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THE LOCAL ENVIRONMENT SHAPES REFUGEE INTEGRATION: EVIDENCE FROM POST-WAR GERMANY

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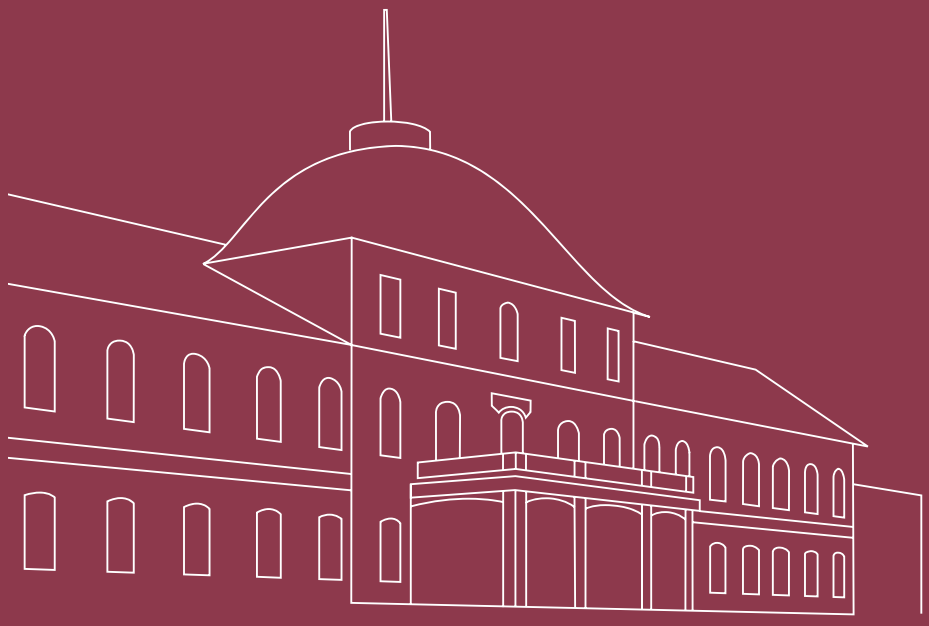

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The Local Environment Shapes Refugee Integration: Evidence from Post-war Germany

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Abstract

This paper studies how the local environment in receiving counties affected the economic, social, and political integration of the eight million expellees who arrived in West Germany after World War II. We first document that integration outcomes differed dramatically across West German counties. We then show that more industrialized counties and counties with low expellee inflows were much more successful in integrating expellees than agrarian counties and counties with high inflows. Religious differences between native West Germans and expellees had no effect on labor market outcomes, but reduced inter-marriage rates and increased the local support for anti-expellee parties.

Keywords: Expellees; Forced migration; Immigration; Integration; Post-War Germany
JEL Classification: J15; J61; N34; C36

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1 Introduction

Does successful integration of refugees depend only on the innate characteristics of refugees, or is there also a role for the local environment of the host country? Does it matter whether refugees are re-settled in rural or urban areas of a host country, in small or large numbers, in culturally close or distant regions? All of these questions are central for designing refugee resettlement programs but have been largely overlooked in prior literature. This paper addresses the role of the local environment for integration in the context of one of the largest forced population movements in history, the mass displacement of ethnic Germans from Eastern Europe to West Germany after World War II. Eight million displaced persons arrived in West Germany between 1944 and 1950, most of them from the territories that Germany relinquished after the war. The integration of these expellees (*Heimatvertriebene*) was widely seen as the single most important challenge that the war-ridden country faced after 1945.

We empirically assess three hypotheses, formulated by contemporary social scientists, on the local determinants of expellee integration. First, we assess the argument that high population shares of expellees deteriorated integration outcomes. Second, we test whether rural and agrarian regions were less successful in integrating expellees than urban regions. Third, we evaluate whether religious differences between expellees and non-expellees had a negative impact on integration outcomes. Drawing on newly digitalized census and administrative data at the county level, we embrace a broad concept of integration: We use local labor market outcomes, inter-marriage rates between expellees and native West Germans, and electoral support for expellee and anti-expellee parties to measure the economic, social, and political integration of expellees.

Three features of our setting are important for the empirical analysis. First, economic, social, and political integration outcomes of expellees varied dramatically across West German counties. Looking at economic integration, for instance, expellees' labor-force-to-population ratio ranged from 31.6% to 59.0%. Second, West German counties were very heterogeneous in terms of their sectoral employment structure and predominant Christian confession before the expellee inflow as well as in the population share of expellees they received. That is,

the local environment that expellees encountered differed substantially. Third, our specific historical setting creates quasi-exogenous variation in the initial placement of expellees. The initial regional distribution of expellees was largely driven by the proximity to expellees' origin regions, and not by integration prospects (Connor 2007, Müller and Simon 1959, Nellner 1959): At the final stages of the war, ethnic Germans from East Europe fled from the approaching Red Army to nearby regions in West Germany. After the war, military governments in the West German occupation zones, overwhelmed by the size and pace of the inflow, were unable to distribute expellees according to their religious affiliation or local job prospects. Local German administration initially had no influence on the distribution of expellees. It is the quasi-exogenous variation in the initial placement of expellees that allows us to study the causal effect of expellee density, of the pre-war employment share in agriculture, and of religious differences between natives and expellees on integration outcomes.

While the occupying powers' military governments in West Germany did not distribute expellees according to their integration prospects, the local housing supply did influence the distribution. Given that much of the German housing stock lay in ruins after the war, the prime concern of the authorities was to provide expellees with a roof over their heads (Nellner 1959). Our empirical analysis thus controls for various indicators of war destruction to alleviate the concern that the local destruction level might have driven both the initial distribution of expellees and their subsequent integration outcomes. The initial, very unequal regional distribution of expellees persisted for several years after the war, as the occupying powers severely restricted relocations within Germany. In our empirical analysis, we use an instrumental variable (IV) strategy to address remaining concerns that expellees relocated endogenously within Germany after their initial placement. Our instrument isolates variation in regional expellee shares that is attributable to the initial placement of expellees and not to subsequent movements.

All of our analyses are based on unique historical census and administrative data which we were able to digitalize for the study. Our data set draws on statistics at the county level from the population and occupation censuses in 1939, 1946, and 1950, and the housing

census in 1950. We further employ voting statistics for 1950, 1954, 1958 and 1962, sales tax statistics for 1935, marriage statistics for 1948 to 1952, and data on war destructions from the 1949 statistical yearbook of German municipalities and the county map (*Kreismappe*) of the Institut für Raumforschung.

Our main findings are as follows. First, the regional expellee share had strong negative effects on the economic, social, and political integration of expellees in 1950, i.e., five years after the war. A one standard deviation increase in the expellee share of a county decreases labor force participation of expellees by 0.4 standard deviations (or 5%), reduces inter-marriage rates by 0.3 standard deviations and increases the support for anti-expellee parties by 0.4 standard deviations (or 15%). This suggests a limited absorptive capacity of receiving counties. Higher expellee shares might intensify the tension between natives and expellees and make it easier for expellees to keep their own company.

