have examined the determinants of populist right-wing voting behavior. Recent studies have identified cultural and economic aspects of immigration (Davis and Deole 2015, Dustmann and Preston 2007, Halla et al. 2012, Lubbers et al. 2002, Rydgren 2008, Scheve and Slaughter 2001) and economic shocks (Funke et al. 2015) as drivers of the increasing voting share of far right-wing parties. This paper, however, aims to identify the historical sources of right-wing voting. We show that an exogenous shock led to a selective migration pattern of political extremists, which substantially shaped voting behavior for more than seven decades. We thus conclude that regional voting behavior is not only a function of *current* economic and social circumstances but also a reflection of values that are inherited over generations. We therefore corroborate the literature on the intergenerational transmission of beliefs and attitudes (Avdeenko and Siedler (2016), Dohmen et al. 2012, Necker and Voskort 2014).

Second, we find strong evidence that migrating extremists shape their destination region in the long run. This goes far beyond previous studies, which show that migrants conserve their inherited cultural norms from their region of origin over generations (Alesina et al. 2013, Atkin 2016, Fisman and Miguel 2007),

[4] The most prominent examples are the United Kingdom Independence Party (UKIP) in the United Kingdom, the Front National (FN) in France, the Lega North (LN) in Italy, the People's Party of Switzerland (SVP) and the Freedom Party of Austria (FPÖ). However, the Netherlands, Belgium, Sweden, Denmark, Finland, Greece, Germany and many other European countries have also witnessed an increase in the voting shares of far right-wing parties in recent years.

but they do not substantially influence residents in their destination region.[5] The former zone border is still apparent in current election results although it divided a historically, culturally, politically and economically homogeneous region.

Third, our empirical setting allows us to observe the evolution of a causal effect over time. Previous studies use historical events as an exogenous identification assumption solely to estimate current geographic discrepancies in the cross-section (Dell 2010, Becker et al. 2016; for a general discussion see Nunn 2009). We can trace the effect of an exogenous shock on the political landscape over a period of nearly seven decades. We further show that spatial differences in extreme voting behavior increase or diminish depending on the political re-orientation of right-wing parties.

Fourth, this is the first study – to the best of our knowledge – that applies *geonomastics* in economics and political science to trace migration patterns. Geonomastics is the study of the geography and repartition of names (Cheshire et al. 2011, Shokhenmayer 2010). We collect the surnames of around 17,000 current party candidates in recent local elections and compare them with the historical pre-treatment distribution of surnames based on phonebook entries of the *Reichstelefonbuch* 1942. Geonomastic is thus a promising alternative when individual microdata are not available.

Last but not least, our study provides evidence for a direct link between former Nazis and NSDAP members and current right-wing voting in a Western democracy.

We will proceed as follows: In the next section, we give an overview of the political landscape in Austria with a special focus on the development of right-wing parties since 1919. Section 3 provides the historical background of the zoning of Upper Austria and the spatial sorting of Nazis after WWII. Section 4 introduces our data and identification strategy. Section 5 presents our spatial RD results and the respective robustness checks. Section 6 rules out channels other than the Nazi-influx that may influence right-wing voting. In Section 7, we explain the transmission channels for persistency. Finally, Section 8 offers concluding remarks.

[5] Dimant et al. (2015) find evidence that migrants form highly corrupt countries are able to increase the corruption level in their destination country. Related studies show that Cuban migrants affect criminal and corruption behavior in Florida (Larzelere 1988), Italian migrants in the nineteenth century established a powerful Mafia organization in the US (Varese 2011) and Lebanese immigrants increase the criminal rate in German cities (Albrecht 1997). In these studies, however, it remains unclear whether the observed effects are solely driven by migrants' behavior or whether migrants are able to affect residents' behavior generally.

2. Right-wing camp in Austrian politics

After the breakdown of the Habsburg Empire after WWI, Austria was traditionally divided into three political camps: Social Democrats, Catholic Conservatives and a right-wing camp (Ignazi 2003, Wandrszuka 1954). The right-wing camp in Austria was based on a pan-German ideology (*Deutschnationale*) before WWII. This ideology survived WWII and was prevalent in the formation of the post-WWII right-wing camp in Austria. According to Ignazi (2003), Knight (1992) and Luther (1997, 2000) there is a direct link between the pre-WWII right-wing *Deutschnationale* parties and the current Freedom Party of Austria (FPÖ).

In the interwar period, the so-called *Deutschnationale* parties constitute the right-wing camp. The *Deutschnationale* camp rejected the idea of an Austrian nation state and enforced accession to the German *Reich*. However, the right-wing camp split off into many branches. The divisions within the right-wing camp were pronounced in the debate regarding autocracy vs. democracy and the rivalry between workers and farmers (Burkert 1995, Dostal 1995, Jagschitz 1995). Within the right-wing camp, several new parties emerged and disappeared. Table 10 in the Appendix gives an overview of the *Deutschnationale* camp from the first national election in 1919 to the last democratic election prior to WWII in 1930. The Austrian branch of the National Socialist German Workers Party (NSDAP), "Hitler's movement" as it was called in Austria, was one of many parties that competed for votes in the *Deutschnationale* camp. The voting shares for the *Deutschnationale* camp were the largest in the direct aftermath of WWI and varied little afterward. From 1934 until the accession of Austria to Nazi Germany in 1938, an authoritarian fascist government came into power. During the autocratic period, no elections were held and *Deutschnationale* parties – especially the NSDAP – were banned. After the accession of Austria, however, the NSDAP was not only re-established but also the only permitted party in Austria. In 1945, approximately 13% of the Austrian population were officially Nazi affiliated (Stiefel 1981).

After WWII, the Allies entirely consolidated the political landscape in Austria. Denazification was implemented. The NSDAP was banned, and three democratic parties were re-founded in 1945: The social-democratic SPÖ, the conservative ÖVP, which was rooted in the former *catholic conservative* camp, and the communist party (KPÖ). Allied denazification excluded more than 535,000 former Nazis (former members and membership candidates of the NSDAP, SA, SS, NSKK and NSFK)[6] from the first

[6] The abbreviations are defined as follows: NSDAP: *Nationalsozialistische Deutsche Arbeiterpartei* (National Socialist German Workers Party); SA: *Sturmabteilung* (armed and uniformed branch of the NSDAP); SS: *Schutzstaffel* (the two major SS-branches are *Allgemeine-SS* (concerned with police and racial matters) and *Waffen-SS*

national election in 1945 (Stiefel 1981). Furthermore, the formation of any right-wing party was prohibited. Due to several amnesties that began in 1947, approximately 90% of formerly registered Nazis became eligible to vote in the national election in 1949. However, a fourth party was founded in 1949. The League of Independents (*Verband der Unabhängigen*, VdU) was formed by and for former Nazis, expellees and dissatisfied residents (Ignazi 2003, Luther 1997, Pelinka 2002, Rathkolb 1986, Staeuber 1974). In the national election in 1949, the VdU gained more than 11% of all votes in Austria; in Upper Austria, the voting share was almost twice as high as the national result (21 % of all votes). After a somehow more liberal but brief period, right-wing politicians took over the party leadership of the VdU. Several right-wing MPs publicly expressed their admiration for certain Nazi regime policies, e.g., family policy, child benefits and tax policies (Staeuber 1974). In the mid-1950s, the VdU lost electoral support. Internal disputes between the liberal and the right-wing faction emerged. The right-wing faction took advantage of the confusion and transferred large parts of the VdU to the newly founded Freedom Party of Austria (FPÖ). In its early years, the FPÖ was more of a national-right party than the former VdU had ever been (Luther 1997). Staeuber (1974) states that the FPÖ was led by the so-called "*Frontgeneration*" until the mid-1970s. Early FPÖ leaders played an active role as members of the NSDAP, the Nazi Army, the SA and the SS during WWII. The first two FPÖ leaders, Anton Reinthaller and Friedrich Peter, were both leading members of the NSDAP and the *Waffen*-SS. During WWII, Reinthaller acted as the NSDAP state secretary for food and agriculture, and Peter served as an officer in the *Waffen*-SS.

Throughout the 1950s and 1960s, the FPÖ played only a minor role in Austrian politics. A short period characterized by a more liberal party ideology led to a further erosion of its voting potential. As Knight (1992, p. 291) states, "sleeping dogs began to growl" when the FPÖ joined a coalition with the social-democratic SPÖ after 1983. Internal opposition grew. Under its charismatic leader Jörg Haider, the right-wing faction asserted more and more control. The coalition with the SPÖ was dissolved. Haider was elected as the party's leader, and he re-shifted the party toward the far right. From 1986 onward, the FPÖ gained more and more electoral support and ran right-wing populist campaigns (Luther 1997). Haider himself has never made any secret of his admiration for Nazi policies in the German *Reich* (Knight 1992). During the 1990s, Jörg Haider became the icon of right-wing populism across Europe.

(armed forces that consisted of combat units within the Nazi army)); NSKK: *Nationalsozialistische Kraftfahrkorp* (paramilitary sub-organization of the NSDAP with respect to motor vehicles); NSFK: *Nationalsozialistische Fliegerkorps* (paramilitary sub-organization of the NSDAP with respect to aviation).

After Haider's landslide victory in the 1999 national election, the conservative ÖVP formed a coalition with the FPÖ. International pressure and internal disputes forced Haider to withdraw his leader position within the party. Thereafter, the FPÖ voting share heavily decreased from nearly 27% in 1999 to 10% in the national election in 2002. Haider left the FPÖ after further internal disputes in 2005 and formed the Alliance for the Future of Austria (*Bündnis Zukunft Österreich*, BZÖ). The BZÖ was somehow considered to be more moderate but Haider's "traditional" FPÖ profile has scarcely been altered (Luther 2008, 2009). The FPÖ itself was led after 2005 by Heinz-Christian Strache, who re-shifted the party to the far right. Today, the FPÖ uses strong nationalistic and anti-immigration rhetoric. Right-wing votes are increasing once again in Austria. In the national elections of 2008 and 2013, the right-wing populist camp of FPÖ and BZÖ gained more than 28% and 24% of all votes.

3. Upper Austria after WWII

3.1 Occupation of Upper Austria (1945–1955)

The Austrian state of Upper Austria is located in the northeast of Austria. It shares a border with Germany and the Czech Republic (prior to 1993: Czechoslovakia). After WWII, Upper Austria was the only Austrian state (with the exception of the capital of Vienna) that was divided into a US and Soviet occupation zone. Figure 1 shows Upper Austria within the realized occupation zones in Austria from 1945 to 1955. In contrast to other occupation border lines, the division of Upper Austria does not follow any pre-existing historical border.

The negotiations regarding the post-war future of Austria began in October 1943. The Foreign Ministers of the major Allies (the US, Soviet Union, and the UK) agreed in the Moscow Declaration to liberate Austria from Nazi Germany and to restore an Austrian state within the national boundaries of 1937 (Erickson 1950, Stourzh 2004). The Allies also further agreed to temporarily split Austria into different occupation zones.

The Allies submitted different zoning proposals, which are documented in the Appendix (Figure 5). The UK was the first to propose an occupation plan in August 1944; the plan comprised a UK and Soviet zone. Other occupation plans considered the US (November 1944) and France (January 1945) as additional post-war occupation powers. The division of Upper Austria, however, was never considered among the zoning proposals. The first occupation plan of August 1944 allocated Upper Austria to the Soviet zone. Thereafter, all further occupation plans assigned Upper Austria to a zone controlled by the US (Erickson 1950, Slapnicka 1986).

The ultimate and surprising decision to divide Upper Austria in 1945 was not based on local issues and needs. Completely unexpectedly, the final and secretly negotiated division plan, which was officially published in July 1945, divided the region of Upper Austria along the Danube River. The division was related neither to Austrian politics nor to economic considerations (Erickson 1950); it followed a clear tactical military consideration by the Soviet Union. The Soviets requested the Northern part of Upper Austria to isolate Czechoslovakia from the US zone (Slapnicka 1986).[7] The US agreed to the Soviet proposal in the final agreement on July 9, 1945 (Erickson 1950). As an offset, the Soviets accepted some US claims related to the zoning of Vienna. As a result, Upper Austria became the only Austrian state that was divided into a US and Soviet occupation zone. Districts in the north of the Danube River were assigned to the Soviets, and the southern parts became part of the US zone. In addition, the capital city of Linz was divided along the Danube River. Due to geographical constraints, two smaller municipalities in southwestern Upper Austria (Maria Neustift, Gaflenz) were also divided into a US and Soviet occupied part. All other Austrian occupation zone borders with the exception of Upper Austria followed historical and pre-existing borders.

After the announcement of the occupation plan on July 9, 1945, US troops withdrew from parts of northern Upper Austria. Until August 8, the Red Army took entire control over northern Upper Austria. During the US withdrawal and prior to the Soviet invasion, migration across the assigned intra-Upper Austrian zone border was somehow possible (Beer 1991). Afterwards, crossing the zone borders was severely restricted. In October 1945, crossing the zone border became possible with a permit and an identity card. Border controls between the Soviet and the US zone were in force until September 9, 1953 (Slapnicka 1986).[8] Upper Austria remain divided until the Austrian State Treaty (*Staatsvertrag*) was signed in late 1955. Thereafter, Austria was fully restored as a sovereign state. The occupation forces left Austria within a couple of months.

3.2 Nazi migration in the aftermath of WWII

The US zone in Upper Austria experienced two major Nazi immigration waves. The first wave was caused by the liberation of Austria in the last weeks of WWII. The second wave occurred in July and early August in 1945 after formerly US occupied regions in northern Upper Austria were re-assigned to the Soviets.

[7] The Soviet proposal was issued to the Allies in April 1945. However, this plan was not provided to the public until the end of zonings negotiation in July 1945.
[8] Border controls between the Western occupation zones were abolished in 1947.

The first wave of Nazi immigration was a direct result of the arrival of the Red Army in eastern parts of Austria including Vienna (Hindinger 1968, Stiefel 1981). Rumors circulated that the Red Army planned to kill NSDAP members after the liberation of Austria. A commitment by Red Army Marshall Fjodor Iwanowitsch Tolbuchin in late March 1945 that ordinary members of the NSDAP would not be punished harshly (Hindinger 1968) was not perceived as credible. Fearing the advancing Red Army, Nazis from eastern parts of Austria fled toward the West. A broad selection of anecdotal evidence of Nazis fleeing for the West is offered in the Appendix (Table 9). Escapes reached a peak in the last months of WWII, especially in March and April 1945. By May 10, Austria was entirely liberated from Nazi occupation (Iber et al. 2008). The front line where the Red and the US armies met in May 1945 roughly corresponded with the eastern external border of Upper Austria (see the left-hand map in Figure 6 in the Appendix).

During WWII, Upper Austria was considered to be a safe haven for former Nazis; this remained true until July 1945. Note that all occupation plans issued after August 1944 allocated all of Upper Austria to the US zone. Thus, during the final weeks of WWII, parts of the Nazi Army fled from Vienna and Lower Austria toward Upper Austria (Hindinger 1968). For example, the military combat unit *Heeresgruppe Süd* escaped the advancing Red Army beyond the River Enns in Upper Austria hoping that they would be overrun by the US rather than the Red Army. In addition, NSDAP members from eastern parts of Austria escaped the advancing Red Army and fled to the West. For example, the NSDAP leader of Vienna, Hans Dörfler, fled to Upper Austria in April 1945 escorted by approximately 400 Nazi fellows (Seliger 2010). Most of these Nazi refugees never returned to their home region even after the end of the occupation period in 1955. For example, about one-third of former Nazis on the local council in Vienna stayed (and died) in southern and western regions of Austria (Seliger 2010).[9]

The second wave of (Nazi) migration was prompted by the surprising division of Upper Austria into a US and Soviet occupation zone. First, rumors that the Russians were seeking to take over northern Upper Austria circulated on July 2, 1945 in Linz (Beer 1991). At this time, most of northern Upper Austria was still controlled by the US. Until the withdrawal of the US army between July 27 and August 3 and the takeover by the Red Army until August 8, 1945 (see Figure 6 in the Appendix), people were relatively free to migrate toward the South (Leimlehner 1974). The US Office of Strategic Services (OSS) estimated that 25,000 people crossed the planned zone border in Linz within a single day (Beer 1991). Other

[9] Although Nazis preferred the US occupation zone (Iber et al. 2008), there were other Austrian territories that were liberated by the Western Allies that faced a Nazi influx at the end of the war.

estimates of the OSS document indicated 4,000 to 5,000 refugees within one day. Slapnicka (1986) states that approximately 900 dwellings became vacant in the Soviet occupied part of Linz (Urfahr) alone. However, broad anecdotal evidence indicate that this population flow was biased towards former Nazis (see Table 9 in the Appendix for an overview).[10] In particular, former members of the NSDAP and other Nazi organizations were in favor of the US zone because they feared harsher punishment and persecution within the Soviet zone (Hindinger 1968, Stiefel 1981). According to Hindinger (1968), most fleeing families were affiliated with the former Nazi party. Schuster (2004) concludes that Nazi elites who feared being exposed to Soviet punishment left the regions that were assigned to the Soviets in Upper Austria. Return migration after the autumn of 1945 took place on a moderate scale, but it was even less likely for Nazis (Stiefel 1981). In comparison to the Soviet zone in Upper Austria, Schuster (2004) and Stiefel (1981) show a dramatically higher share of Nazi elites (the so called "*Belastete*") in the US zone in relation to the overall number of registered Nazis according to the "Act against Nazi activities" (*Nationalistengesetz*).[11] Table 1 depicts this unequal regional distribution of Nazis. In relation to total population, the US zone hosted 53% more registered Nazis and nearly three times as many Nazi elites than the Soviet zone. Schuster (2004) and Stiefel (1981) indicate that this finding is driven by Nazi migration to the US zone.