Second, high shares of agricultural employment had an even stronger adverse effect on expellees' labor force participation: A one standard deviation increase in the share of individuals working in agriculture before the war reduces expellees labor force participation rate by 0.5 standard deviations (or 7.7%). Agricultural employment also worsened social and political integration outcomes but was less important for explaining regional differences in these variables. This suggests that resentments against expellees were higher in more agrarian regions, and that agrarian regions also had less capacity to absorb surplus population. The findings highlight potential costs of sending today's refugees to rural areas in order to avoid the formation of ghettos in the cities.

Third, differences in the religious confession between expellees and natives reduced intermarriage rates and increased the vote share of anti-expellee parties, but had no effect on expellees' labor market outcomes. This is consistent with the notion that shared values and traditions facilitate the social integration of refugees.

Fourth, political integration, the only dimension for which we have data over a longer time period, takes a considerable amount of time to complete. We find that the share of expellees and the religious distance between expellees and natives remain a strong predictor for the

success of anti-expellee parties in 1954 and 1958. More than ten years after the arrival of expellees, a one-standard-deviation increase in the share of expellees still increases the vote share of the anti-expellee party by 2.0 percentage points.

Fifth, we show that the three factors we study–the regional population share of expellees, the pre-war employment share in agriculture, and religious differences between expellees and natives–explain a large part of the regional variation in integration outcomes. We find, for instance, that regional differences in the expellee share and in pre-war agricultural employment account for more than 60% of the variation in expellees' labor force participation. Overall, our results highlight that the local environment strongly shapes subsequent integration outcomes, and should thus be an important consideration when resettling forced migrants.

Related literature. Our paper complements a nascent literature that studies the distribution of (forced) migrants *across* countries, but generally abstracts from the effects on integration outcomes. Hatton (2015, 2016) argues that there is a strong case for a common asylum policy in the European Union (EU), but that such a policy can only reach the socially optimal number of admitted refugees if some form of financial burden-sharing exists. His arguments are based on a simple theoretical model of two symmetric countries, in which citizens value the admission of refugees to either country, but only face costs if refugees are admitted to their own country. Hosting refugees can then be viewed as an international public good that will be under-provided in the absence of cooperation.

Fernández-Huertas Moraga and Rapoport (2014) also start from the idea that hosting forced migrants creates costs for the host country and consider positive externalities for people who care about world poverty. They then show that tradeable immigration quotas can reveal country-specific costs of hosting migrants and thus each country's comparative advantage in hosting migrants. Since migrants typically have preferences over destination countries, and destination countries have preferences over migrants, Fernández-Huertas Moraga and Rapoport (2014) supplement the tradeable quota system with a matching mechanism that takes those preferences into account. Fernández-Huertas Moraga and Rapoport (2015a)

discuss how such as a framework could work in the context of the Syrian refugee crisis and Fernández-Huertas Moraga and Rapoport (2015b) apply the framework to the EU Common Asylum Policy. They underline that EU countries trade quotas previously assigned to them through an allocation rule. Proposals for such allocation rules are widespread in the political debate. These rules typically calculate a country's "capacity" of hosting migrants based on economic criteria, such as population size, GDP per capita or the unemployment rate (see, for instance, Thielemann (2010) and European Commission (2015)). Such a rule, based on regional population and tax income, exists e.g. for the distribution of *today*'s refugees within Germany. Our empirical findings show how the regional distribution of forced migrants affects their subsequent integration outcomes, and can thus help to formulate evidence-based allocation rules.

Our result that expellee inflows increased the vote share for anti-expellee parties is consistent with recent evidence for Denmark. Dustmann et al. (2016) exploit quasi-random variation in the timing of refugee allocation, induced by a dispersal policy that randomly distributed refugees across Denmark. They find that outside urban municipalities, allocation of larger refugee shares between elections increases the vote share of anti-immigration and centre-right parties.

Damm (2009) exploits the same Danish dispersal policy to study the effect of ethnic enclaves, as measured by local ethnic concentration, on immigrants' labor market outcomes. The paper shows that seven years after their arrival, living in an ethnic enclave has a significantly positive effect on the earnings of refugees. Edin et al. (2003) also find a positive effect of living in an enclave on earnings of low-skilled refugees in Sweden, but not on earnings of high-skilled refugees. Our paper differs from the previous literature on ethnic enclaves in that we study the effect of the number of jointly resettled refugees on integration outcomes–and not the effect of the pre-existing local ethnic network. This distinction is likely to matter: Beaman (2012) shows for the US that the labor market outcomes of newly arrived refugees deteriorate with an increase in the number of recently resettled refugees of the same nationality.

Our paper also contributes to a small but growing literature on the economic effects of

displacement (reviewed in Ruiz and Vargas-Silva (2013)). Sarvimäki et al. (2009) study the long-term effects of the displacement of Finns from areas ceded to the Soviet Union after World War II. While they find a positive effect of displacement on the long-term income of male Finns who lived in rural areas before the displacement, the literature mainly documents negative economic effects of displacement. In post-war Bosnia and Herzegovina, employment rates are lower for displaced Bosnians than for Bosnians who stayed behind (Kondylis 2010), and displaced households in Northern Uganda experienced a significant decrease in consumption levels and asset values relative to comparable non-displaced households (Fiala 2015). Ibáñez and Vélez (2008) estimate that welfare losses caused by displacement within Colombia amount to 37% of the household's net present value of rural lifetime aggregate consumption. None of these papers studies how the displacement effect varies with characteristics of the initial resettlement location.

A few papers have exploited the quasi-experimental variation in our setting to study the effect of expellee inflows on structural change, native labor market outcomes, and regional population patterns in West Germany. Braun and Mahmoud (2014) document that large expellee inflows substantially reduced native employment in the short run. Braun and Weber (2016) consider a dynamic search and matching model to analyze how regional labor markets in West Germany adjusted to the inflow of workers over time. Braun and Kvasnicka (2014) show that expellee inflows fostered structural change away from low-productivity agriculture, but had a negative short-run effect on output per worker. Finally, Schumann (2014) uses a spatial regression discontinuity approach to show that the expellee inflow had a persistent effect on regional population patterns in the German state of Baden-Württemberg.

Regarding the economic integration of expellees, Bauer et al. (2013) compares the economic situation of expellees and native West Germans with identical pre-war observable characteristics. Their results show that in 1971, expellees and natives still performed strikingly different on the West German labor market (in line with earlier findings by Luettinger (1986)). In particular, expellees still earned significantly lower incomes than native West Germans and were over-represented among unqualified workers. Falck et al. (2012) show that the relative

occupational position of expellees did not improve after the Federal Expellee Law (*Bundesvertriebenengesetz*) had been enacted in 1953, and hence conclude that the law did not achieve its aim of improving the labor market prospects of expellees. Whereas prior empirical literature provides important insights into the situation of expellees on the labor market, it neglects the importance of the local environment for integration, which is the focus of our study.

This paper is organized as follows. Section 2 provides background on the flight and expulsion of ethnic Germans from Eastern Europe. Section 3 explores regional variation in the integration outcomes of expellees, and outlines factors that can potentially explain these differences. Section 4 presents the empirical strategy and the data we use. Section 5 discusses our results, and Section 6 concludes.

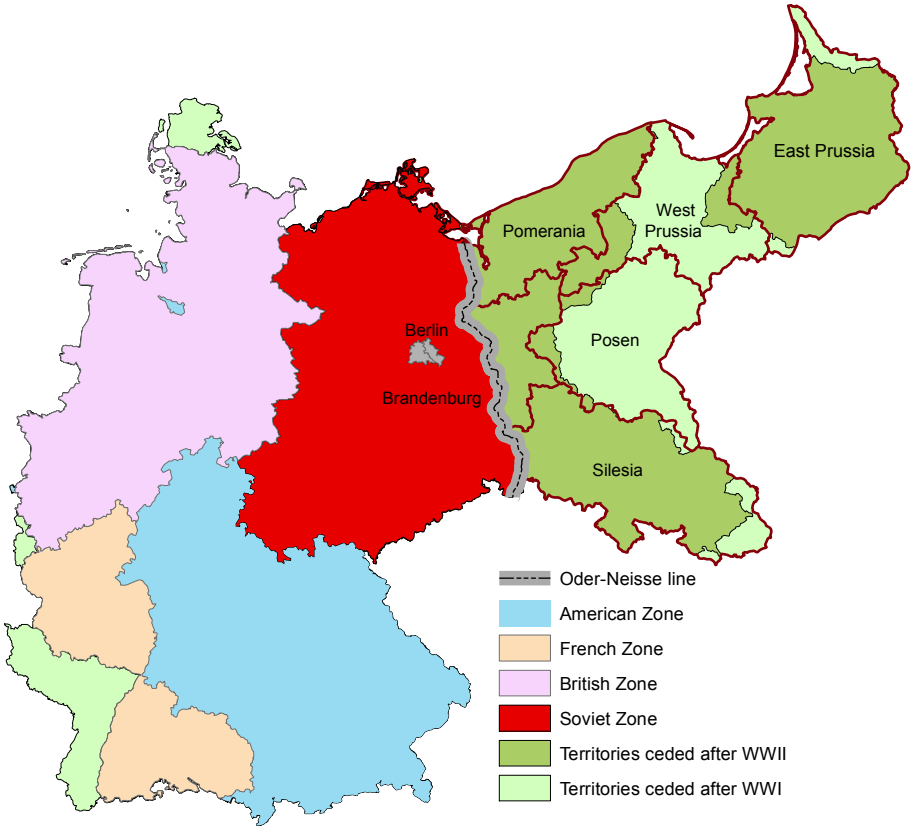
2 The Flight and Expulsion of Germans from Eastern Europe

This section describes the flight and expulsion of ethnic Germans from Eastern Europe, the regional distribution of expellees in West Germany, and their socio-demographic characteristics relative to the native West German population. Henceforth, we will refer to those territories east of Germany's today's border that Germany lost after World War I or II as eastern territories. Figure 1 depicts Germany's territorial losses after the two world wars.

Flight and expulsion. Between 1944 and 1950, 12-14 million Germans were displaced from Eastern Europe. The displacement took place in three phases between 1944 and 1950 (for further details see Connor (2007), Douglas (2012) and Schulze (2011)).

The first phase of the displacement took place at the final stages of World War II and began when Soviet troops entered East Prussia in October 1944. The Soviet offensive on the East front prompted more than six million refugees from Germany's eastern territories to flee westwards (Oltmer 2010). Since the Nazis often delayed organized evacuations until it was too late, many people fled on their own. They either took the last train or ships out of the territories under attack or fled on foot. Refugees' initial destination in the West were largely

Figure 1: Germany's Territorial Losses 1919-45 and its Division in 1945



Base maps: MPIDR (2011).

determined by the available escape routes (Müller and Simon 1959). Many East Prussians, for instance, rushed to the ports on the Baltic Sea and boarded ships that brought them to North Germany.

After Nazi Germany's surrender in May 1945, many refugees tried to return home. However, Polish and Soviet troops soon turned refugees away at the Oder/Neisse line (see Figure 1). At the same time, authorities in Poland–soon to be followed by those in Czechoslovakia–began expelling the remaining German population. These so-called 'wild' expulsions, which marked the second phase of the displacement, were not yet sanctioned by an international agreement, and continued until the end of 1945. Ethnic Germans were typically forced out of their homes on short notice and rounded up into holding camps. They were then either put on trains, or were marched to the border and driven into occupied Germany. While the

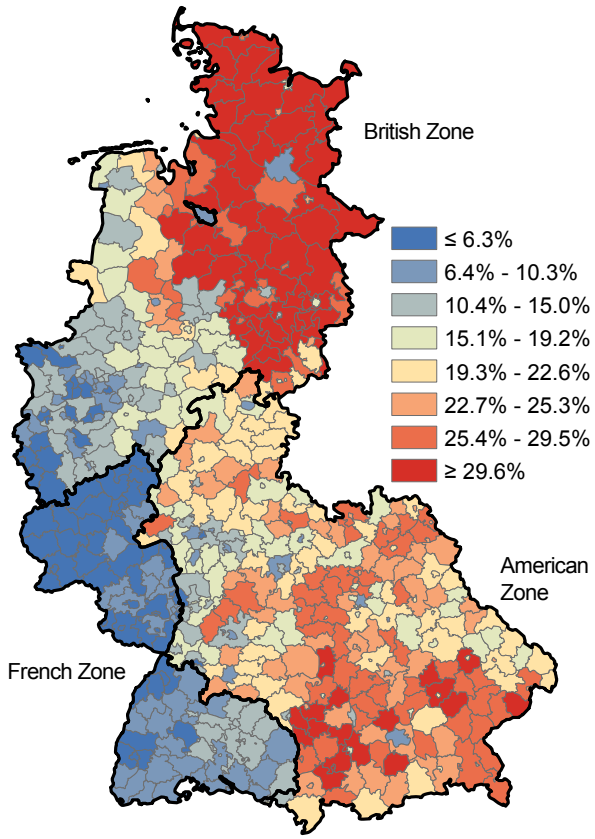
number of ethnic Germans displaced during the wild expulsions remains unclear, existing estimates suggests that by the end of 1945, 800,000 to 1,000,000 people were displaced from Czechoslovakia alone (Douglas 2012).

The third phase of the displacement began in August 1945 when the Soviet Union, the United Kingdom and the United States concluded the Potsdam Agreement. The Agreement shifted the border between Germany and Poland westwards to the Oder-Neisse line. The eastern parts of Pomerania and Brandenburg, and most of East Prussia, were placed under Polish control. The rest of East Prussia went to the Soviet Union. German territories west of the Oder-Neisse line were divided into four occupation zones: a French zone in the southwest, a British zone in the northwest, an American zone in the south, and a Soviet zone in the east (see Figure 1). The three Western zones were later merged into the Federal Republic of Germany (henceforth: West Germany), the focus of our analysis. The Soviet zone became the German Democratic Republic (henceforth: East Germany).