TABLE 1. POPULATION AND REGISTERED NAZIS IN UPPER AUSTRIA, 1947

	Population	*Registered Nazis per 1,000 capita*	
		Total	*Nazi elites ("Belastete")*
	I	*II*	*III*
US zone (including Linz-South)	903,167	86.57	26.40
Soviet zone (including Linz-North)	216,191	56.70	9.36
Total	1,119,358	80.80	23.11
Ratio US zone/Soviet zone		*153%*	*282%*

Notes: This table shows the population of the Soviet and the US zone of Upper Austria in late 1946 (Column I). Columns II and III show the total number of registered Nazis per 1,000 capita and the subgroup of Nazi elites ("*Belastete*") per 1,000 capita in 1947. All figures include the occupied parts of Linz. Source: Schuster (2004).

[10] Note that in addition to the influx of Nazis, the US zone in Upper Austria was a favored place for internal and external refugees and expellees in general. Population size increased enormously during the first month after WWII. Slapnicka (1986) estimated that the resident population in May 1945 was 950,000 and that it hosted about 1 to 1.2 million refugees and 150,000 Allied soldiers. However, most of these temporary residents left Upper Austria within a couple of months. We control for the potential channel of refugees on FPÖ voting shares in Section 6.

[11] According to the denazification law (*Nationalistengesetz*), "*Belastete*" were mainly former Nazis that were affiliated with the NSDAP prior to the accession of Austria to Nazi Germany. Therefore, the *Nationalistengesetz* distinguished between Nazis of conviction (old members) and NSDAP members who joined the party due to economic reasons or due to social pressure after the accession (new members). "*Belastete*" account for approximately 10% of all registered Nazis after WWII (Schuster 2004, Stiefel 1986).

We conclude that Upper Austria in August 1945 is the Austrian state where we can identify regions with a high density of Nazis (US occupation zone) and a low density of Nazis (Soviet occupation zone). In the following sections, we present evidence that the post-war Nazi migration to southern Upper Austria has an impact on right-wing voting to the present day.

4. Empirical strategy

4.1 Identification strategy

We test whether post-war Nazi migration impacts the spatial distribution of right-wing voting outcomes. We employ a spatial regression discontinuity (RD) approach (e. g., Becker et al. 2016, Egger and Lassmann 2015, Dell 2010, Schumann 2014, von Ehrlich and Seidel 2015). This allows us to identify geographical discontinuities in voting shares for right-wing parties between US and Soviet occupied municipalities in Upper Austria. In our study, all identifying assumptions for the spatial RD approach are met. First, the location of the intra-state zone border was exogenous. It neither coincides with any historical border nor was it foreseeable before the official announcement of the occupation plan on July 9, 1945. Second, our units of observation (municipalities) are not able to manipulate the assignment variable (Lee and Lemieux 2010). Municipalities were not able to self-select into occupation zones. Upper Austria was zoned by the Allies without consideration for Austrian internal requests (Erickson 1950). RD is thus a powerful approach to estimate the (local average) treatment effect at the occupation zone border. RD controls for unobservable heterogeneity across treated and non-treated units that are arbitrarily close to each other (Imbens and Lemieux 2008). In general, the RD approach is able to address spatial clustering. For example, informal and mostly unobservable regional institutions may differ among municipalities that are located far away from each other but less between direct neighbors.

Our baseline model uses the distance to the temporary intra-Upper Austrian zone border as a single-dimensional running function. We estimate a cross-section RD for all national elections between 1919 and 2013 as follows:

$$s_i = \alpha + \beta US_i + [\gamma_1 d_i + \gamma_2 (US_i \times d_i) + \gamma_3 (d_i \times d_i) + \gamma_3 (US_i \times d_i \times d_i)] + X_i' \delta + \varepsilon_i \qquad (1)$$

s_i denotes a party's voting share in national elections in municipality i. US_i is a dummy variable that equals one if a municipality is located in the US zone and zero otherwise (Soviet zone). The term in square brackets represents the RD polynomial that controls for smooth functions of geographic location. Herein, d_i measures the geographical distance in kilometers to the temporary intra-Upper Austrian zone

border. In our baseline specification in equation (1), we allow for a quadratic form of our running variable. We also run several robustness checks where we allow for other polynomial orders as well as interactions with longitude and latitude as proposed by Dell (2010). Our treatment effect at the threshold is captured by coefficient β. Hence, β can be interpreted as the shift in a party's voting share as a result of marginally crossing the temporary zone border from the Soviet to the US zone. X_i is a vector of municipal control variables. α is a constant. ε_i is the error term. We apply standard errors robust to heteroscedasticity (Huber-White sandwich standard errors; see Huber, 1967; White, 1980).

4.2 Data

We use municipal-level data for all democratic national elections in Austria. As we outlined above (see Section 2), the FPÖ gave former Nazis a new political home after WWII. We thus focus on voting shares for the FPÖ (and its predecessors). We collect pre- and post-WWII political economy data from several historical sources. Municipal-level data on the outcomes of all 26 national elections between 1919 and 2013 have been obtained from official electoral publications.[12] We code a party as "right-wing" according to Dostal (1995), Burkert (1995) and Jagschitz (1995) for the interwar period and Luther (1997) and Mudde (2013) for the post-WWII period.[13] We collect municipal-level data regarding socio-demographics (population, number of foreigners[14], religion) and the economic structure of residents from official census publications of the Statistical Office of Austria for the years 1934, 1951 and 2011.[15] We end up with a full set of covariates on the municipal level close to the three elections of main interest. These include the national election in 1930 (the last democratic election prior to the autocratic regime take over in 1934 and the accession to Nazi-Germany in 1938), the first post-WWII election in 1949 where the FPÖ was permitted to compete, and the most recent national election in 2013. To make results comparable, we follow the mergers of municipalities over time.[16] All data has been transformed to the 2015 territorial status.

Table 11 in the Appendix reports descriptive statistics for the national elections in 1930, 1949 and 2013 and the related covariates of the full sample. We report the voting shares on the municipal level for the

[12] We are highly indebted to the Archives of Upper Austria for providing raw data from the DORIS (Digitales Oberösterreichisches Raum-Informations-System) database on request.
[13] In particular for the interwar period, a distinction between the right-wing and national-conservative camp is not always applicable. Our results, however, do not differ under different definitions of right-wing.
[14] The number of foreigners is not available for the year 1934 at the municipal level. We use the ratio of present population to resident population instead.
[15] Data sources used include the following: *Die Ergebnisse der Österreichischen Völkszählung vom 22. März 1934, Heft 5* for 1934, *Ergebnisse der Volkszählung vom 1. Juni 1951 nach Gemeinden, Heft 8* for 1951 and *Ein Blick auf die Gemeinde* for 2011. Due to a lack of more recent data, we use 2001 data of the religious denomination.
[16] The number of municipalities decreased from 515 in the 1930s to 442 in 2015.

three main political camps in Austria, the Social Democrats (SPÖ), the Catholic Conservatives (ÖVP) and the right-wing camp, referred to as FPÖ. Throughout the 20th century, the Conservatives were the leading political power in Upper Austria, although their power has eroded in the last decades. However, the right-wing camp has always been strong in Upper Austria. *Deutschnationale* parties received more than 25% of votes in 1930 and more than 26% in the most recent national elections in 2013. Voting shares for the right-wing camp decreased in the mid-1950s and continued to do so until the mid-1980s. We show the evolution of the right-wing voting shares in Upper Austria for all national elections since 1919 in Table 10 in the Appendix.

In Section 7, we employ additional data. We collected the names of more than 17,000 candidates that ran for municipal council elections in September 2015 as well as phonebook entries from the *Reichstelefonbuch* 1942. We also collect data on airstrike campaigns during WWII and locations of refugee camps. We explain the data in the respective sections in more detail.

4.3 Covariates

To draw strong implications from our RD identification, control variables should either be continuous at the RD threshold for the pre-treatment period or should not vary over time in the case of a discontinuity in the interwar period. If these assumptions hold, the average treatment effect on right-wing voting after WWII should provide a causal interpretation. Table 2 shows the variation in covariates at the temporary zone border. In the pre-treatment period, most variables are continuous at the threshold. These are municipal population size, share of foreigners, share of Jews as an indicator of potential antisemitism, all variables concerning the economic structure of residents and time invariant variables such as distance to external borders or municipal population density. We find discontinuities in the share of Protestants and in the share of settlement areas as a portion of the overall area and terrain classification (low and hilly altitudes) throughout the whole period. However, the discontinuities are time invariant and may thus hardly explain a potential disruption in right-wing party votes after WWII. Only the share of foreigners varies discontinuously at the demarcation line after WWII, but this is not so in 1930 and 2013. The share of foreigners was higher in the US zone because of the many external refugees. We will discuss the disruption in the share of foreigners as a potential channel of differences in the voting shares for right-wing parties in more detail later on. Lastly, voter turnout is also somehow discontinuous at the threshold in the national election in 1949, whereas the rate of unemployment is continuous (data available only for 2013).

TABLE 2. CONTINUITY OF COVARIATES AT THE TEMPORARY ZONE BORDER

	RD		
	1930	*1949*	*2013*
	I	*II*	*III*
Socio-demographics			
Population	0.15	0.46	0.58
	(0.32)	(0.42)	(0.84)
Share of foreigners	1.17	10.12***	1.22
	(3.81)	(1.67)	(0.88)
Share of protestants	9.66***	9.74***	6.95***
	(2.47)	(2.19)	(1.89)
Share of Jews	0.01	0.00	-0.01
	(0.03)	(0.00)	(0.01)
Economic structure			
Share of industry	-4.80	-2.22	0.94
	(3.02)	(2.60)	(1.68)
Share of trade	-0.22	-2.02	4.94***
	(1.41)	(1.63)	(1.20)
Share of public administration	0.87	0.18	-0.32
	(0.59)	(0.56)	(0.53)
Share of other services	0.01	0.67	-2.07
	(0.41)	(0.51)	(2.47)
Geography			
Share of settlement area of overall area	11.12**	11.25**	11.33**
	(4.71)	(4.70)	(4.70)
Distance to external border	-4.43	-4.39	-4.43
	(3.36)	(3.35)	(3.35)
Thinly-populated area	0.15	0.15	0.15
	(0.13)	(0.13)	(0.13)
Low and hilly altitudes	0.27**	0.26*	0.26*
	(0.14)	(0.14)	(0.14)
Further variables			
Share of agriculture	3.77	1.43	0.66
	(5.53)	(5.18)	(0.98)
Voter turnout	0.00	2.02*	0.47
	(1.22)	(1.05)	(1.14)
Rate of unemployment	n/a	n/a	0.74
			(0.46)

Notes: This table gives the RD results (quadratic polynomial for distance to the temporary zone border) for different covariates as the dependent variable. Covariates regarding socio-demographics and economic structure are obtained from the national census in 1934 (for 1930 election), 1951 (1949) and 2011 (2013). Time-invariant geography covariates change slightly due to differences in the number of observations. The rate of unemployment at the municipal level is not available for the decades around WWII. Significance levels: *** 0.01, ** 0.05, * 0.10 (Robust Standard Errors).

5. Results

5.1 Baseline

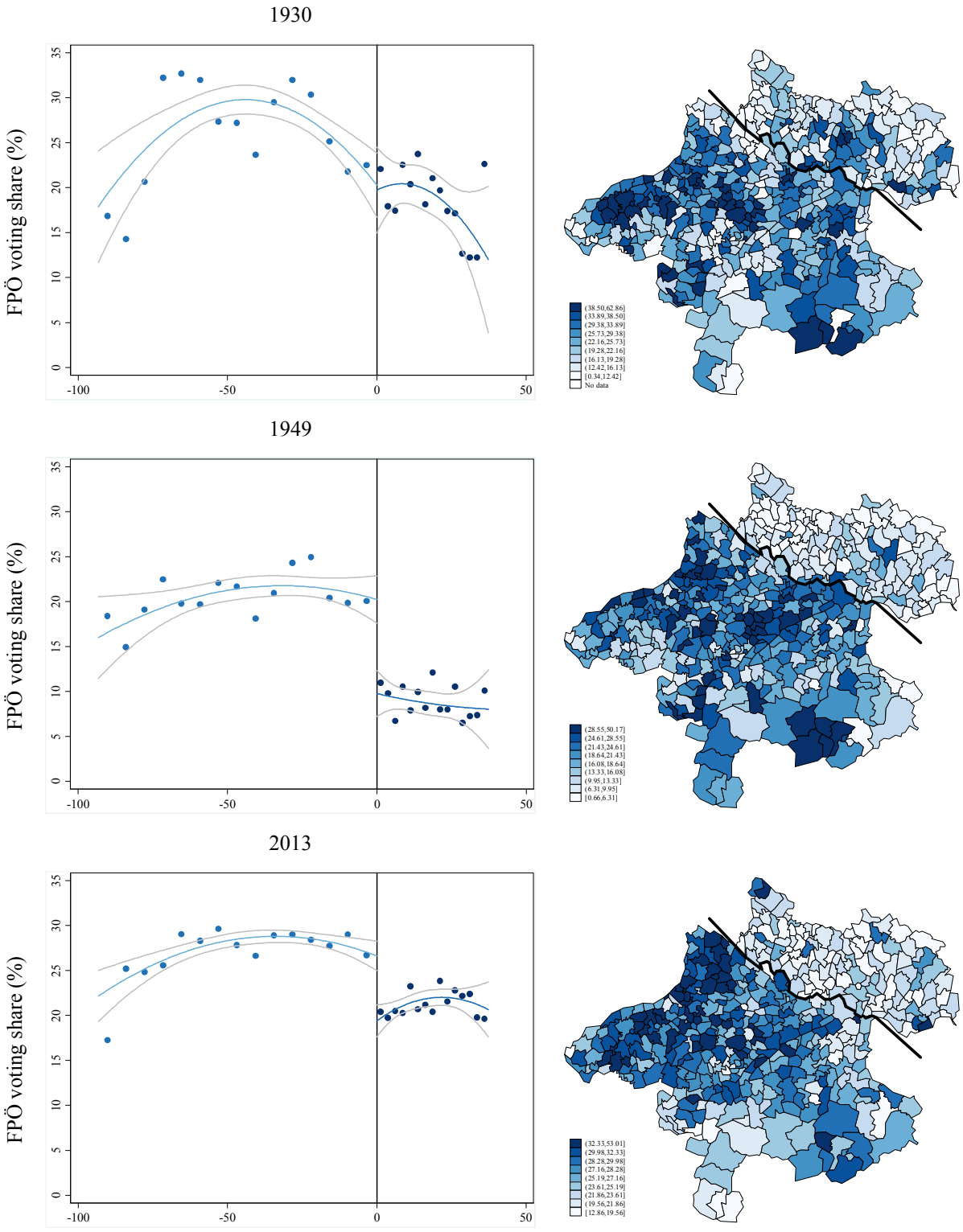
We inspect RD graphs before addressing regression outputs. Figure 2 depicts the geography of right-wing electoral outcomes in Upper Austria at the municipal level (maps on the right-hand side) and the corresponding RD graphs on the left-hand side. We plot municipalities' distances to the temporary intra-Upper Austrian zone border against FPÖ voting shares, and we include a quadratic polynomial fit. Negative (positive) distances are used for municipalities temporarily occupied by the US (Soviet Union). The upper graphs show the voting shares for FPÖ in the last democratic national election before the autocratic regime and the accession to Nazi-Germany and WWII in 1930. Center graphs show the first

national election with FPÖ participation after WWII in 1949. The bottom graphs the most recent national election in 2013. Southern Upper Austria (i.e., the later US zone) already appears to be more affiliated with right-wing ideology in the pre-WWII period. However, we observe a smooth decline in FPÖ electoral outcomes from the Southwest to the Northeast in the 1930 election with no discontinuity at the later zone border. By contrast, the results of the 1949 and even the 2013 national election show a clear and significant discontinuity at the temporary zone border line between the US and Soviet zone in post-WWII Austria.

These results are fully in line with the anecdotal reports of large-scale Nazi migration after WWII. The US zone appeared to be a safe haven for Nazis. Marginally crossing the zone border from the Northern to the Southern side of the Danube River may not matter in terms of geographical distance but indeed matters in terms of expected occupation policy. A Nazi who migrated from the Soviet-occupied North to the US-occupied South lowered right-wing voting shares in Northern Upper Austria and increased voting shares in the Southern zone.