The Potsdam Agreement of August 1945 also legalized the expulsions of Germans from Eastern Europe and stipulated 'that the transfer to [postwar] Germany of German populations, or elements thereof, remaining in Poland, Czechoslovakia, and Hungary, will have to be undertaken'. In November 1945, the Allied Control Council approved a timeline for the organized expulsion of the estimated 6.65 million Germans who were still living in Poland, Czechoslovakia, and Hungary at that time. The council also set quotas for the expellee intake of each occupation zone. Most of the organized expulsion transfers took place in 1946, but transfers continued on a smaller scale until 1950. Germans were either brought to holding camps or immediately put on often overloaded trains, which brought them to reception points in occupied Germany.

Regional Distribution. The flight and expulsion of ethnic Germans from East and Central Europe involved at least 12 million people. By September 1950, 7.876 million of them had settled in West Germany where they accounted for 16.5% of the population. The majority of them–around 4.423 million–had lived in the eastern territories that Germany ceded after

Figure 2: Population Share of Expellees in West German Counties, 9/1950



Notes: The figure shows the population share of expellees on 13 September 1950. The black line depicts the border of the three occupation zones.
Source: Statistisches Bundesamt (1955). *Basemap*: MPIDR (2011).

World War II, namely Silesia (2.053 million), East Prussia (1.347 million), Pomerania (0.891 million) and Brandenburg (0.131 million). In addition, 1.912 million expellees came from the Sudentenland, the German-speaking part of Czechoslovakia which Nazi Germany annexed in September 1938. The remaining expellees had mostly lived in the eastern territories that Germany ceded after World War I, namely in Posen and West Prussia.

Importantly, expellees were distributed very unevenly across West Germany. Figure 2 depicts the county-level population share of expellees in September 1950. Three main facts stand out. First, the overall population share of expellees was much lower in the French occupation zone (6.6%) than in the American (18.7%) and British zone (17.2%). This was because the French initially refused to accept any newcomers into their zone. The French

had not been invited to the Potsdam conference. Therefore, they did not feel obliged to the commitment of the Potsdam agreement to secure an 'equitable distribution' of expellees across occupation zones.

Second, the population share of expellees was considerably higher in the eastern parts of the American and British occupation zones than in the western parts. This is particularly evident for the British zone where the expellee share was well above 30% in the north-east but as low as 5% in the far west. These enormous differences were mostly the result of the undirected flight of refugees at the final stages of the war. During this first phase of the displacement, refugees mostly sought shelter in those regions of West Germany that were closest to their former homelands and thus most accessible to them (Müller and Simon 1959). Many Germans from East Prussia, for instance, fled via the Baltic Sea to Schleswig-Holstein in the far north of Germany.

The 'wild expulsions' of the second phase only worsened these imbalances. Refugees were often just driven across the border into the eastern parts of occupied Germany. Germans from the Sudetenland, for instance, were often forced into neighbouring Bavaria. Even the organized transport of the third phase typically brought expellees to reception points in the east of each occupation zone.

Third, the population share of expellees was higher in rural areas than in cities. This was because many cities were in shambles after the war. Since housing was scarce, the military governments in the American and British occupation zones frequently restricted relocations into cities (Müller and Simon 1959). Instead, expellees were often housed in more rural areas where the housing stock had suffered less from bombing (Burchardi and Hassan 2013, Connor 2007). This rural-urban divide added to the regional imbalances, as the rural areas in the north- and southeast of Germany were already overburdened with refugees due to their geographical proximity to the eastern territories and the Sudetenland. It also explains why some of the smaller urban counties (*Stadtkreise*) in Figure 2 have low expellee shares despite being surrounded by larger rural counties (*Landkreise*) with very high shares.

The very unequal regional distribution of expellees remained largely unchanged in the first

few years after the war.[1] The occupying powers severely restricted the ability of Germans to change residence, and initially banned relocation altogether. After the ban was relaxed in 1947, moving still required permission from military authorities (permission was primarily granted for family reunification). It was not until the foundation of West Germany in May 1949 before the general freedom of movement was restored (Müller and Simon 1959, Ziemer 1973).

Socio-demographic characteristics. Expellees and natives were similar in several important respects. They both spoke German as their mother tongue and had both been educated in German schools. Moreover, the ceded eastern provinces, home to most expellees, had all been an integral part of the German Reich since the Reich was formed in 1871. Most expellees and natives had therefore lived in the same country for decades. Expellees were also not a selected sub-group of their home regions, as virtually all Germans living east of the Oder-Neisse line fled or were expelled.

As a result, socio-demographic characteristics of expellees and natives were similar. Table 1 shows that females outnumbered males both in the expellee and the non-expellee population, a legacy of the two world wars. Expellees were slightly younger, somewhat more likely to be single, and slightly better educated than the rest of the population. Overall, however, differences between expellees and natives were small, especially when compared to other migration episodes.

The mass arrival of expellees also had little impact on the denominational structure of West Germany as a whole. The shares of Catholics and Protestants were very similar in the expellees and non-expellees population (see again Table 1). However, the inflow of expellees had a significant effect on the denominational structure at a local level. As the expellees could not choose their initial destination based on the predominant Christian confession, and German authorities did not account for the religion of expellees when distributing them, many Catholic expellees ended up in predominately Protestant regions and vice versa (Connor 2007). In Bavaria, for instance, the number of exclusively Catholic or Protestant parishes fell from

[1] The correlation coefficient between the county-level population share of expellees in 1946 and 1950 is 0.966.

Table 1: Socio-demographic characteristics of expellees and non-expellees in West Germany, September 1950

	Expellees[a]	Rest of the population[b]
% females	52.9	53.2
Age structure		
% aged 0-17	29.7	27.7
% aged 18-24	11.3	10.1
% aged 25-44	30.0	27.9
% aged 45-64	21.8	24.6
% aged 65 and above	7.2	8.6
Marital status (aged 18 and above)		
% single	25.7	23.4
% married	60.4	64.0
% widowed or divorced	14.0	12.5
Education (born 1885-1927)[c]		
Years of schooling[d]	8.5	8.4
% vocational training	37.3	37.6
% university degree	3.5	2.9
Religious confession		
% Catholic	45.4	45.4
% Protestant	52.8	50.7
% Other	1.8	3.9

Data sources: All data except for educational attainment are from the census of 13 September 1950, as published by Statistisches Bundesamt (1952). Figures on education are from our own calculations based on a 10% sample of the census of 27 May 1970 (FDZ 2008). Parts of the table are reproduced from Braun and Kvasnicka (2014).
Notes: [a] Expellees are defined as German nationals or ethnic Germans who on 1 September 1939 lived (i) in the former German territories east of the Oder-Neisse line, (ii) in Saarland or (iii) abroad, but only if their mother tongue was German. [b] The education statistics distinguish between expellees and native West Germans (excluding non-German foreigners). All other statistics distinguish between expellees and the rest of the population. [c] The education statistics are for those who were born between 1885 and 1927 (aged 23 to 65 in 1950). The overwhelming majority of these persons should have completed their education by 1950. [d] We only have data on the highest school degree. Years of schooling are inferred from the minimum years of schooling required to obtain a particular degree.

1,564 in 1939 to just nine in 1950 (Menges 1959).

Panel (a) of Figure 3 illustrates differences in the religious affiliation of expellees and non-expellees at county level in September 1950. It depicts the Euclidean distance between the religious affiliations of expellees and non-expellees in county i:

$$ReligiousDistance_{i50} = \sqrt{\sum_{j} \left(share^{nat}_{ij50} - share^{exp}_{ij50} \right)^2}, \quad (1)$$

where $share^{nat}_{ij50}$ ($share^{exp}_{ij50}$) is the share of natives (expellees) in county i who belong to confession j. We distinguish between Catholic, Protestant, and other religious affiliations.

Panel (a) of Figure 3 shows that the denominational structure of expellees and natives was relatively similar in the Protestant north of Germany, where mainly Protestant East Prussians arrived, and in the Catholic south-east, where many Catholic Sudeten Germans arrived. Differences were larger in western, middle, and south-eastern parts of the country. Many Catholic Sudeten Germans, for instance, were brought to settle in the mainly Protestant areas of North-Hesse and Franconia.

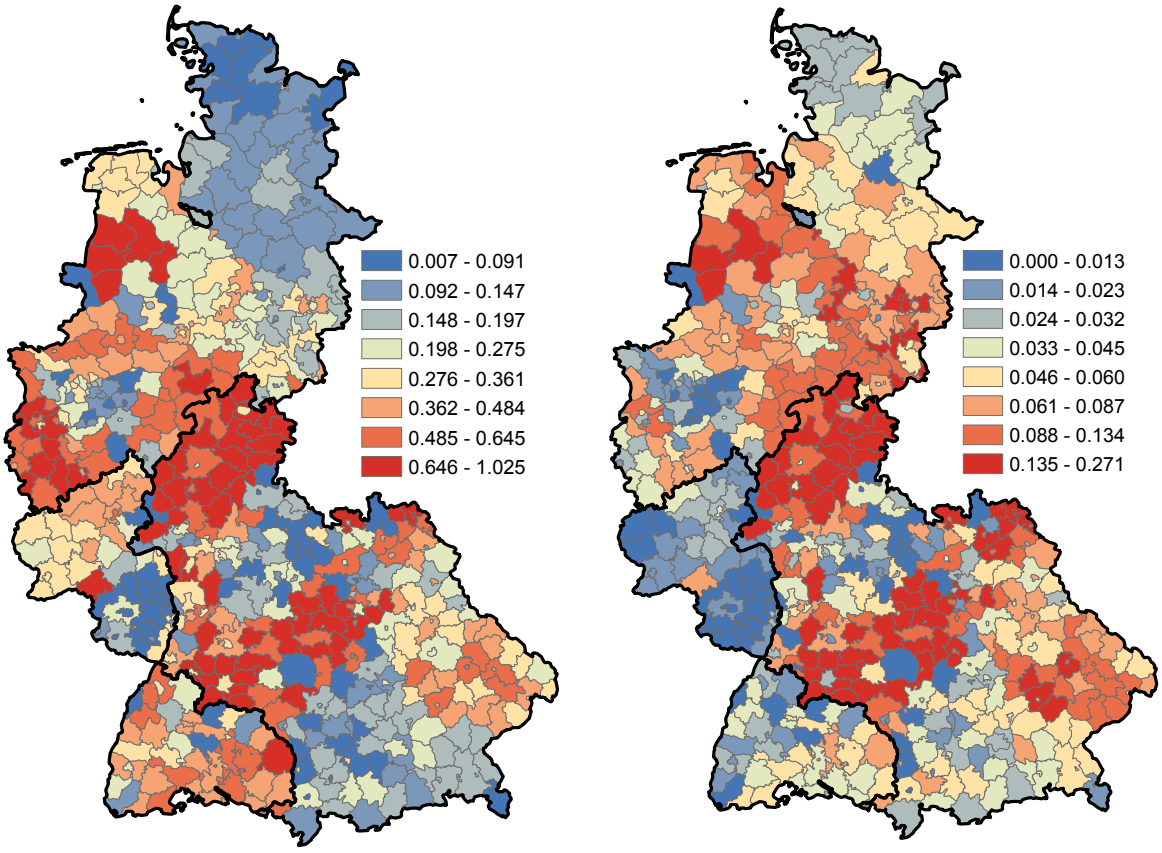
Panel (a) only depicts religious differences between the average expellee and native, but sheds no light on the overall effect of the expellee inflow on the denominational structure of a region. To capture how expellees changed a region's denominational structure, we consider the Euclidean distance between the actual denominational structure of a county, $share^{total}_{ij50}$, and the denominational structure of natives, $share^{nat}_{ij50}$:

$$\begin{aligned} ChangeReligion_{i50} &= \sqrt{\sum_j \left(share^{total}_{ij50} - share^{nat}_{ij50}\right)^2} \\ &= ExpelleeShare_{i50} \times \sqrt{\sum_j \left(share^{nat}_{ij50} - share^{exp}_{ij50}\right)^2}. \end{aligned} \quad (2)$$

The denominational structure of natives can be thought of as the hypothetical denominational structure of the region that would have prevailed without the inflow of expellees. Equation (2) illustrates that the overall change in the religious profile, $ChangeReligion_{i50}$, equals the denominational difference of expellees and non-expellees, $ReligiousDistance_{i50}$ (see above), times the regional population share of expellees, $ExpelleeShare_{i50}$.

Panel (b) of Figure 3 shows that the expellee inflow had the greatest effect on the denominational structure of Lower Saxony, Northern Hesse, and Franconia. In the North-Hessian county of Giessen, for instance, 94% of the native population but only 22% of the expellee population were Protestants. Since expellees made up a quarter of the total population, the overall share of Protestants in the county was 'only' 76%, down from 96.5% before the war. Changes in the religious profile were much more moderate in Schleswig-Holstein or Southern

Figure 3: Expellee Inflows and the Religious Profile of West German Counties, 9/1950



(a) Religious Distance (b) Overall Change in Denominational Structure

Notes: The figure depicts the Euclidean distance between the denominational structure of a) expellees and non-expellees (Panel (a)) and b) the overall population and non-expellees (Panel (b)). See equations (1) and (2) and the corresponding description in the main text for more details. The black line depicts the border of the three occupation zones. The graphs divide the population into eight equally numerous subsets (octiles).
Sources: Own calculations based on Statistisches Bundesamt (1952). *Basemap*: MPIDR (2011).

Bavaria although these regions received very large inflows of expellees.

3 The Integration of Expellees in West Germany

The integration of eight million expellees into the West German economy and society posed a paramount challenge to the war-ridden country. This section presents descriptive evidence on the economic, social, and political integration of expellees in 1950, i.e., five years after

the end of World War II. We show that the degree of integration varied greatly across West German counties. We then outline the factors that can potentially explain these differences, drawing on previous analyses of historians, sociologists, and contemporary observers.

Economic Integration. We consider the employment situation of expellees as our indicator for the *economic integration* of expellees, in line with contemporary observers (Connor 2007). We use the share of economically active persons in the expellee population (henceforth, labor force participation rate) as our main indicator and consider the share of employed persons in the population (henceforth, employment rate) as an alternative indicator.