We create further RD graphics for the other two main political camps in Austria, the Social Democrats (SPÖ) and the Catholic Conservatives (ÖVP) (see Figure 7 and Figure 8 in the Appendix). None of the national elections in 1930, 1949 or 2013 yield a significant structural break in SPÖ and ÖVP voting shares at the temporary zone border. This indicates that the randomly drawn occupation zones trigger right-wing votes but do not affect voting behavior in favor of other parties. Remarkably, post-war Nazi migration patterns seem to be apparent in most recent elections. Later, we will discuss several channels that may explain this persistency.

FIGURE 2. FPÖ VOTING SHARES IN NATIONAL ELECTIONS IN 1930, 1949 AND 2013



Notes: These figures depict municipal-level voting shares for the FPÖ (1930: *Deutschnationale* parties, 1949: *VdU*) in Upper Austria in the national elections of 1930, 1949 and 2013. The right-hand side gives the spatial distribution of the voting shares for the 1945 to 1955 zone border (bold dark line). All maps show the municipal territorial status for the year 2015. Figures on the left show the municipal mean FPÖ voting share (blue line) based on a quadratic polynomial fit (Equation 1) that depends on the municipal distance in kilometers to the temporary zone border. Negative (positive) distances indicate municipal distances to the temporary zone border line for US (SU) occupied municipalities. Gray lines indicate 95% confidence bands. For illustrative reasons, the number of bins equals 15 for both occupation zones.

We now turn to our regression tables. Table 3 presents RD estimations with a quadratic polynomial fit for the national elections in 1930, 1949 and 2013. Columns I to III cover the RD plots of Figure 2. The results read as follows: FPÖ voting shares vary smoothly at the temporary zone border in the interwar period as indicated by the insignificant treatment dummy US (Column I). After WWII, the treatment effect is highly statistically significant. Switching from a border municipality in the Soviet zone to its adjacent municipality in the US zone increases FPÖ votes by more than 10 percentage points in 1949 (Column II) and more than 7 percentage points in 2013 (Column III). Columns IV to VI show that all results hold when we add controls for the socio-economic characteristics of municipal residents. Columns VII to IX add time-invariant geographic controls. All findings remain robust under these specifications. Adding covariates to our model somehow reduces the magnitude of our treatment effect. However, right-wing voting shares vary smoothly in the national election in 1930, whereas we find a sharp and highly significant discontinuity in right-wing voting at the threshold for the national election of 1949 as well as for the most recent election in 2013.

Several covariates show differences in right-wing voting. The share of foreigners is found to be a crucial determinant for right-wing voting as shown in Dustmann and Preston (2007), Halla et al. (2012) or Rydgren (2008). The massive increase in the share of foreigners due to refugees and expellees in the US zone after WWII may have triggered an increase in voting shares for right-wing parties. We find a correlation between FPÖ voting and the municipal share of foreigners for the national elections in 1949 and in 2013 (Column V and VI). When we add geographic controls, however, the correlation becomes statistically insignificant for the 1949 election and remains weakly significant for 2013. In any instance, the discontinuity for FPÖ votes at the temporary zone border remains highly statistically significant even when we control for the share of foreigners.[17] Second, the differences in the economic structure of municipalities may affect FPÖ voting. We find that a higher employment share in the trade sector seems favor the FPÖ, in particular after WWII.[18]

[17] The share of foreigners exhibits a spatial discontinuity along the zone border in the census of 1951 (see Table 2). Nonetheless, our findings for the FPÖ voting share remain robust.

[18] Note that the share of agriculture gives the base category in our model. We also include the municipal-level unemployment rate for the 2013 election (historical unemployment data are not available). The results remain unchanged and are available upon request.

TABLE 3. BASELINE RESULTS

	Dependent variable: FPÖ voting share								
	RD			*RD (controls included)*					
	1930	*1949*	*2013*	*1930*	*1949*	*2013*	*1930*	*1949*	*2013*
	I	*II*	*III*	*IV*	*V*	*VI*	*VII*	*VIII*	*IX*
US	0.56	10.48***	7.24***	-1.04	9.09***	6.16***	-3.81	8.02***	5.02***
	(2.94)	(1.81)	(1.12)	(2.94)	(1.72)	(1.22)	(2.85)	(1.76)	(1.28)
Distance	0.17	-0.08	0.24**	0.13	0.08	0.21*	0.24	0.14	0.23**
	(0.34)	(0.19)	(0.1)	(0.32)	(0.17)	(0.1)	(0.31)	(0.18)	(0.11)
US × Distance	-0.60*	-0.02	-0.37***	-0.64*	-0.24	-0.29**	-0.86***	-0.49**	-0.46***
	(0.35)	(0.2)	(0.11)	(0.34)	(0.18)	(0.12)	(0.33)	(0.19)	(0.12)
Distance × Distance	-0.01	0.00	-0.01**	-0.01	0.00	-0.01**	-0.01	0.00	-0.01***
	(0.01)	(0.01)	(0.00)	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
US × Distance × Distance	0.01	0.00	0.00	0.00	0.00	0.01*	0.00	0.00	0.00
	(0.01)	(0.01)	(0.00)	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Population				-0.49**	-0.15	0.02	-0.40**	0.00	0.03
				(0.23)	(0.14)	(0.04)	(0.17)	(0.13)	(0.03)
Share of foreigners				0.00	0.12**	0.16**	0.00	0.06	0.14*
				(0.02)	(0.06)	(0.07)	(0.02)	(0.05)	(0.07)
Share of protestants				0.09	0.06	-0.06*	0.07	0.09**	0.00
				(0.06)	(0.04)	(0.03)	(0.06)	(0.04)	(0.03)
Share of Jews				-9.24	6.59	7.48*	-5.54	1.72	5.42
				(5.63)	(4.72)	(4.45)	(6.08)	(4.42)	(4.51)
Share of industry				-0.13**	0.02	0.23***	-0.06	0.06*	0.25***
				(0.06)	(0.04)	(0.03)	(0.06)	(0.04)	(0.04)
Share of trade				0.12	0.25**	0.14***	0.19	0.35***	0.18***
				(0.16)	(0.11)	(0.05)	(0.15)	(0.12)	(0.05)
Share of public administration				0.31	0.68***	0.25	0.45	0.51**	0.31
				(0.28)	(0.23)	(0.22)	(0.28)	(0.22)	(0.2)
Share of other services				1.18***	0.11	-0.25***	1.05**	0.23	-0.27***
				(0.44)	(0.23)	(0.05)	(0.41)	(0.24)	(0.05)
Constant	19.72***	9.75***	19.38***	20.64***	4.86***	17.24***	6.70	2.86	18.30***
	(2.50)	(1.42)	(0.71)	(3.29)	(1.69)	(1.48)	(4.13)	(2.44)	(2.11)
Geography controls	No	No	No	No	No	No	Yes	Yes	Yes
Obs.	433	438	439	433	438	439	433	438	439
Adj. R²	0.16	0.38	0.33	0.21	0.44	0.44	0.27	0.48	0.50
Akaike	3,244	2,969	2,572	3,231	2,939	2,507	3,208	2,912	2,468

Notes: This table gives the RD results (quadratic polynomial for distance to the temporary zone border) for the national elections in 1930, 1949 and 2013. The municipal FPÖ voting share serves as the dependent variable. Columns I–III show the basic RD results without controls, Columns IV–VI include population characteristics of municipal residents, Columns VII–IX add geographic controls. Geography controls: Share of settlement area of overall area, Distance to external border, Thinly-populated area, Low and hilly altitudes. Significance levels: *** 0.01, ** 0.05, * 0.10 (Robust Standard Errors).

5.2 Evolution of the treatment effect

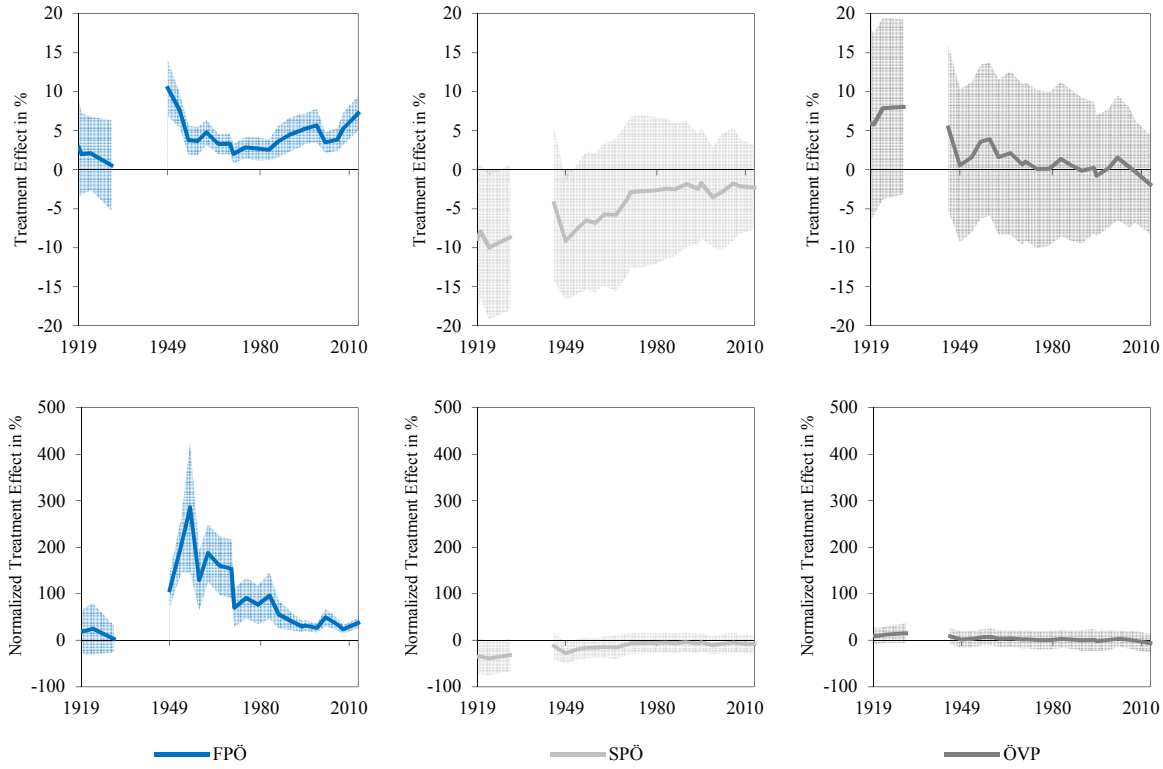
We show that the temporary zone border in Upper Austria leads to a disruption in right-wing votes in the 1949 election and in the most recent election in 2013. In contrast, votes for the social-democratic SPÖ and conservative ÖVP do not exhibit a discontinuity at the temporary zone border (Figure 7 and Figure 8 in the Appendix). To underpin this asymmetrical finding, we estimate our RD baseline model without controls for the three main Austrian parties FPÖ, SPÖ and ÖVP for all 26 democratic national elections between 1919 and 2013.[19] Figure 3 shows the evolution of the treatment effect for the three

[19] The 1927 election has to be dropped because *Deutschnationale* and the Conservatives have a common electoral list.

main parties of Austria. The upper graphs give the "raw" treatment effect β and the respective confidence band as revealed for the FPÖ in Figure 2 or Table 3 (coefficient denoted by US). These graphs show US-Soviet zone border differences in party voting shares. Non pre-WWII elections show statistically significant differences in FPÖ voting across the later zone border. By contrast, the FPÖ voting share is disruptive at the zone border throughout the entire post-WWII period. Note that the U-shaped pattern of border differentials is mainly triggered by the weak FPÖ election performance between the 1960s and the mid-1980s. SPÖ and ÖVP voting shares vary smoothly at the temporary zone border for the entire period of observation. None of the treatment effect coefficients are statistically significant at the 5 % level.

The lower graphs plot a "normalized" treatment effect. We normalize voting shares by setting the distance to the temporary zone border to zero ($d = 0$). According to Equation (1), only the constant α and the treatment effect β remain. In our RD setting, α has a meaningful interpretation. It measures the average voting share of a border municipality in the non-treatment region (Soviet zone). Correspondingly, $(\alpha + \beta)$ measures the voting share of an average border municipality in the treated region (US zone). When we divide β by α, we obtain the normalized treatment effect, which shows the *relative* increase in voting shares by marginally crossing the temporary zone border from a Soviet to an adjacent US municipality. For example, the 1949 normalized treatment effect can be derived as the ratio of the constant and the US zone dummy: $10.48/9.75 = 107.40\%$ (see Column II in Table 3). Municipal FPÖ voting shares were more than twice as high in the US occupied border municipalities than in adjacent Soviet municipalities.

FIGURE 3. EVOLUTION OF THE TREATMENT EFFECT



Notes: The figures show the voting shares for 4 pre-WWII and 21 post-WWII elections. The upper three graphics depict the evolution of the RD treatment effect in municipal voting shares for the three main Austrian Parties SPÖ (light gray, Social Democrats), ÖVP (dark gray, Conservative, 1919–1930: *Christlichsoziale*) and FPÖ (blue, populist right-wing, 1919–1930: *Deutschnationale* parties, 1949–1955: *VdU*). The lower graphs show the normalized treatment effect that is the increase in relative municipal-level voting shares by marginally crossing the temporary zone border. See text for a detailed description. The shaded areas indicate 95% confidence bands for the three parties, respectively (Robust Standard Errors).

Both the evolution of the treatment effect and the normalized treatment effect underpin our findings. We clearly observe a spatial discontinuity for FPÖ voting after WWII, whereas there is no significant structural break for the social-democratic SPÖ and conservative ÖVP. The normalized treatment effects for the FPÖ indicate that right-wing voting shares in US occupied municipalities were more than twice as high from 1949 until the 1970s in comparison to adjacent Soviet occupied municipalities. Interestingly, the largest normalized treatment effect is shown in the national election in 1956. In this election, the newly founded FPÖ competed as the remaining right-wing branch of the dissolved VdU (Luther 1997, Pelinka 2002). We thus observe that spatial differences in right-wing votes partially depend on the political re-orientation of right-wing parties.

Differences in FPÖ voting shares persist to the present day. In the most recent national election in 2013, the *relative* FPÖ voting share in former US occupied municipalities is still 37 % larger than in former adjacent Soviet occupied municipalities. Impressively, variation in party votes at the temporary zone border for SPÖ and ÖVP remain fairly unchanged during the entire observation period; SPÖ and ÖVP

geographic clusters in voting shares across the temporary zone border "survive" from the interwar period until the present day, whereas they do not for the FPÖ.

5.3 Robustness checks

We conduct several robustness checks. We test different polynomial fits, regional subsamples, and pseudo-occupation assignments as well as an alternative definition of the pre-WWII right-wing camp. Rows B to O in Table 4 present the results of these specifications in comparison to our baseline results in Row A. Columns I to III show robustness checks without controls, Columns IV to VI include the full set of municipal control variables as presented in Table 3, Columns VII to IX. Figure 9 in the Appendix provides a graphical impression for each of our robustness checks.

We focus on the treatment effect β only. All other coefficients have been left out for reasons of simplicity.[20] In Rows B to E, we employ different polynomial fits for voting shares of the FPÖ. Rows B and C report the treatment effects for a linear and a cubic RD specification. The results change only marginally with respect to our quadratic baseline specification. However, we find a significant pre-treatment effect in the simple linear RD for the national election in 1930 (Row B, Column I). This result shows that the later US zone has been a traditional stronghold of *Deutschnationale* parties. The treatment effect, however, becomes insignificant when we include covariates (Column IV). Rows D and E show that all results are robust under two latitude-longitude RD specifications proposed by Dell (2010). Furthermore, in Rows F to H, we check different regional bandwidths for the temporary zone border. We reduce the maximum distance to the temporary zone border to 60, 40 and 20 kilometers, respectively. All treatment effects remain robust even to very narrow bandwidths. Rows I to K report treatment effects for pseudo-borders, which we apply instead of the realized zone border. We apply the following pseudo-border assignments: an alphabetical order of municipalities' names (Row I), a pseudo southwest to northeast division along the highways (*Westautobahn-Mühlviertelautobahn*) (Row J) and a pseudo division of Upper Austria 20 kilometers to the south of the realized zone border (Row K). Only the 1930 RD regression for the pseudo division (Row J, Column IV) gives a significant result, which indicates the exceptional FPÖ stronghold in the district of Wels located directly on the pseudo zone border. We further restrict our data set to regional subsamples by longitude (Rows L to N). We use the most western and most eastern points of the zone border within Upper Austria. These points are represented by two mu-

[20] Detailed regression outputs provided upon request.

nicipalities, Mauthausen (East) and Engelhartszell (West). The results show no difference with our baseline results. Finally, we employ a stricter definition of the FPÖ camp in 1930 by excluding the *Heimatblock* from the FPÖ camp (Row O).[21] The pre-treatment effect remains fairly unchanged.