Employment data come from the census of 17 September 1950. The census distinguished between economically active persons (*Erwerbspersonen*), independent economically inactive persons (*Selbständige Beruflose*), and dependent economically inactive persons (*Angehörige ohne Beruf*) (Statistisches Bundesamt 1955).[2] We calculate the labor force participation rate as the share of economically active persons in the total expellee population of a county.[3] Importantly, there are many contemporary accounts that expellees, discouraged by dismal employment prospects, withdraw from the labor market and either retired early or returned to the fold (Pfeil 1958). The labor force participation rate captures this discouragement effect and can be precisely calculated for all West German counties.

The main drawback of the labor force participation rate is that it does not distinguish between economically active persons with and without employment. Although the census distinguished between the two groups,[4] the German Statistical Office never published the

[2]Economically active persons are those who were in full-time employment at the time of the census or were looking for full-time employment. Part-time workers were not counted as economically active. Independent economically inactive persons were economically inactive but supported themselves through, in particular, retirement pensions or disability benefits. Dependent economically inactive persons were economically inactive and depended economically on another household member.

[3] We cannot calculate the share of economically active expellees in the working-age population, as data on the expellee population by age is only available at the district level, but not at the more disaggregated county level. However, as a robustness check, we calculate a proxy for the county-level expellee population of working age by multiplying the district-level share of expellees aged 18 to 65 with the county-level expellee population. We then use this proxy to calculate the share of economically active persons in the expellee population aged 18 to 65. Section 5 shows that our conclusions are unchanged when using this variable as our measure for economic integration. This is to be expected as selection into specific regions was of no concern in our historical context, and regional differences in the age distribution of expellees were therefore relatively small.

[4]The census counted all persons as unemployed who usually carried out a full-time job but did not have employment at the time of the census. This includes persons not registered as unemployed at an employment

corresponding data at the county level and the original census records are, to the best of our knowledge, no longer available today. Fortunately, Pfeil (1958) drew on the original census records to calculate the share of economically active persons without employment (henceforth, unemployment rate), distinguishing also between expellees and non-expellees.

We use the data in Pfeil (1958) to calculate the employment rate, i.e., the share of employed persons in the population, as (100 − Unemployment rate) × Labor force participation rate. Unfortunately, Pfeil only reports the unemployment rate in nine ranked categories, ranging from 0-4% to above 32%. We use midpoints of these categories to calculate the employment rate. Moreover, the unemployment rate is not available for the federal states of Südbaden and Württemberg-Hohenzollern, so that we can not calculate the employment rate for the 39 counties located in these two states. This is why we use the labor force participation rate rather than the employment rate as our main indicator of economic integration.

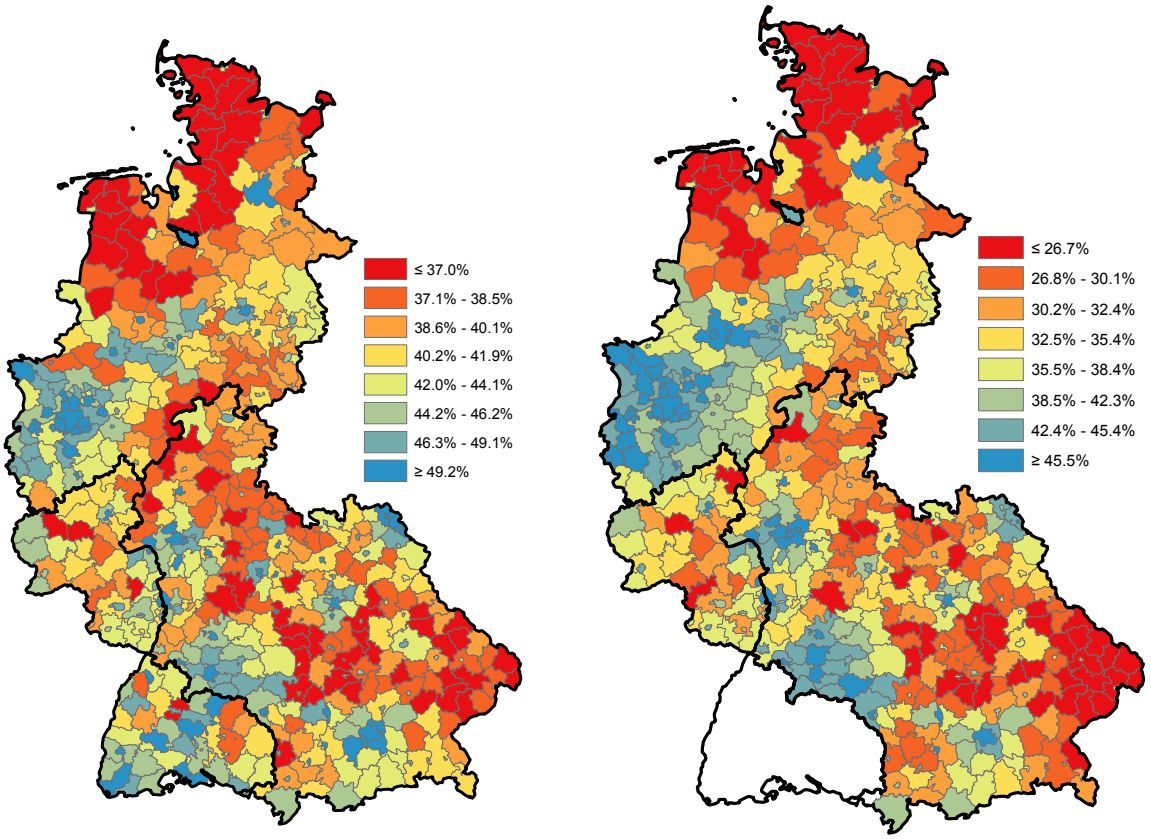
In West Germany as a whole, the labor force participation rate of expellees was 42.2% in September 1950. This is 4.2 percentage points lower than the participation rate of natives (46.4%). Differences between natives and expellees were even more pronounced with respect to the employment rate: 44.2% of the native population but only 35.9% of the expellee population were employed in September 1950.

Figure 4 illustrates that the aggregate numbers hide considerable regional variation in the labor market integration of expellees. The left panel shows that the labor force participation rate of expellees differs greatly across West German counties. It varies from 37.0% or less in regions in the lowest octile to 49.2% or more in the highest octile. There are clear regional clusters: Labor force participation is particularly low in the north, north-west, and south-east of West Germany and particularly high in the west and south-west of the country. These clusters are at times interrupted by the co-existence of small urban counties with higher participation rates and larger rural counties with lower participation rates.

The right panel, which depicts the employment rate of expellees in West German counties, reinforces these observations. The employment rate of expellees varies considerably between

office.

Figure 4: Labor Market Integration of Expellees in West German Counties, 9/1950



(a) Labor force participation rate (b) Employment rate

Notes: The labor force participation rate is the share of economically active persons in the expellee population and the employment rate is the share of employed persons in the population. See the description in the main text for more details. The black line depicts the border of the three occupation zones. The employment rate is not available for counties in the federal states of Südbaden and Württemberg-Hohenzollern. The graphs divide the population into eight equally numerous subsets (octiles).
Sources: Own calculations based on Statistisches Bundesamt (1955) and Pfeil (1958). *Basemap*: MPIDR (2011).