TABLE 4. ROBUSTNESS CHECKS

		Dependent variable: FPÖ voting share					
		RD			*RD (controls included)*		
		1930	*1949*	*2013*	*1930*	*1949*	*2013*
		I	*II*	*III*	*IV*	*V*	*VI*
Baseline	*A*	0.56	10.48***	7.24***	-3.81	8.02***	5.02***
		(2.94)	(1.81)	(1.12)	(2.85)	(1.76)	(1.28)
RD specification							
Linear	*B*	4.54**	12.40***	8.47***	0.79	11.70***	7.03***
		(2.01)	(1.19)	(0.80)	(1.98)	(1.24)	(0.95)
Cubic	*C*	3.44	8.22***	7.74***	-0.42	7.02***	5.19***
		(4.17)	(2.48)	(1.44)	(3.81)	(2.39)	(1.50)
Longitude-Latitude (linear, interacted)	*D*	0.70	11.14***	8.17***	2.31	12.44***	6.05***
		(3.53)	(1.89)	(1.27)	(3.34)	(1.79)	(1.31)
Longitude-Latitude (quadratic, interact.)	*E*	-1.79	9.76***	7.32***	-2.23	8.90***	4.21***
		(2.45)	(1.49)	(0.92)	(2.48)	(1.53)	(1.03)
Maximum distance to zone border							
60 km	*F*	1.04	9.39***	7.96***	-1.98	6.52***	5.42***
		(3.12)	(1.95)	(1.24)	(2.92)	(1.86)	(1.43)
40 km	*G*	-3.05	6.99***	6.74***	-4.62	4.80**	3.65**
		(3.43)	(2.22)	(1.38)	(3.19)	(2.13)	(1.49)
20 km	*H*	0.63	8.27***	4.70***	-2.30	6.39**	3.28*
		(4.56)	(2.98)	(1.73)	(4.44)	(3.16)	(1.84)
Pseudo borders							
Alphabetical assignment	*I*	0.39	-0.29	0.14	0.29	0.24	-0.25
		(1.12)	(0.93)	(0.55)	(1.06)	(0.82)	(0.44)
South-west to north-east division	*J*	-3.74	-1.65	0.13	-4.78*	-2.39	1.29
		(2.39)	(2.03)	(1.09)	(2.48)	(1.67)	(0.87)
Shift of zone border 20 km to south	*K*	5.49	2.42	2.04	3.57	1.15	2.17
		(3.71)	(3.10)	(2.30)	(3.82)	(2.78)	(1.85)
Subsamples							
Without east of Mauthausen	*L*	-0.23	9.23***	6.78***	-4.54	6.72***	4.47***
		(3.22)	(1.87)	(1.16)	(3.12)	(1.87)	(1.32)
Without west of Engelhartszell	*M*	2.08	10.85***	6.64***	-2.05	8.35***	4.17***
		(3.23)	(2.04)	(1.07)	(2.97)	(2.00)	(1.22)
Between Mauthausen and Engelhartszell	*N*	1.24	9.57***	6.15***	-2.11	6.88***	3.85***
		(3.49)	(2.10)	(1.11)	(3.27)	(2.11)	(1.33)
Parties forming the FPÖ camp							
Stricter FPÖ definition	*O*	0.33	10.48***	7.24***	-2.76	8.02***	5.02***
		(2.30)	(1.81)	(1.12)	(2.39)	(1.76)	(1.28)
Socio-demographic controls		No	No	No	Yes	Yes	Yes
Economic structure controls		No	No	No	Yes	Yes	Yes
Geography controls		No	No	No	Yes	Yes	Yes

Notes: This table shows robustness checks based on Columns I–III (no controls) and VI–IX (full set of controls) in Table 3. Row A presents the baseline results in Table 3 (quadratic RD polynomial for distance to the temporary zone border, full data set). Rows B and C present the linear and cubic RD polynomial orders; Rows D–E show the results of a two-dimensional polynomial RD proposed by Dell (2010). In Rows F–H, the maximum distance to the temporary zone border is reduced to 60, 40 and 20 kilometers. Pseudo treatments are employed in Rows I–K (alphabetical order of municipalities' names, southwest to northeast division along the highways *Westautobahn-Mühlviertelautobahn*, shift in the temporary zone border 20 kilometers to the south). Rows L–N show the results for regional subsamples in the longitude space, excluding municipalities in the west and/or east of the longitude of the temporary zone border. In Row O, the 1930 stricter definition of the FPÖ camp applies (see Appendix, Table 10). See Figure 9 for geographical illustrations. Significance levels: *** 0.01, ** 0.05, * 0.10 (Robust Standard Errors).

[21] The *Heimatblock* bridges the right-wing camp and the conservative camp in the national election of 1930.

6. Other channels

We show that regions that experienced a Nazi influx exhibit significantly higher FPÖ voting shares in all national elections after WWII. In the following, we exclude channels other than Nazi migration whose shock to the US zone differed from the shock to the Soviet zone until the national election in 1949. We test the following alternative channels that might have triggered FPÖ votes in the post-war period: Potential regional differences in denazification, Allied aerial bombing during the war as an indicator for both, suffering during the war and domiciled armament industries, the rapidly increasing share of foreigners (*Volksdeutsche* refugees), tactical considerations of the established parties and further unobservable differences in the policies of the respective occupation forces. We test whether these channels have explanatory power for our findings. We thus include proxies for all channels as additional controls for 1949 FPÖ voting shares (see Sections 6.1 to 6.4). This strategy provides two meaningful insights: On the one hand, we can see whether a certain channel affects the treatment effect at the temporary zone border. On the other hand, the coefficient of the covariate itself indicates whether the observed channel comes with differences in FPÖ voting shares. Table 5 shows the effects of different additional covariates on FPÖ voting shares in the national election in 1949. A geographical representation of these additional covariates is given in Figure 10 in the Appendix. We further attempt to rule out unobservable differences in Allied occupation policy by comparing US and Soviet occupied districts in the Austria's capital Vienna (see Section 6.5 later on).

TABLE 5. CONTROL FOR OTHER CHANNELS FOR 1949 NATIONAL ELECTIONS (RD)

	Dependent variable: FPÖ voting share								
	Baseline	*Denazification*		*Volksdeutsche refugees*		*Bomb attacks*			*ÖVP "terrorism"*
	I	*II*	*III*	*IV*	*V*	*VI*	*VII*	*VIII*	*IX*
US	8.02***	9.06***	9.12***	8.02***	8.02***	7.77***	7.53***	7.84***	8.18***
	(1.76)	(1.83)	(1.59)	(1.76)	(1.77)	(1.76)	(1.75)	(1.74)	(1.73)
Electorate growth 1945–1949		0.19***							
		(0.06)							
FPÖ voting share 1930			0.29***						
			(0.04)						
Refugee camp 1949				0.59					
				(1.06)					
Population growth 1939–1951					0.26				
					(0.3)				
Bomb attacks (narrow)						-1.80			
						(1.17)			
Bomb attacks (broad)							-1.86**		
							(0.92)		
Bomb attacks (neighbors)								-1.38	
								(1.21)	
ÖVP voting share 1945									-0.06
									(0.04)
Socio-demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Economic structure controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geography controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	438	438	433	438	438	438	438	438	438
Pseudo R²	0.48	0.51	0.58	0.48	0.48	0.48	0.48	0.48	0.48
Akaike	2,912.43	2,891.93	2,794.60	2,914.14	2,913.86	2,912.46	2,911.12	2,913.38	2,911.49

Notes: This table gives the RD results with a quadratic polynomial for distance to the temporary zone border for the national election in 1949. The municipal FPÖ voting share serves as the dependent variable. All equations include a constant and a full set of control variables as introduced in Table 3. Column I shows our baseline RD result (see Table 3). Columns II–IX add measures for other possible channels of persistency separately. A geographical representation of each additional covariate is given in Figure 10 in the Appendix. Significance levels: *** 0.01, ** 0.05, * 0.10 (Robust Standard Errors).

6.1 Denazification

After WWII, former Nazis were registered according to the "Act against Nazi activities" (*Nationalistengesetz*). The target of the *Nationalistengesetz* was to denazify society, but in particular the public administration.[22] For example, registered Nazis lost the right to vote in the national election in 1945 and faced higher tax rates (Knight 1986).[23] The VdU as the predecessor of the FPÖ tailored its electoral campaigns in 1949 to this disenfranchised group of registered Nazis. If the intensity in the registration of Nazis differed between occupation zones in Upper Austria, this in turn may have caused voting dif-

[22] According to Knight (2007), denazification is narrowly defined as a political purge or more broadly as an attempt to change the values of post-Nazi society.

[23] According to this act, members and membership candidates of the NSDAP and members of the *Schutzstaffel* (SS), *Sturmabteilung* (SA), *Kraftfahrerkorps* (NSKK) and *Fliegerkorps* (NSFK) had to be registered (Schuster 2004). Note that the Act against Nazi activities had severe consequences only for members of the NSDAP who were employed in public services (administration, teacher) as opposed to ordinary members, whereas the majority of registered Nazis only lost their right to vote in the national election in 1945 and were partially levied by higher tax rates (Stiefel 1981).

ferentials across the temporary zone border. Regional differences in registered Nazis may arise in particular as a result of the accuracy of the execution of denazification policies by the respective occupation force (Stiefel 1981, 1986).[24] Traditional strongholds of the *Deutschnationale* camp in southern Upper Austria may also explain differences in the density of registered Nazis. For whatever reason, the number of denazified people may have differed across the temporary zone border.

There are no municipal level registration data available. We thus apply two proxies to test whether differences in Nazi registration between the US and Soviet zone affect FPÖ votes in the national election of 1949. First, we rely on the municipal increase in the electorate from the national election in 1945 to the election in 1949. In Upper Austria, approximately 90,000 registered Nazis were excluded from the first national election after WWII in 1945 but *not* from the election in 1949 (Schuster 2004, Stiefel 1981). From 1947 onward, several amnesty laws rehabilitated non-elite NSDAP members (ordinary party members). By 1949, approximately 92% of formerly registered Nazis in Upper Austria were rehabilitated and given their voting rights back (Stiefel 1981). Amnesty led to a massive increase in the electorate for the national election in 1949.[25] Second, we use the municipal FPÖ voting share in the last national election prior to WWII as an indicator for regional strongholds of the *Deutschnationale.* FPÖ voting shares in 1930 approximately indicate the pre-WWII regional distribution of Nazis, as *Deutschnationale* might have been more likely to join the NSDAP than members of other interwar parties.

We test the impact of denazification on FPÖ voting shares in 1949. Column II in Table 5 shows the correlation of an increase in the electorate with FPÖ voting shares. An increase in the electorate is accompanied by a statistically significant higher FPÖ voting share. Therefore, a formerly registered electorate might be more in favor of the FPÖ as has been mentioned by political scientists so far (Ignazi 2003, Knight 1992, Luther 2000). However, controlling for the change in the electorate does not affect our RD treatment effect. We thus conclude that the change in electorate may have triggered FPÖ voting share differences *within* but not *between* US and Soviet occupied municipalities. We also include lagged FPÖ voting shares as a second approximation of the regional differences in registered Nazis. Column III depicts similar results compared to the increase in electorate. In sum, measures of the number of

[24] Registration of Nazis was best executed within the US zone and was handled less accurately in the Soviet zone (Stiefel 1981). The Soviets transferred the registration of Nazis to their trustworthy local forces, i.e., the Communist Party of Austria (KPÖ), which was part of the national government. However, the KPÖ was too overstrained by the task to register Nazis accurately (Stiefel 1986).
[25] The electorate increased not only by virtue of the number of former Nazis (approximately 90,000) but also naturalization (20,020), returned soldiers and young voters (Stiefel 1981).

registered residents are associated with higher right-wing voting shares but cannot explain spatial differences in FPÖ voting shares across the temporary zone border.

6.2 Volksdeutsche refugees

FPÖ votes might have been triggered not only by a Nazi influx but by post-war migration in general. The US occupation zone in Upper Austria was a favored destination for internal and external refugees and expellees during and in the direct aftermath of WWII, whereas the Soviet zone was a place of emigration (see Section 3.2). Intra-Austrian migrants, *Volksdeutsche* refugees from Hungary and Romania or national Germans (*Reichsdeutsche*), expelled from Bohemia and Moravia, might have put some pressure on local residents because they compete for affordable housing and scarce jobs.[26] This in turn might have increased right-wing voting (Dustman and Preston 2007) and thus FPÖ voting share differentials across the temporary zone border.

To address the issue of refugees and expellees, we collected data on the location of refugee camps in 1949 from Slapnicka (1986). In Column IV in Table 5, we show the correlation of a refugee camp and the voting share for the FPÖ in 1949. A dummy variable indicates whether a municipality hosted a refugee camp in 1949 ($yes = 1; no = 0$). The existence of a refugee camp does not show a significant effect on the FPÖ voting share, and it does not change the treatment effect. The same holds true when we regress FPÖ voting shares on municipal population growth between 1939 and 1951[27] as a proxy for refugee settlement (Column V in Table 5). Although population growth rates were substantial between 1939 and 1951, population growth neither influences our treatment effect nor demonstrates any statistical power in explaining FPÖ voting. These results have strong implications because we are able to exclude a general effect of a shift in population due to refugees and migrants on FPÖ voting shares. Migration *in general* thus does not explain FPÖ voting outcomes in 1949.

6.3 Allied bombings

Regions in the US occupation zone were more exposed to airstrikes by the US and the Royal Airforce during the last two years of WWII than were the later Soviet-occupied regions.[28] According to Ulrich (1978), the state of Upper Austria became an airstrike target mainly because of the armament industries

[26] Most external refugees, however, left Upper Austria for Germany within the year 1945 (Slapnicka 1986).
[27] Population data on the municipal level are not available for 1949. We thus use data based on the census in 1951.
[28] The first US bombing campaign against Austria took place on August 13, 1943. However, airstrikes against Austrian targets became more frequent after June 1944 (Ulrich 1978).

located in and around the cities of Linz, Steyr and Wels and because of its railroad infrastructure.[29] Bombed regions proxy for armament industry workforce during WWII. Bombings during WWII therefore cover not only war destruction but also control for a higher density of profiteers from the Nazi war industry during WWII. After WWII, bombed municipalities not only may have suffered from a housing shortage but also from sharply decreasing incomes when production of war equipment stopped. Furthermore, people who were exposed to Allied bombing attacks might have been opposed to occupation by a former enemy. Thus, bombing victims may have favored the FPÖ as the party strongly opposed the SPÖ-ÖVP-KPÖ government, which collaborated with the occupation forces (Staeuber 1974).

We identify municipalities that have been exposed to bombings to test the effects of Allied bombing on FPÖ votes. Columns VI to VIII in Table 5 show the coefficients of a dummy variable that equals 1 when the municipality was exposed to bomb attacks and zero otherwise. We use three measures of the intensity of Allied bombing attacks based on Ulrich (1978). Column VI shows the effects of a dummy for municipalities that are located in the regions that were the most affected ones – from Steyr to Linz and Wels and including Attnang-Puchheim. Column VII includes municipalities bordering these most affected regions. Finally, Column VIII shows the effects of bomb attacks for the cities of Steyr, Linz, Wels and Attnang-Puchheim and their direct surrounding municipalities. Figure 10 in the Appendix shows the location of the respective municipalities. Our findings suggest that the Allied bombings do not affect our RD treatment effect, nor do they prompt higher FPÖ voting shares. On the contrary, municipalities that were more exposed to Allied bombing have lower FPÖ voting shares, which are, in the broad specification (Column VII), statistically significant.

6.4 ÖVP "terrorism"

An additional possible channel for regional differences in right-wing votes is the tactical considerations of other parties. Knight (1992) reports that the two major parties, the social-democratic SPÖ and the conservative ÖVP, tried to integrate former Nazis into their organization. The ÖVP, however, attempted to hinder the formation of local FPÖ branches in 1949 as ÖVP politicians feared a fragmentation of the conservative camp and a consequent loss of votes. The co-founder of the VdU, the predecessor of the FPÖ, Viktor Reimann, reported massive obstructions, which he called "ÖVP terrorism" (Reimann 1980). In many municipalities, the ÖVP attempted to hinder the formation of FPÖ local party branches.

[29] In terms of destroyed houses, killed and injured people and total damages, Upper Austria suffered less than Vienna, Lower Austria and Styria but more than other West Austrian states (Ulrich 1978).

To address potential "ÖVP terrorism", we include ÖVP voting shares in the first post-WWII election in 1945 as an additional covariate. We hypothesize that the stronger the local ÖVP, the higher the degree of pressure against the formation of a FPÖ local party branch. The Soviet occupied regions in Upper Austria have been a traditional stronghold of the ÖVP. Hence, successful "ÖVP terrorism" may have weakened the success of the FPÖ, especially in Northern Upper Austria. The results of our estimation, however, indicate that the relative strength of the ÖVP neither influences the treatment effect nor right-wing voting in general (Column IX in Table 5). We conclude that "ÖVP terrorism" plays a negligible role in explaining regional differences in FPÖ voting.

6.5 Differences in occupation policy

Potential influences of further differences in the occupation policies of the Allies are difficult to identify. They are either unobservable – e.g., psychological pressure on local politicians who wanted to run for the FPÖ in national or local elections[30] – or their influence on election outcomes is somehow unclear.[31] Nevertheless, differences in occupation policy may cause differences in voting shares for the FPÖ between the US and Soviet zone.

To isolate differences in occupation policy from Nazi migration effects, we investigate national election outcomes in US and Soviet occupied districts in Vienna, the capital of Austria. As in the case of Berlin, Vienna was divided among the four Allies throughout the entire occupation period. Studying Vienna provides a counterpart to Upper Austria with the same occupational treatment (regional differences in unobservable policies by the respective Allies) but without differences in the regional density of Nazis. Vienna was freed and temporarily occupied for a few months by the Red Army. Nazis fled the advancing Red Army in the last weeks of WWII and its direct aftermath and left Vienna without returning (Seliger 2010). We also find no anecdotal evidence of a specific sorting of Nazis in Vienna in favor of US districts, whereas we do in the case of Upper Austria. In sum, the density of former Nazis, in particular Nazi elites, was relatively low in both the US and Soviet occupied districts of Vienna. We thus argue

[30] According to Mueller (2005), the Soviet occupation forces, however, did not attempt to control FPÖ activities before its electoral victory in 1949. Quite the contrary, the Soviet occupation force supported the VdU in the Soviet zone, hoping to weaken the established parties.

[31] Most importantly, the US provided better nutrition and economic aid after the direct aftermath of WWII. Later, the European Reconstruction Program (ERP), which was launched in 1948, favored regions that were occupied by the Western Allies (Haas 2007, Hofbauer 1992). According to Bader (1962), the election in 1949 was a test for the ruling coalition government also with respect to the ERP. Therefore, better economic conditions in the south of Upper Austria should have favored the ÖVP or SPÖ rather than the FPÖ.

that potential differences in FPÖ voting shares between the US and Soviet occupied districts of Vienna in the national election in 1949 give the isolated effect of unobservable policies by the respective Ally.

We compare the shift in FPÖ voting shares for the national election in 1949 to the last democratic election prior to WWII. We set out separate estimations for both districts in Vienna as well as for municipalities in Upper Austria. We estimate the following Difference-in-Difference model:

$$s_{it} = \alpha + \beta US_i + \delta PostWWII_t + \gamma(US_i \times PostWWII)_t + \varepsilon_{it} \quad (4)$$

s_{it} is the voting share for right-wing parties in national elections in 1930 and 1949. US_i is a dummy that equals one for a district (Vienna) or a municipality (Upper Austria) occupied by the US. $PostWWII_t$ is a dummy that equals one for the national election in 1949 and zero for the election in 1930. γ measures the interaction of the two dummies and is the coefficient of interest. The coefficient γ thus indicates whether US occupied regions experience a shift in FPÖ voting shares after WWII. α is a constant. ε_{it} is the error term.

Table 6 shows the Difference-in-Difference results for six US and five Soviet occupied districts in Vienna (Column I) and 75 municipalities along the zone border in Upper Austria (Column II).[32] The interaction term is small in size and insignificant for Vienna. FPÖ voting in Vienna is independent of the respective occupation force. By contrast, we find the interaction term to be positive and highly statistically significant for Upper Austria.[33] Differences-in-Differences estimations thus indicate no significant separate occupation policy effect. In conclusion, we can rule out differences in unobservable occupational policies as a driver for FPÖ voting differences after WWII. This finding provides strong evidence that higher voting shares in favor of right-wing parties in the US zone in Upper Austria did not originate from different (unobservable) occupation policies. We conclude that the anecdotally reported influx of Nazis into the US zone in Upper Austria (and the resulting differences in the regional density of Nazis) is the channel that led to an increase in right-wing votes in the US zone after WWII.

[32] We restrict our municipality sample in Upper Austria to municipalities that are located within 10 kilometers of the temporary zone border line. Thus, the municipalities are located approximately within the same great circle distance to the zone border as the districts in Vienna.

[33] Note that the Difference-in-Difference estimator yields a similar treatment effect compared to our RD specification.

TABLE 6. CONTROL FOR DIFFERENCES IN OCCUPATION POLICY IN VIENNA AND UPPER AUSTRIA

	Dependent variable: FPÖ voting share	
	Vienna	*Upper Austria*
	11 districts (max. 10 km to intra-Viennese border)	*75 municipalities (max. 10 km to temporary zone border)*
	I	*II*
US	6.53	1.64
	(3.88)	(2.11)
PostWWII	-7.84*	-10.54***
	(3.80)	(1.69)
US × PostWWII	-1.81	8.52***
	(4.26)	(2.52)
Constant	13.48***	19.64***
	(3.51)	(1.46)
Obs.	22	150
Adj. R²	0.60	0.30

Notes: This table shows the results of two Difference-in-Difference estimations using the 1930 and 1949 FPÖ voting share as the dependent variable. The model in Column I comprises the six US and five Soviet occupied districts of Vienna. The model in Column II uses the 75 municipalities of Upper Austria, which are located at a maximum distance of 10 km from the intra-Upper Austrian zone border (see Figure 11 in the Appendix for a graphical illustration). The dummy US equals one (zero) if a district or municipality is part of the US (Soviet) zone, and PostWWII equals one (zero) for the national elections in 1949 (1930). US × PostWWII is the interaction term. Significance levels: *** 0.01, ** 0.05, * 0.10 (Robust standard errors).

7. Explaining persistency

We show that FPÖ voting shares differ substantially in the former US zone in comparison to the former Soviet zone for the entire post-war period. We are also able to exclude other potential factors beside the influx of Nazis that might trigger these results. In the following, we discuss several explanations for the remarkable persistency of FPÖ voting differentials between former US and Soviet occupied regions. We present evidence for two channels: intergenerational transmission and institutions. We show that right-wing attitudes have been inherited within families over generations. We further document the impact of an early formation of a local FPÖ party branch on subsequent spatial differences in right-wing voting.

7.1 Intergenerational transmission

Recent studies show that political beliefs and attitudes are inherited over generations (Dohmen et al. 2012, Necker and Voskort 2014). Avdeenko and Siedler (2016) find an even stronger intergenerational transmission for right-wing beliefs and attitudes compared to more moderate ones. Based on these findings, we hypothesize that the initial regional differences in Nazi (elite) density in August 1945 impact both the FPÖ electorate and FPÖ partisans. If migrated FPÖ affiliates transmitted their values to the next generation, and this generation to the next generation, the regional voting pattern may survive for decades. Austrian party members themselves mention ideology and family tradition as the main reason for their party membership (Mueller 1994).

We rely on the technique of *geonomastics* to overcome the lack of FPÖ-related microdata. Geonomastics is the analysis of the geographic distribution of names using statistical characteristics such as frequency, density and spatial clustering (Shokhenmayer 2010). Surnames offer detailed insight into the long- and short-term dynamics of migration and residential mobility (Cheshire et al. 2011). This holds for intra-country studies (Cheshire et al. 2010) as well as for international comparisons (Cheshire et al. 2011). Given the hypothesis of an intergenerational transmission, we presume that the Nazi influx after WWII should still be visible in the distribution of surnames of current FPÖ partisans in former US occupied municipalities. Current FPÖ partisans in southern Upper Austria should exhibit a higher propensity for a "typical" northern Upper Austrian surname than other parties.

We collect pre-treatment surnames and current partisan names from two sources. First, we use phone book data for the German *Reich*. Totaling more than 6,800 pages, the *Reichstelefonbuch* from 1942 includes more than 2.6 million entries. In 1942, neither the end of the war nor the existence or shape of occupation zones could have been anticipated. Furthermore, the front line was far away from Austria. Thus, the 1942 spatial distribution of surnames covers the pre-migration status at its best. We extract all surname entries for the latter US and Soviet zone in Upper Austria separately. We end up with more than 5,300 surnames from the *Reichstelefonbuch* of 1942. Second, we collect surnames of candidates running for the municipal council elections in Upper Austria in September 2015. We consult the website of all Upper Austrian municipalities and digitalize the official published list of all candidates. 228 out of 439 municipalities provided a digital list of local candidates, each of which was published only a few weeks prior to the municipal council elections in September 2015.[34] We collect more than 17,000 candidates from FPÖ, conservative ÖVP and social-democratic SPÖ who competed in the municipal council election in September 2015.

We compare the frequency of surnames of current party candidates to the spatial distribution of surnames in 1942. We hypothesize that current FPÖ candidates in the former US zone are more likely than candidates from other parties to have a surname that is listed in the 1942 phonebook of the former Soviet zone. If this hypothesis holds, it would provide a link between migration towards the US zone and current political FPÖ affiliation. We use two score measures to test the sensitivity of our findings. The first measure is the *Representation Score.* To obtain this score, we count how often the surname of every

[34] The list of candidates covers the municipalities of all 16 Upper Austrian districts. We do not collect candidates from Linz due to the division of Linz during the occupation period. The mean t-tests for municipalities that are included in our sample and those municipalities without an online published list of candidates show no difference in FPÖ, ÖVP or SPÖ voting shares (see Table 12 in the Appendix).

candidate j ($j = 1,2, \dots, J_R$) from region R appears in the *Reichstelefonbuch* 1942 of the *other* region $\bar{R}$. We derive the *Representation Score* ($RepScore_R$) as follows:

$$RepScore_R = \frac{1}{J_R} \sum_{j=1}^{J_R} M_{j,\bar{R}} \tag{2}$$

$M_{j,\bar{R}}$ describes the number of cross-regional surname matches for candidate j. We divide the sum of cross-regional surname matches by the number of party candidates J_R in Region R to obtain our *Representation Score*. This score measures how often the surname of a randomly chosen candidate of a certain party appears in the *Reichstelefonbuch* 1942 in the other region.

Our second measure gives the probability that a randomly chosen candidate's surname from region R appears *at least once* in the *Reichstelefonbuch* 1942 in the other region $\bar{R}$. The *Probability Score* for region R ($ProbSore_R$) is given by

$$ProbScore_R = \frac{1}{J_R} \sum_{j=1}^{J_R} \min[\, M_{j,\bar{R}}\, , 1] \tag{3}$$

where $M_{j,\bar{R}}$ again denotes the number of cross-regional surname matches of an individual candidate j in 2015 from region R with surname entries in the 1942 *Reichstelefonbuch* in the other region $\bar{R}$. However, the $\min[\ \cdot\ ]$ function censors the individual matches at unity. Again, we divide the sum of the censored surname matches by the number of party candidates J_R in Region R. Comparing two different measures allows us to address the adverse effects of very common surnames. Think of a surname that appears frequently in the *Reichstelefonbuch* 1942. An additional current candidate with this frequent surname would have a strong impact on the overall number of cross-regional surname matches $M_{j,\bar{R}}$. Thus, the *Representation Score* is more sensitive to frequent phonebook entries, which may lead to biased results. By contrast, the *Probability Score* is less sensitive to very frequent surnames but somehow underrates the frequency of 1942 surnames.

Table 7 shows the results for both scores by different parties. Column I to III report the *Representation Scores* and the *Probability Scores* for each of the three major parties separately. The scores read as follows: The surname of a randomly chosen 2015 FPÖ candidate from the former US zone is cited 0.247 times in the *Reichstelefonbuch* 1942 of the former Soviet zone (*Representation Score* in Column I). In contrast, a randomly chosen 2015 SPÖ candidate's surname from the former US zone was cited only 0.208 times in the *Reichstelefonbuch* of the former Soviet zone (Column II). Concerning the *Probability Score,* the likelihood that the surname of a randomly chosen 2015 FPÖ candidate from the former US zone appears in the Reichstelefonbuch in the former Soviet zone is 14.5% (*Probability Score* in Column

I), whereas this likelihood is only 11.7% for a current SPÖ candidate (Column II). Columns IV to VI take the differences in the two score measures between the FPÖ and the other parties. Column IV compares FPÖ candidate surnames with the surnames of the other two parties, and Column V (VI) takes the difference between the FPÖ and SPÖ (ÖVP) candidates separately. We find that the surnames of candidates who compete for the FPÖ in the former US zone are significantly more frequent in the *Reichstelefonbuch* 1942 in the former Soviet zone than the surnames of candidates of other parties. These results hold for both representation measures.

To ensure the validity of our results, we compare the surnames of current candidates from former Soviet municipalities with the surnames entries for 1942 in the former US zone (lower part of Table 7). This exercise includes hypothetical migration from the US to the Soviet zone. We find no significant differences among parties for the surnames of current candidates in former Soviet occupied municipalities. This is in line with our historical investigation: No political subgroup was favored to escape from the US zone to the Soviet zone. Thus, differences in surnames are neither found nor suggested.

TABLE 7. MATCHING OF PRE-OCCUPATION AND PRESENT CANDIDATE NAMES

1942: Reichstelefonbuch *2015: Names of party fellows*	*Matches with phonebook data*			*Differences*		
	FPÖ	*SPÖ*	*ÖVP*	*FPÖ–(SPÖ/ÖVP)*	*FPÖ–SPÖ*	*FPÖ–ÖVP*
	I	*II*	*III*	*IV*	*V*	*VI*
US zone 2015 vs. Soviet zone 1942						
Representation Score	0.247	0.208	0.226	0.028***	0.039***	0.021*
Probability Score	0.145	0.117	0.132	0.018***	0.028***	0.013*
Obs.	2,806	4,012	6,648	13,466	6,818	9,454
Soviet zone 2015 vs. US zone 1942						
Representation Score	2.110	1.913	2.249	-0.020	0.197	-0.139
Probability Score	0.400	0.385	0.401	0.005	0.016	-0.001
Obs.	272	1,216	2,240	3,728	1,488	2,512

Notes: This table shows two different measures of surname representation. Columns I–III depict these representation measures for the FPÖ, SPÖ and ÖVP, respectively. Columns IV–VI represent the differences in representation measures between the FPÖ and the other two major parties together (IV) and for the SPÖ (V) and ÖVP (VI) separately. The upper part of the table compares the candidates of current parties in the former US zone with phonebook entries from 1942 in the former Soviet zone. The bottom part of the table compares the candidates of current parties in the former Soviet zone with the phonebook entries of 1942 in the former US zone. Significance levels of party differences (two-sample Wilcoxon rank-sum test): *** 0.01, ** 0.05, * 0.10.

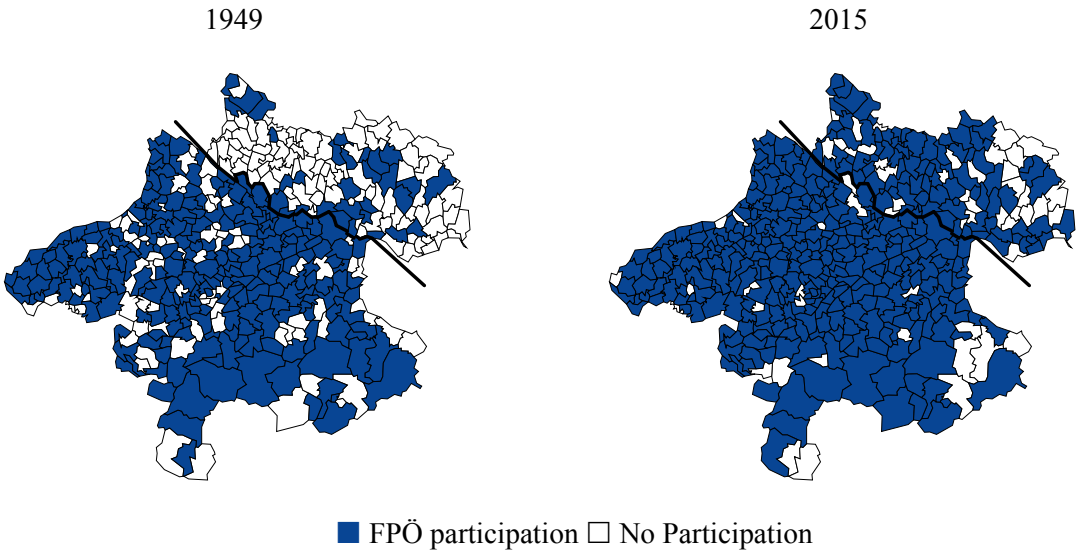
The analysis of the origin of the surnames of current candidates in the former US zone provides strong evidence for post-war Nazi migration. Even recent surnames reflect this migration pattern; intergenerational transmission thus serves as an important channel for persistency in party membership and for spatial differences in FPÖ voting.

7.2 Local party branches

Migrating extremists may leverage their impact if they engage in local politics. Local party branches in particular are an important institutional trigger for persistency. In contrast to voting shares in national elections, local party branches strongly reflect a party's "supply" side. Local party branches tailor national electoral campaigns to local needs, provide human and financial resources, and nominate local residents running for membership in the municipal council. Participation in local elections thus appears to be a good indicator for local political power and embeddedness. This holds true especially for Austria, where local party politics are characterized as being highly continuous (van Biezen et al. 2012). We thus analyze the impact of an early formation of a local FPÖ party branch on current right-wing affiliation.