26.7% or less in regions in the lowest octile and 45.5% or more in the highest octile. Again, employment is particularly low in the north, north-west and south-east of West Germany and particularly high in the west and south-west of the country. The correlation between labor force participation and employment rates is 0.928.

Social Integration. Following contemporary sociologists (Müller 1950, Poepelt 1959), we use intermarriage rates between expellees and non-expellees as indicator for the social in-

tegration of expellees. Let a be the number of marriages between non-expellee men and non-expellee women in a region, b the number of marriages between non-expellee men and expellee women, c the number of marriages between expellee men and non-expellee women, and d the number of marriages between expellee men and expellee women (see Table 2). The indicator then compares the actual number of marriages between non-expellees and expellees, as given in Table 2, to the hypothetical number expected if the expellee status would not play any role for the choice of a spouse.

Table 2: Marriage behavior in a region

	Non-expellee women	Expellee women	Sum
Non-expellee men	a	b	$a+b$
Expellee men	c	d	$c+d$
Sum	$a+c$	$b+d$	$a+b+c+d$

Notes: Each entry gives the number of marriages in a cell.

Consider marriages between non-expellee men and expellee women. The actual number of marriages between non-expellee men and expellee women is b. The expected number is given by the probability of a randomly drawn men-women pair being a non-expellee man and an expellee woman, $(a+b)/(a+b+c+d) \times (b+d)/(a+b+c+d)$, times the total number of marriages in the region, $a+b+c+d$. The intermarriage rate between non-expellee men and expellee women is then calculated as:

$$\frac{100 \times b}{\frac{a+b}{a+b+c+d} \times \frac{b+d}{a+b+c+d}} \times (a+b+c+d) = \frac{100 \times b}{\frac{(a+b)\times(b+d)}{a+b+c+d}}. \tag{3}$$

Likewise, the intermarriage rate between expellee men and non-expellee women is:

$$\frac{100 \times c}{\frac{c+d}{a+b+c+d} \times \frac{a+c}{a+b+c+d}} \times (a+b+c+d) = \frac{100 \times c}{\frac{(c+d)\times(a+c)}{a+b+c+d}}. \tag{4}$$

The indicator varies between 0 (no marriages between expellees and non-expellees) and 100 (expellee status plays no role for the choice of a spouse). Higher values of intermarriage rates hence reflect better social integration. Importantly, the intermarriage rates calculated in equations (3) and (4) do not depend mechanically on the relative population size of expellees

and non-expellees, as other commonly used indicators do (such as the share of marriages between two groups in the total number of married couples).

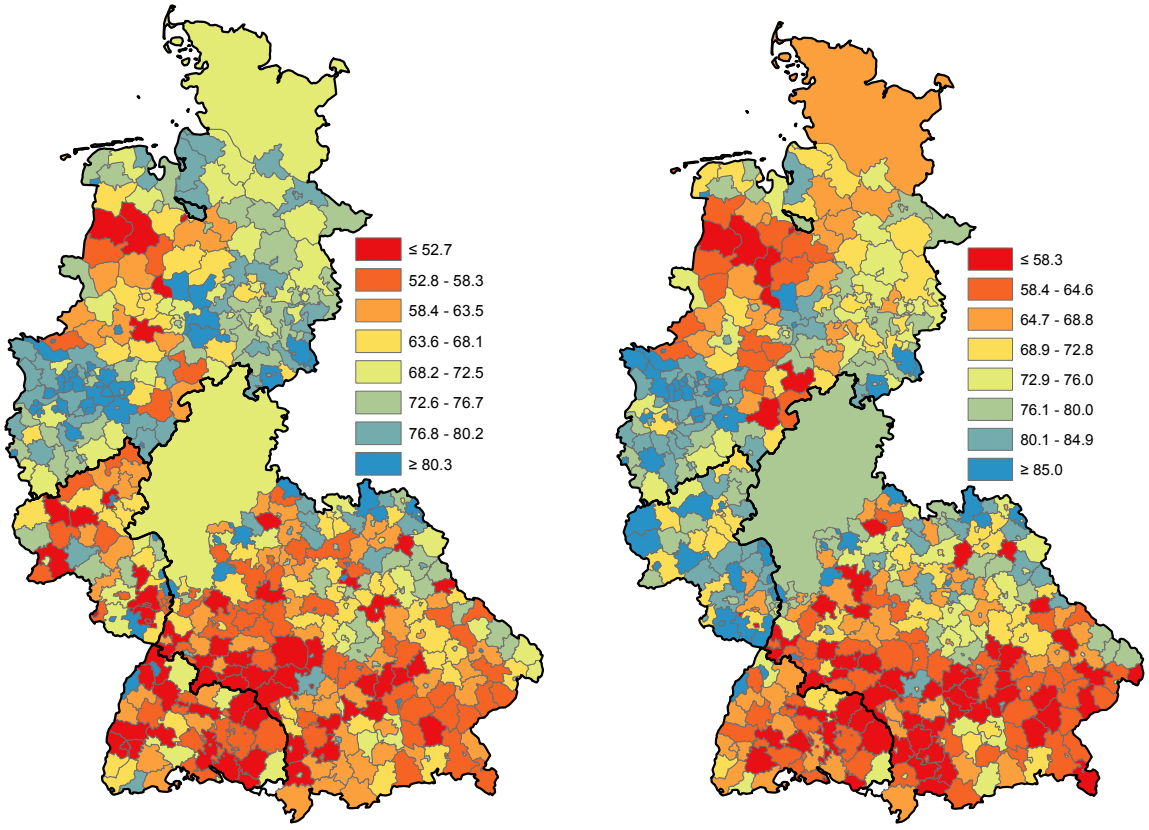
The average intermarriage rates across West German counties are 67.0 for expellee women and 71.9 for expellee men; expellees and non-expellees are significantly less likely to marry each other than what a random match suggests. Again, there is substantial regional heterogeneity. Drawing on data from Poepelt (1959), Figure 5 depicts county-level intermarriage rates in 1950–separately for expellee women and expellee men (data for Hesse and Schleswig-Holstein are only available at the federal state level). For female (male) expellees, the intermarriage rate varies from 52.7 (58.3) or less in regions in the lowest octile to 80.3 (85.0) or more for regions in the highest octile. Clear regional clusters arise: Intermarriage rates are particularly low in the south and in some parts of the north-west of West Germany and particularly high in the west.

Political Integration. The occupying powers harbored deep fears that the expellees could destabilize the young West German democracy–and thus placed strong emphasis on the political integration of expellees (Connor 2007). In fact, the Allies banned refugee organizations until the beginning of 1950, as they saw them as a potential source for the re-emergence of nationalism in Germany, and placed the responsibility of integrating expellees on the established parties. The established parties, in turn, were often reluctant to embrace expellee demands, as they feared losing the support of non-expellee voters. In fact, parties frequently campaigned on an outspoken anti-expellee stance.