Figure 4 on the left shows whether the FPÖ nominated candidates in the municipal council election in 1949 (blue colored). In most Soviet occupied municipalities, the FPÖ abstains from participation. In 92 out of 120 Soviet occupied municipalities, either a local party branch did not exist or it was too weak to compete in local elections. We run a probit estimation using participation by the FPÖ in the local election in 1949 ($yes = 1; no = 0$) as the dependent variable. The results are shown in Table 8. We include several explanatory variables stepwise (see Columns I to IV), which are introduced in Section 5. As a main result, we find a positive and significant effect for municipalities located in the US zone on local election participation in 1949, which is robust to all specifications. We thus find a higher density of FPÖ local party branches in the US zone after WWII. As outlined in Section 6, the rather weak presence of FPÖ branches in the Soviet zone cannot be explained by occupational treatment, e.g., psychological pressure that discourages local residents from running for the FPÖ. In fact, the Communist party on behalf of the Soviet occupation force sought to push local FPÖ branches in its zone for the purpose of weakening well-established parties (Mueller 2005).

FIGURE 4. FPÖ PARTICIPATION IN LOCAL COUNCIL ELECTIONS 1949 AND 2015



Notes: The figures depict whether the FPÖ (VdU) participates in municipal council elections in Upper Austria in 1949 (on the left) and in 2015 (on the right). Participation is given when at least one voter casts a vote for the FPÖ. No participation indicates that the FPÖ gets zero votes. The bold line gives the temporary zone border between the US and Soviet zone from 1945 to 1955.

TABLE 8. LOCAL PARTY FORMATION IN 1949 (PROBIT ESTIMATION)

	Dependent variable: FPÖ participation in local election			
	I	*II*	*III*	*IV*
US	1.41***	1.53***	1.50***	1.71***
	(0.15)	(0.16)	(0.17)	(0.26)
Socio-demographic controls	No	No	No	Yes
Economic structure controls	No	No	Yes	Yes
Geography controls	No	Yes	Yes	Yes
Obs.	438	438	438	438
Pseudo R²	0.17	0.20	0.24	0.34

Notes: This table shows the results of probit estimations. The dependent variable equals one if the FPÖ participates in local elections in 1949 (zero otherwise). US is a dummy that equals one if the municipality is located in the US zone (zero otherwise). Column I depicts univariate probit results. Columns II–IV stepwise include municipal control variables for geography, economic structure and socio-demographics (see Table 3). Significance levels: *** 0.01, ** 0.05, * 0.10 (Robust Standard Errors).

We test whether the other channels introduced in Section 6 have any additional explanatory power for the likelihood of the formation of a FPÖ local party branch in 1949. In Table 13 in the Appendix, we present results of a control for potential regional differences in denazification, Allied aerial bombings during the war, the rapidly increasing share of foreigners (*Volksdeutsche* refugees) and tactical considerations by established parties. All additional explanatory variables exhibit weak or no correlation with the likelihood of forming a local FPÖ party branch in 1949. Our proxies for the number of denazified electorate have a very weak impact on the likelihood of the formation of a local party branch, whereas these proxies come with statistically significant higher FPÖ voting shares in the national election in 1949 (Columns II and III in Table 5). Thus, the overall group of former Nazis (natives and migrants)

influenced right-wing party votes in the national election in 1949 but only marginally affected the formation of a local party branch. We thus argue that the absolute number of former Nazis cannot fully explain the formation of a local party branch. We combine this finding with our previous result that current FPÖ local party candidates are more likely to have ancestors from formerly Soviet occupied regions. Thus, it is plausible to argue that an early formation of a local party branch is also a result of Nazi migration to southern Upper Austria. A specific subgroup of people who were engaged in the formation of a local party branch was more likely to be located in the US rather than in the Soviet zone.

The absence of a local FPÖ party branch in 1949 has an impact in the present day. Figure 4 on the right shows whether candidates represented the FPÖ in the municipal council election in September 2015 (blue colored). 34 out of 120 (approximately 30%) of all former Soviet-occupied municipalities lack local FPÖ participation. By contrast, in the former US zone, only 7% of all municipalities lack FPÖ participation in 2015. Additionally, we find support for a transmission link to the national election in 2013. We observe a correlation of 0.33 between FPÖ participation in local elections in 1949 and 2013 FPÖ voting shares. This result is significant at the 1 % level. We conclude that the early formation of an FPÖ local party branch, triggered by immigrating Nazis, might lead to more persistent local embeddedness of a right-wing party that is still visible today. Hence, local FPÖ party branches might act as an institution that transmits local right-wing attitudes over generations.

8. Conclusion

This paper shows that migrating political extremists can shift the political sentiments of their destination region toward their political ideology. Our results demonstrate that initial local differences in an extreme ideology arising from an external migration shock can persist for more than 60 years, even within politically, economically, culturally and historically homogeneous regions. In contrast, the spatial distribution of voting for moderate parties remains unaffected by the shock and differs only slightly for almost a century.

We explore two channels to explain the high degree of persistency in right-wing attitudes. We introduce geonomastics as a novel approach to trace current party affiliation back to historical migration patterns. Phonebook entries from 1942 proxy for the pre-occupation distribution of surnames in Austria. We find that current municipal council candidates for the FPÖ in the former US zone have surnames that are more prevalent in the former Soviet zone in comparison to other parties. The higher density of Nazis in the US zone also increases the probability of an early formation of a local party branch. The persistency

of cross-border differences in right-wing voting shares are thus triggered by an individual channel (intergenerational transmission within families) and an institutional channel (early formation of a local party branch).

The case of Upper Austria shows that right-wing attitudes have a deeply rooted historical component in addition to current economic and cultural circumstances. Once the seed of extremism is planted, it somehow proves to be persistent. History thus acts as an important driver for differences in extreme political attitudes. This issue has not been considered in empirical studies that aim to explain right-wing ideology (e.g., Dustmann and Preston 2007, Funke et al. 2015, Halla et al. 2015 or Rydgren 2008). Historical circumstances explain substantial aspects of the variation in right-wing attitudes on both the regional and the individual level and should therefore be considered in empirical analyses. Further insights into differences in regional voting behavior with respect to historical exogenous shocks and their transmission channels constitute a valuable agenda for further research.

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Appendix

TABLE 9. ANECDOTAL EVIDENCE FOR A NAZI INFLUX IN UPPER AUSTRIA IN 1945

Original	*Translation*	*Source*
"[NSDAP-]Kreisleiter Hans Dörfler soll sich 'an der Spitze von 400 flüchtigen Parteigenossen, getarnt als Volkssturmmänner nach Oberösterreich' abgesetzt haben."	The leader of the local [Nazi party] branch, Hans Dörfler, is said to have fled to Upper Austria escorted by 400 party members camouflaged as soldiers of last resort (*Volkssturm*).	Seliger (2010), Scheinparlamentarismus im Führerstaat, LIT Verlag, Vienna, Münster, p. 661.
(Regarding a very Nazi friendly manager in Vienna): *Übrigens, dieser werte Herr Prokurist flüchtete zeitgerecht, bevor die Russen Wien besetzten, nach Oberösterreich in die amerikanische Besatzungszone."*	Incidentally, the "honorable" manager fled to Upper Austria toward the US occupation zone before the Russians occupied Vienna.	Haidinger M. and G. Steinbach (2009), Unser Hitler: Die Österreicher und ihr Landsmann, Ecowin, Salzburg.
(Regarding the municipality of Mitterschlag (today: Langschlag) in Lower Austria): *"Der [NSDAP-]Ortsgruppenleiter, einige Männer und Frauen und der Gutsbesitzer und sein Personal flüchteten nach Oberösterreich."*	The leader of the local [Nazi party] branch, additional men and women and the landowner and his employees fled to Upper Austria.	Schübl, A. (ed.) (2011), Schulchronik Langschlag 1879–1955, p. 83.
"[S]ogar die Tische, Sessel und Stockerl fanden Anwert und wurden auf die Autos, mit denen die SS und Flüchtlinge aus dem Banat beim Herannahen der Roten Armee nach Oberösterreich weiter flüchtete, aufgeladen und kehrten nie wieder."	Tables, chairs and stools were loaded up and transported by vehicles that were used by the SS and refugees from the Banat [region in Hungary] to escape the Red Army and flee toward Upper Austria. They never returned.	Salvesberger, M. (ed.) (1997), Briefe von der Front: Feldpostbriefe, 1939-1945, Gösing am Wagram, p. 312.
(Regarding the takeover of a dispossessed pharmacy in Vienna by a Nazi): *"Anfang Mai 1938 wurde die Leitung der Apotheke von der späteren 'Ariseurin' Mag. Frieda Kahls übernommen und am 19. Mai 1938 SA-Sturmbannführer Mag. Erwin Renner auch in dieser Apotheke als kommissarischer Verwalter eingesetzt. [...] Angesichts der bevorstehenden Befreiung Wiens durch die Rote Armee verübte Anton Datz am 10. April 1945 Selbstmord. Frieda Datz, geb. Kahls - sie hatte zwischenzeitlich ihren Geschäftspartner Mag. Datz geheiratet - flüchtete nach Ostermiething in Oberösterreich."*	In early May 1938, the "Ariseur" [Nazi affiliated person who takes over dispossessed Jewish property in Nazi Germany] Frieda Kahls took over the pharmacy. SA-*Sturmbannführer* Erwin Renner served as temporary manager. […] On the 10th of April, 1945, Anton Datz committed suicide due to the arrival of the Red Army. Frieda Datz (formerly: Frieda Kahls), who had married her business partner Mr. Datz, fled to Ostermiething in Upper Austria.	Fehringer, A. (2013), Arisierung und Rückstellung von Apotheken in Österreich, Vienna University Press, Vienna, pp. 113–114.
(Regarding 50,000 Austrian citizens from Vienna, Lower Austria and Burgenland in Upper Austria in February 1946): *"Es finden sich unter ihnen Nationalsozialisten, die sich abseits ihrer einstigen Umgebung und fern von Menschen aufhalten wollen, die über ihr Wirken in der NS-Zeit gut Bescheid wissen."*	There were many Nazis among the refugees who wanted to live far from their former homes and far from former neighbors who knew about their actions within the Nazi regime.	Slapnicka (1986), Oberösterreich – zweigeteiltes Land, Landesverlag, Linz, p. 93.
"Als sich anfangs Juli das Gerücht verbreitete, es werde eine Änderung der Besatzungszonen vorgenommen bzw. das Mühlviertel von der Roten Armee besetzt, löste diese Nachricht Schecken und Angst unter der Bevölkerung aus und hatte einen Flüchtlingsstrom zur Folge, der sich vor allem über Linz ergoß. Unter den ca. 900 Familien, die vor den Russen die Flucht ergriffen, befanden sich in der Hauptsache Reichsdeutsche, ehemalige Parteigenossen, die von den Russen eine weit schlimmere Behandlung befürchteten."	In early July, rumors circulated about a change of occupation zones, i.e., the occupation of the Mühlviertel [northern Upper Austria] by the Red Army. This announcement brought fear to the population and led to large-scale migration, especially in the direction of Linz. The 900 fleeing families were mainly *Reichsdeutsche*, former Nazi fellows who expected the worst under Russian occupation.	Hindinger (1968), Das Kriegsende und der Wiederaufbau demokratischer Verhältnisse in Oberösterreich im Jahre 1945, Verlag Brüder Hollinek, Vienna, p. 130.
"Im Juni/Juli 1945 lösten Gerüchte über eine Besetzung des Mühlviertels durch die sowjetische Rote Armee eine Massenflucht aus. Vor allem ehemalige NSDAP-Angehörige setzten sich mit Hab und Gut ins südliche Oberösterreich ab."	In June/July 1945, rumors of a Soviet occupation of the Mühlviertel [northern Upper Austria] led to a mass exodus. Former Nazi party fellows in particular took their belongings and fled to southern Upper Austria.	Bohrmann, Y. (2015), Die Kulturgeschichte des Mühlviertels (http://www.waldwildnis.de/cd/archiv/muehlviertel/mkgeo.htm), access: 09.12.2015.
"Die Folge war, dass schon in den letzten Julitagen, nach Bekanntwerden dieser Tatsache [Teilung Oberösterreichs in eine US- und eine Sowjetische Besatzungszone], eine Flucht über die Donau einsetzte. Insbesondere Nationalsozialisten fürchteten eine Bestrafung durch die Russen weit mehr und begaben sich mit ihrer Habe ins südliche Oberösterreich."	In the last days of July, a mass exodus across the Danube River began. Nazis in particular feared being punished more severely by the Russians and took their belongings to southern Upper Austria.	Leimlehner, E. (1974), Das Kriegsende und die Folgen der sowjetischen Besetzung im Mühlviertel 1945 bis 1955, Juris Druck + Verlag, Zurich, p. 69.

(Continues)

TABLE 9 – CONTINUED

Original	*Translation*	*Source*
(Regarding the registration of Nazis according to the Act against National Socialist Activities): *"[In] der russischen Zone andererseits löste sich das Entnazifizierungsproblem zum Teil von selbst, weil die meisten wichtigen Nationalsozialisten sich vor der russischen Besatzung in die westlichen Bundesländer abgesetzt hatten."*	The denazification problem within the Russian zone partially vanished because most of the important Nazis escaped to the western Austrian states.	Stiefel (1981), Entnazifizierung in Österreich, Europaverlag, Vienna, Munich, Zurich. p. 33.
(Regarding denazification in Vienna): *„Viele belastete Nazis setzten sich deshalb vor der russischen Besatzung und vor den Maßnahmen der österreichischen Regierung nach Westen ab, vor allem in die amerikanische Zone, in jene Gebiete, wo es nicht nur Fleisch und Butter gibt, sondern wo, nach dem allgemeinen Eindruck, allzu viele Nazi unbehelligt geblieben sind."*	Numerous Nazis escaped the Russian occupation and fled the actions of the Austrian government for the West, in particular the American zone. In those regions, not only was a provision of meat and butter granted, but also, by public opinion, many Nazis could remain unharmed.	Arbeiterzeitung (Jan. 1, 1946); Newspaper of the labor movement, cited in Stiefel (1981), Entnazifizierung in Österreich, Europaverlag, Vienna, Munich, Zurich, p. 90.
(Regarding the escape of NSDAP members, businessmen and Nazi-sympathizing artists to the West): *„Es sind gewichtige Burschen unter ihnen, […] denn es waren bestimmt nicht die ärmsten und kleinsten PGs [Parteigenossen], die da mit sehr großem Sack und Pack abgezogen sind […] Auch viele Wirtschaftskapitäne sollen es sich an den Seen unseres schönen Landes gutgehen lassen, die vor den Stürmen des rasanten Vormarsches der Roten Armee […] sich selbst in stillere Gewässer in Sicherheit brachten. Dass zu sehr in die braune Soße hineingetretene Künstler ebenfalls dem großen Zug nach dem Westen gefolgt sind, […] ist uns ebenfalls bekannt."*	There are important comrades among them. Those NSDAP members who escaped with bags and baggage were not the poorest and least powerful. Additionally, many businessmen escaped the advancing Red Army and enjoyed their lives at the lakes [Southern Upper Austria and Carinthia] of our beautiful country. We also know that many artists that sympathized with the Nazis followed the great escape to the West.	Arbeiterzeitung (Aug. 7, 1945); Newspaper of the labor movement, cited in Stiefel (1981), Entnazifizierung in Österreich, Europaverlag, Vienna, Munich, Zurich, pp. 91–92.
(Regarding the registration of Nazis according to the Act against National Socialist Activities): *„[…] dass die elastische Absatzbewegung der besonders Schuldbewussten in das mildere Klima des Westens und Südens […] die Lösung des Problems sehr erschwert habe."*	The flexible escape movements of guilty Nazis toward the milder climate of the West and South […] complicates the problem [Registration of Nazis according to the Act against National Socialist Activities] even further.	Communist Party of Austria (KPÖ) (July 24, 1946), cited in Stiefel (1981), Entnazifizierung in Österreich, Europaverlag, Vienna, Munich, Zurich, p. 90.
(Regarding Nazi refugees in Upper Austria): *„[…] dass Nazibonzen aus allen Teilen Österreichs und Deutschlands in Oberösterreich und anderswo mit Auto und Dienerschaft ein ruhiges Leben führten und über die Dummen lachten, die in der unmittelbaren Kriegszone geblieben sind."*	Nazi officials from all over Austria and Germany lived comfortably in Upper Austria and elsewhere. They laughed at the stupid ones who stayed in the war zone [i.e., the Russian occupation zone].	Das kleine Volksblatt (Aug. 24, 1945); Party newspaper of the catholic-conservative party of Austria (ÖVP), cited in Stiefel (1981), Entnazifizierung in Österreich, Europaverlag, Vienna, Munich, Zurich, p. 92.

Notes: This table presents anecdotal evidence of Nazi migration from Soviet-occupied regions toward the US occupation zone in Upper Austria. Translation was performed by the authors.

TABLE 10. PARTIES FORMING THE RIGHT-WING CAMP

National election	*Parties forming the right-wing camp*	*Voting share in Upper Austria*
Before WWII		
1919	DFOP, DVP	28.25
1920	DOEBP, GDVP	17.01
1923	GDLB	15.03
1927	– (Common list with Conservative CP)	–
1930	LBd, NSDAP, SCHO, (HB)	17.34 (25.04)
After WWII		
1945	– (No participation: Nazis have been banned)	–
1949	VdU	17.70
1953	VdU	10.39
1956	FPÖ	6.20
1959	FPÖ	7.70
1962	FPÖ	7.49
1966	FPÖ	5.63
1970	FPÖ	6.62
1971	FPÖ	6.28
1975	FPÖ	7.20
1979	FPÖ	7.41
1983	FPÖ	6.25
1986	FPÖ	11.23
1990	FPÖ	15.58
1994	FPÖ	22.19
1995	FPÖ	21.93
1999	FPÖ	26.53
2002	FPÖ	10.74
2006	FPÖ, BZÖ	14.94
2008	FPÖ, BZÖ	28.97
2013	FPÖ, BZÖ	26.10

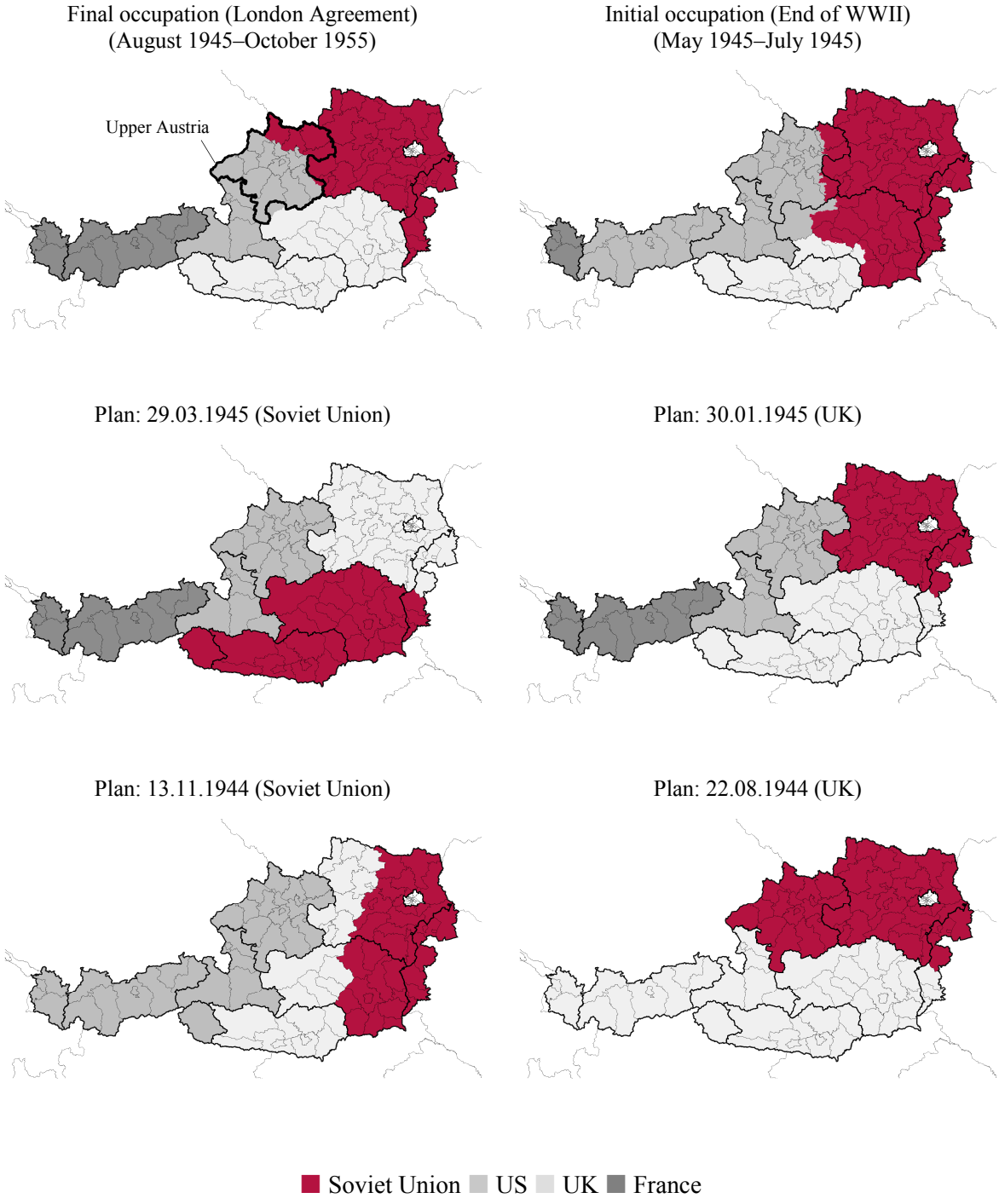
Notes: This table presents the parties that form the right-wing camp (FPÖ camp) in our analysis. Parties in brackets contribute only partly to the right-wing camp but also to the conservative camp. Leaving out these parties gives the strict definition of the FPÖ applied in Row O in our robustness checks (Table 4). However, these results hold under both definitions. Abbreviations are as follows: DFOP: Deutsche Freiheits- und Ordnungspartei; DVP: Deutsche Volkspartei; DOEBP: Deutschösterreichische Bauernpartei; GDVP: Großdeutsche Volkspartei; DOEBP: Deutschösterreichische Bauernpartei; GDVP: Großdeutsche Volkspartei; GDLB: Verband der Großdeutschen und des Landbundes; LBd: Landbund für Österreich; NSDAP: Nationalsozialistische Deutsche Arbeiterpartei (Hitlerbewegung); SCHO: Nationaler Wirtschaftsblock und Landbund (Führung Dr. Schober); HB: Heimatblock; VdU: Verband der Unabhängigen; FPÖ: Freiheitliche Partei Österreichs; BZÖ: Bündnis Zukunft Österreich.

TABLE 11. DESCRIPTIVES

	1930 (n = 436)				*1949 (n = 441)*				*2013 (n = 442)*			
	Mean	*Std. Dev.*	*Min*	*Max*	*Mean*	*Std. Dev.*	*Min*	*Max*	*Mean*	*Std. Dev.*	*Min*	*Max*
Political Economy												
FPÖ voting share	25.03	11.00	0.34	62.86	17.66	9.00	0.66	50.17	26.10	5.44	12.87	53.01
SPÖ voting share	17.78	14.59	0.00	79.35	23.50	11.71	1.31	65.99	22.74	7.82	5.59	49.53
ÖVP voting share	57.12	18.09	6.49	99.31	57.19	16.22	9.38	97.38	32.35	9.73	8.89	61.92
Socio-demographics												
Population	2,054	5,814	266	115,338	2,513	9,179	280	184,685	3,115	9,492	234	183,504
Share of foreigners[a]	100.31[a]	22.57[a]	0.00[a]	404.21[a]	8.15	7.37	0.00	55.81	4.43	3.48	0.00	17.75
Share of protestants	2.15	7.42	0.00	87.72	4.89	7.61	0.00	84.66	3.23	6.00	0.00	75.77
Share of Jews	0.02	0.09	0.00	1.16	0.00	0.05	0.00	1.05	0.01	0.03	0.00	0.30
Economic structure												
Share of industry	24.57	10.01	6.03	64.64	31.86	10.50	7.82	79.66	25.04	6.52	7.40	46.41
Share of trade	6.54	4.95	0.00	40.65	6.12	4.32	0.00	35.88	18.35	4.75	3.97	36.88
Share of public administration	1.45	1.74	0.00	16.68	1.90	1.72	0.00	14.99	4.44	1.51	1.16	9.89
Share of other services	1.47	1.73	0.00	15.68	2.00	2.03	0.00	20.44	24.15	7.48	6.00	48.42
Geography												
Share of settlement area by overall area	70.40	22.90	2.43	100.12	70.48	22.99	2.43	100.12	70.50	22.97	2.43	100.12
Distance to external border	25.00	19.26	0.00	84.73	25.27	19.38	0.00	84.73	25.23	19.38	0.00	84.73
Thinly-populated area	0.86	0.34	0.00	1.00	0.86	0.35	0.00	1.00	0.86	0.35	0.00	1.00
Low and hilly altitudes	0.18	0.38	0.00	1.00	0.18	0.38	0.00	1.00	0.18	0.38	0.00	1.00
Further variables												
Share of agriculture	52.15	18.90	1.33	82.87	41.80	17.50	1.31	82.75	6.71	3.76	0.22	19.14
Voter turnout	89.10	4.38	71.88	100.00	95.93	4.36	87.49	170.04	72.51	4.67	53.05	83.21

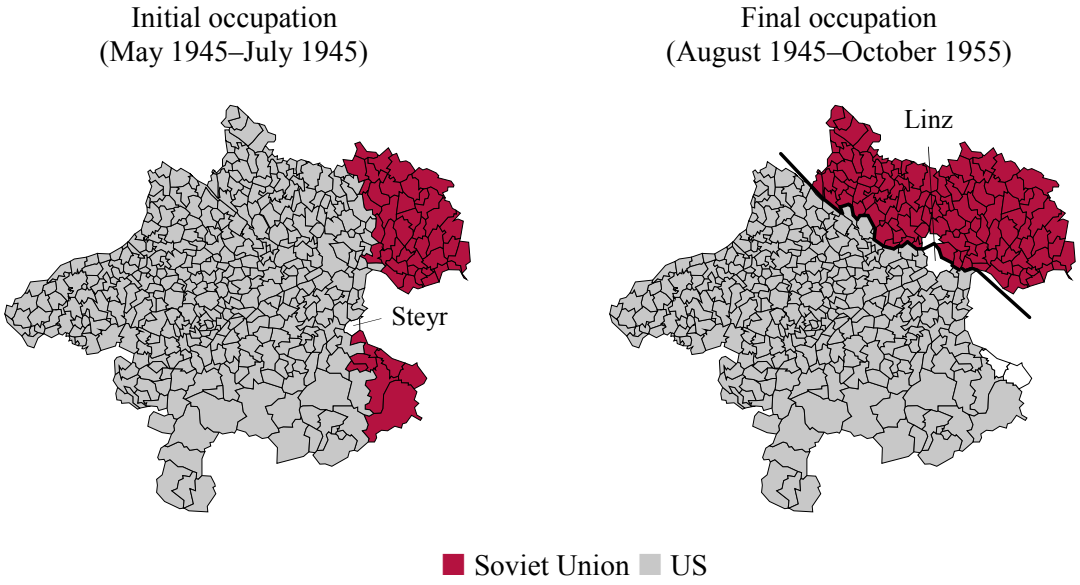
Notes: This table provides the descriptives for our data set covering political economy, socio-demographic, economic and geographical variables. In 1930, six municipalities (Perwang am Grabensee, Schlüßlberg, Roßleithen, Dietach, Lenzing, Sattledt) were the administrative districts of other municipalities. In 1949, one municipality (Perwang am Grabensee) was an administrative district of another municipality (Palting). Our data set also comprises data on the outcome of all 26 democratic national elections taking place between 1919 and 2013 (not shown here). a) 1930: Ratio of present population by resident population.

FIGURE 5. LIBERATION, OCCUPATION AND ALLIED OCCUPATION PROPOSALS FOR POST-WWII AUSTRIA,



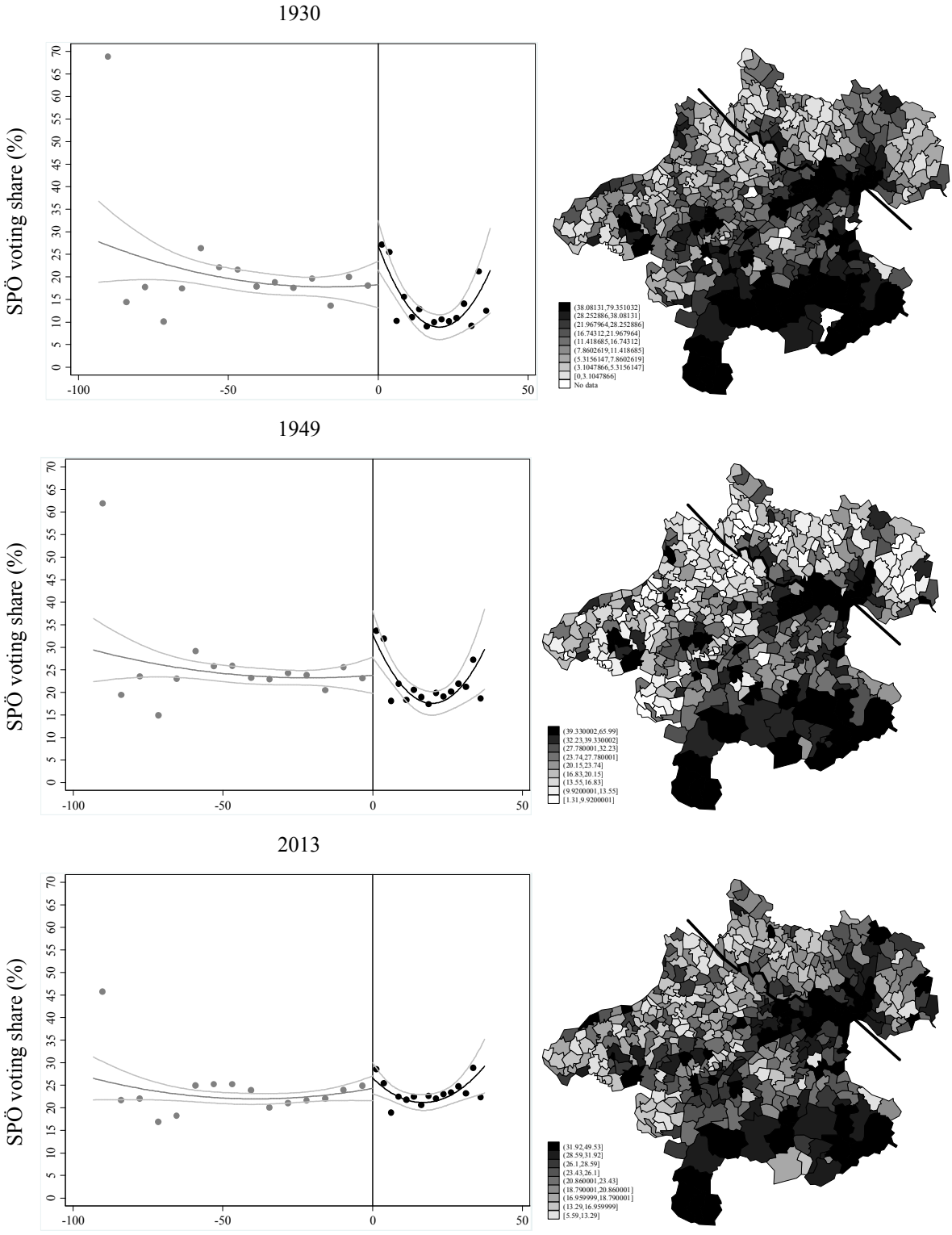
Notes: These figures depict the temporary occupation zones and the occupation plans for Austria created by the Allies after WWII, which were in effect until the Austrian State Treaty was signed in 1955. Thin lines within Austrian external borders depict districts, and bold lines show the nine Austrian states. The date that corresponds to each map indicates the day on which the plan was shared (for the most part in secret) by the Ally in brackets with the other Allies. The last and final occupation plan by the Soviet Union from April 1945 (but not published until July 1945) was the first plan to outline the division of Upper Austria.

FIGURE 6. ALLIED OCCUPATION OF POST-WWII UPPER AUSTRIA



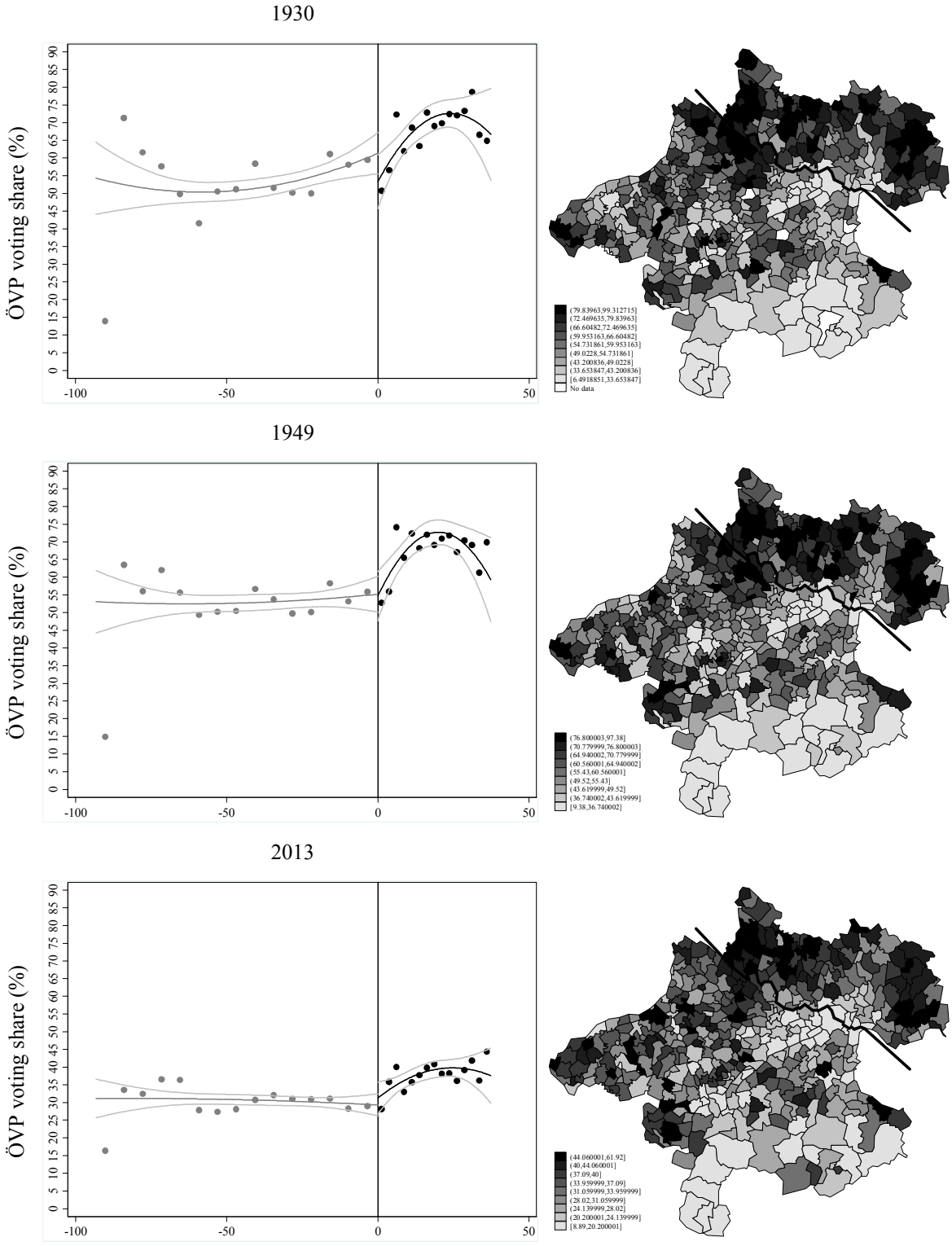
Notes: These figures depict the temporary and final occupation of Upper Austria by the Red Army and US Army after WWII. During the temporary occupation period, the city of Steyr was divided at the Enns River. In the final occupation period, the Upper Austrian capital Linz was divided at the Danube River. Until 1955, two small municipalities in southwestern Upper Austria (Maria Neustift, Gaflenz) remained divided due to geographic constraints. We drop divided municipalities in our analysis.

FIGURE 7. SPÖ VOTING SHARES IN NATIONAL ELECTIONS IN 1930, 1949 AND 2013



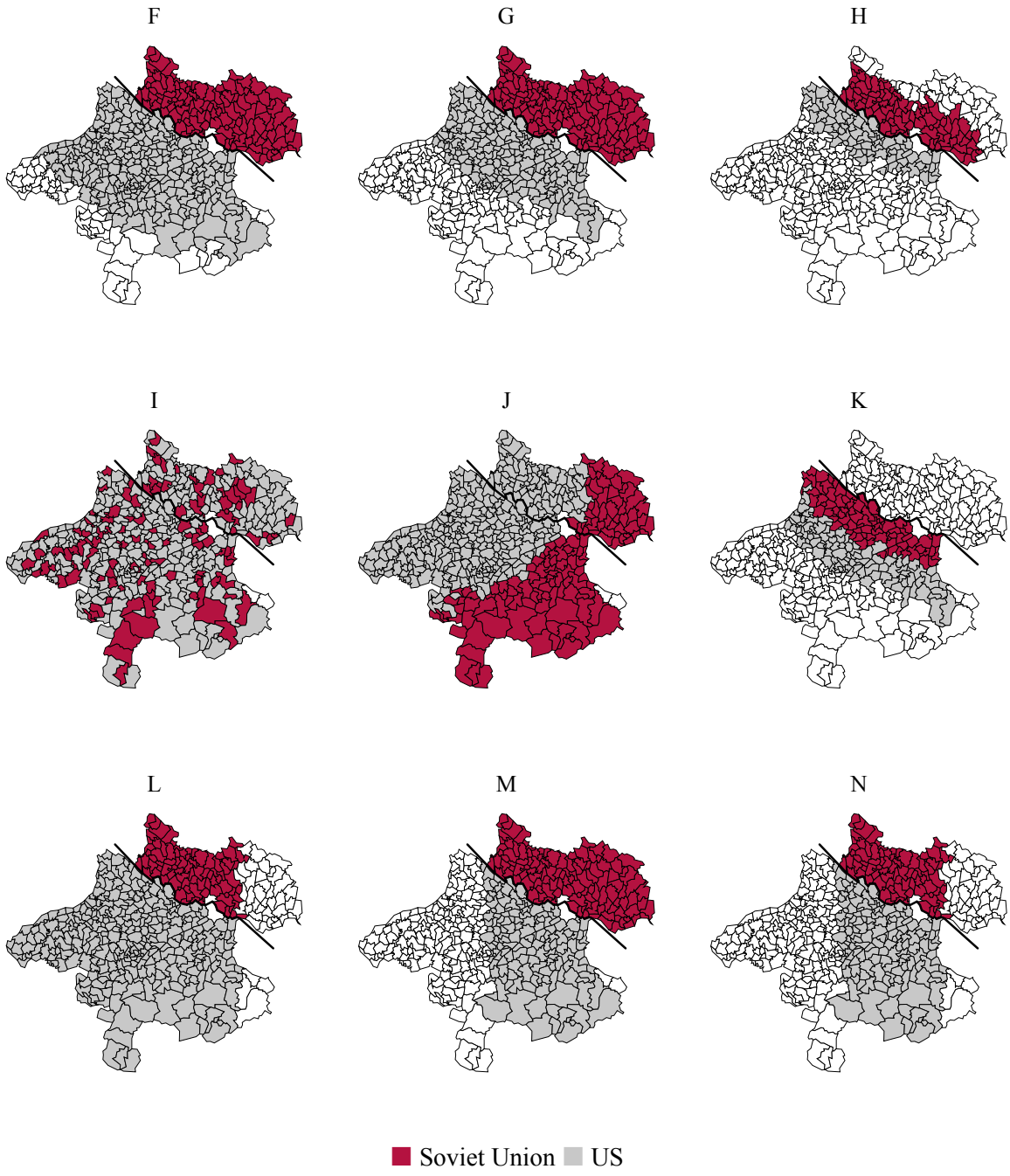
Notes: These figures depict the municipal-level voting shares for the SPÖ in Upper Austria in the national elections of 1930, 1949 and 2013. The right-hand side gives the spatial distribution of the voting shares for the 1945–1955 zone border (bold line). All maps reflect the municipal territorial status in 2015. Figures on the left show the municipal mean SPÖ voting share (bold dark line) based on a quadratic polynomial fit (equation 1) that depends on the municipal distance in kilometers to the temporary zone border. Negative (positive) distances indicates municipal distances to the temporary zone border for US (SU) occupied municipalities. Gray lines indicate 95% confidence bands. For illustrative reasons, the number of bins equals 15 for both occupation zones.

FIGURE 8. ÖVP VOTING SHARES IN NATIONAL ELECTIONS IN 1930, 1949 AND 2013



Notes: These figures depict the municipal-level voting shares for the ÖVP (1930: *Christlichsoziale Partei*) in Upper Austria in the national elections of 1930, 1949 and 2013. The right-hand side gives the spatial distribution of the voting shares for the 1945–1955 zone border (bold dark line). All maps reflect the municipal territorial status in 2015. Figures on the left show the municipal mean ÖVP voting share (dark line) based on a quadratic polynomial fit (equation 1) that depends on the municipal distance in kilometers to the temporary zone border. Negative (positive) distances indicate municipal distances to the temporary zone border for US (SU) occupied municipalities. Gray lines indicate 95% confidence bands. For illustrative reasons, the number of bins equals 15 for both occupation zones.

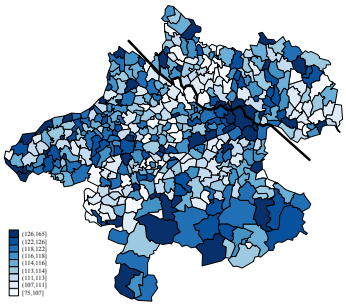
FIGURE 9. ILLUSTRATION OF ROBUSTNESS CHECKS



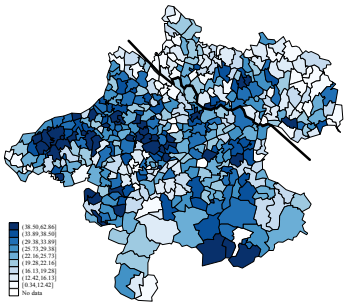
Notes: These figures provide a geographical illustration of the robustness checks employed in Table 4. The red (gray) color shows the municipalities included in the respective robustness check attributed to the Soviet (US). Blank municipalities have been left out. The bold line indicates the temporary zone border from 1945 to 1955.

FIGURE 10. ILLUSTRATION OF CONTROL FOR OTHER CHANNELS

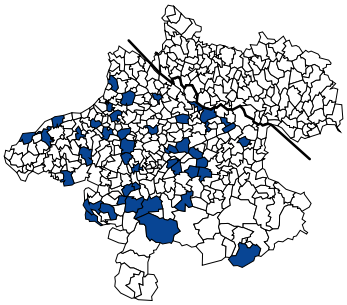
Growth electorate 1945–1949



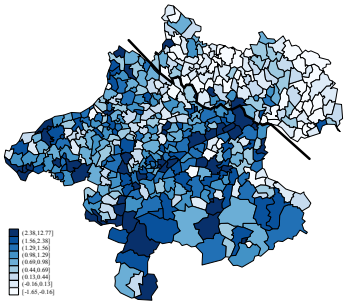
FPÖ voting share 1930



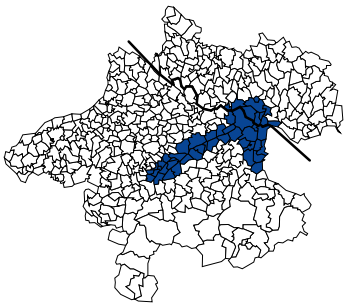
Refugee camp 1949



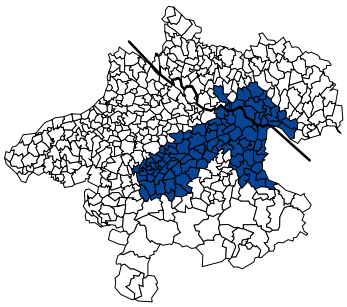
Population growth 1939–1951



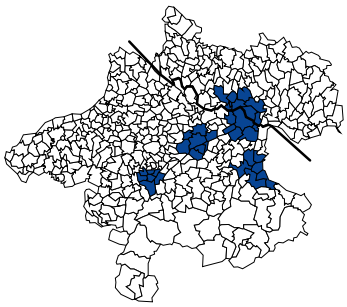
Bomb attacks (narrow)



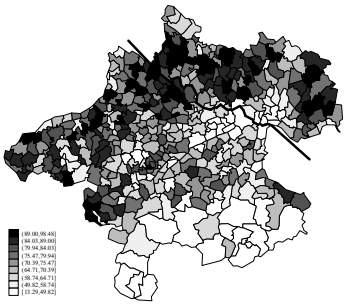
Bomb attacks (broad)



Bomb attacks (neighbors)

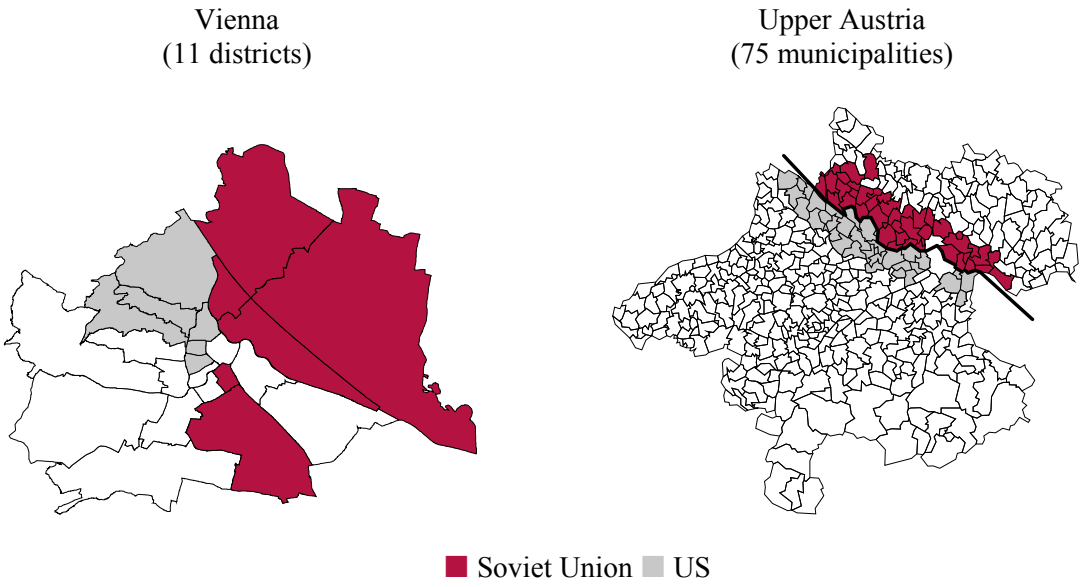


ÖVP voting share 1945



Notes: These figures provide a geographical illustration of the control for further channels employed in Table 5 and Table 13. The bold line shows the realized zone border from 1945 to 1955.

FIGURE 11. ILLUSTRATION OF CONTROL FOR DIFFERENCES IN OCCUPATION POLICY



Notes: The left-hand map depicts the districts of Vienna occupied by the Soviet Union (red) and by the US (gray color). The maximum distance to the "district border" between the US and Soviet zones is approximately 10 km. The right-hand map shows municipalities with a maximum distance of 10 km to the intra-Upper Austrian zone border. The Upper Austrian capital Linz is divided at the Danube River and is therefore left out.

TABLE 12. REPRESENTATIVENESS OF THE PRESENT PARTISAN NAME SAMPLE

	Mean		*Difference*
	Sample	*Non-Sample*	
	I	*II*	*III*
FPÖ voting share local election 2009	12.92	14.25	-1.32
			(0.87)
SPÖ voting share local election 2009	28.53	27.82	0.71
			(1.28)
ÖVP voting share local election 2009	52.88	53.77	-0.89
			(1.42)
Obs.	228	211	439

Notes: This table shows the municipal voting shares for the FPÖ, SPÖ and ÖVP in local elections in 2009. Column I depicts the mean municipal voting shares for municipalities in our sample. Column II depicts voting shares in municipalities without online listed candidates. Column III compares the mean differences of the samples for each party separately. Significance levels: ***0.01, ** 0.05, * 0.10 (Standard errors in brackets).

TABLE 13. CONTROL FOR OTHER CHANNELS OF LOCAL PARTY FORMATION IN 1949 (PROBIT ESTIMATION)

	Dependent variable: FPÖ participation in local election								
	Baseline	*Denazification*		*Volksdeutsche refugees*		*Bomb attacks*			*ÖVP "terrorism"*
	I	*II*	*III*	*IV*	*V*	*VI*	*VII*	*VIII*	*IX*
US	1.71***	1.70***	1.65***	1.68***	1.67***	1.70***	1.73***	1.69***	1.73***
	(0.26)	(0.26)	(0.26)	(0.25)	(0.25)	(0.26)	(0.26)	(0.25)	(0.26)
Electorate growth 1945–1949		0.01							
		(0.01)							
FPÖ voting share 1930			0.01**						
			(0.01)						
Refugee camp 1949				0.36					
				(0.32)					
Population growth 1939–1951					-0.15*				
					(0.09)				
Bomb attacks (narrow)						-0.10			
						(0.3)			
Bomb attacks (broad)							0.12		
							(0.23)		
Bomb attacks (neighbors)								-0.30	
								(0.34)	
ÖVP voting share 1945									-0.01
									(0.01)
Socio-demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Economic structure controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geography controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	438	438	433	438	438	438	438	438	438
Pseudo R²	0.34	0.34	0.35	0.34	0.34	0.34	0.34	0.34	0.34
Akaike	412.93	413.62	405.92	413.17	414.57	414.91	414.55	414.34	413.40

Notes: This table shows the results of probit estimations. The dependent variable equals one if the FPÖ participates in local elections in 1949 (zero otherwise). US is a dummy that equals one if the municipality is located in the US zone (zero otherwise). Column I depicts the baseline multivariate probit results shown in Table 8, Column IV. Columns II–IX add municipal control variables for each additional channel under consideration. Significance levels: *** 0.01, ** 0.05, * 0.10 (Robust Standard Errors).