The political integration of expellees can be studied from two perspectives, the electoral success of anti-expellee parties and that of expellee parties. Ideally, we would like to study a national election, in which both an anti-expellee and an expellee party competed for votes. However, expellee parties were still banned when West Germany's first national election was held in August 1949. Moreover, several parties only stood for election in a limited number of federal states, making it difficult to compare voting behavior across federal states.

Instead, we focus on the election for state parliament in Bavaria, one of the main refugee

Figure 5: Inter-Marriage between Expellees and Non-Expellees in West German Counties, 1950



(a) Female expellees (b) Male expellees

Notes: The figure shows the intermarriage rates between expellee women and non-expellee men (left panel) and between expellee men and non-expellee women (right panel). See equations (3) and (4) and the corresponding description in the main text for more details on the calculation. The intermarriage rates are only available at the federal state level for the states of Hessen and Schleswig-Holstein. The graphs divide the population into eight equally numerous subsets (octiles).
Source: Poepelt (1959). *Basemap*: MPIDR (2011).

states, in November 1950. The election offers three important advantages for our purpose. First, the expellee party *Bund der Heimatvertriebenen* (BHE) stood for election, forming an electoral pact with the right-wing nationalist party *Deutsche Gemeinschaft* (DG). The BHE primarily represented the interest of the expellees, demanding generous compensation for lost property and the recovery of the territories that Germany ceded after World War II. Second, with the *Bayernpartei* (BP), a fiercely anti-expellee party stood for election which articulated native Bavarian concerns of being swamped by foreign expellees (Connor 2007). In

an infamous speech, Jakob Fischbacher, one of BP's founding members, called for the expellees to be thrown out of the country (Spiegel 1947). Third, the election date was very close to the date of the census, allowing us to relate regional vote shares to regional characteristics elicited in the census.

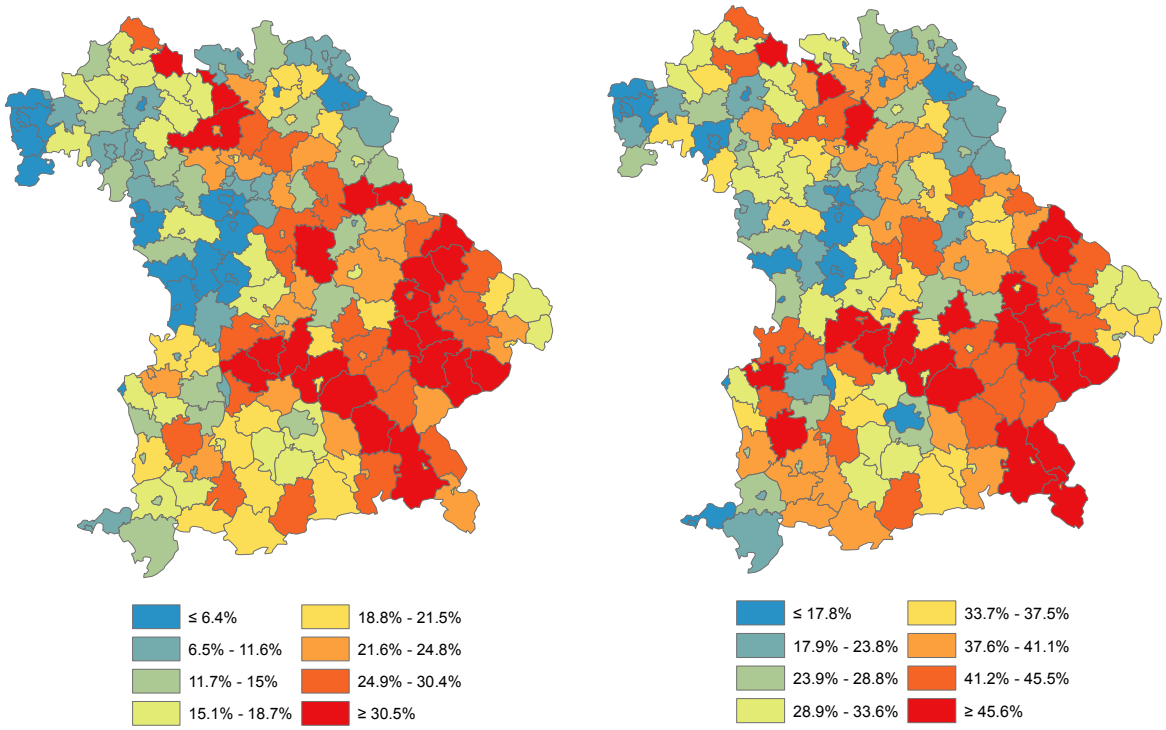
Figure 6 depicts the vote share of BP (left panel) and the combined vote shares of BP and BHE (right panel) in the Bavarian state election of 26 November 1950, as reported in Bayerisches Statistisches Landesamt (1951). State-wide, the BP received 17.9% of the vote, making it the third largest party in parliament (after the Social Democratic Party and the Christian Social Union). The BHE came fourth, receiving 12.3% of votes. In 15 out of 186 Bavarian counties, a majority of voters supported either the BP or the BHE.

The figure show that the vote shares for the two parties differed greatly across Bavaria. The BP was most successful in the south-east of Bavaria, reaching as much as 37.3% in Wasserburg am Inn. It was least successful in the north-west of the country where it frequently fell short of the 5 percent hurdle required to win seats in parliament. Adding the vote share of the BHE does not markedly change the picture. The combined share of the two parties were highest in the south-west and lowest in the north of Bavaria.

Explaining Geographic Differences in Integration. The great regional differences in the degree of economic, social, and political integration were not hidden to contemporary observers. Pfeil (1958), for instance, described the geographical location of the expellees as their 'destiny'. Likewise, there is no shortage of potential explanations for these stark differences in integration outcomes. What is missing, however, is a systematic empirical test of these explanations.

At least three not mutually exclusive hypotheses have been formulated. The first hypothesis states that high population shares of expellees were an impediment to local integration. The hypothesis holds that higher expellee shares intensified the competition on the labor market, slowing down the economic integration of expellees (Braun and Weber 2016, Pfeil 1958). Higher expellee shares might also have intensified the tension between natives and expellees

Figure 6: Vote Share of Special Interest Parties in Bavarian Federal State Election, 11/1950



(a) Anti-expellee party: BP

(b) Special interest parties: BP and BHE

Notes: The figure shows the vote share of BP (left panel) and the combined vote share of BP and BHE in the Bavarian state election of 26 November 1950. The graphs divide the population into eight equally numerous subsets (octiles).
Sources: Bayerisches Statistisches Landesamt (1951). *Basemap*: MPIDR (2011).

and made it easier for expellees to keep their own company (Connor 2007). This might have decreased inter-marriage rates. By slowing down economic integration, higher expellee shares might also have increased expellee support for the BHE. Moreover, the perceived threat of expellees to local traditions might have mobilized native voters to vote for anti-expellee parties.

The second hypothesis states that the integration of expellees was more difficult in rural and agrarian regions. The hypothesis holds that rural economies had little capacity to absorb surplus population, rendering the economic integration of expellees difficult (Connor 2007, Pfeil 1958). In fact, both Connor (2007) and Pfeil (1958) argue that the job prospects of expellees were determined less by the population share of expellees than by the 'absorption

capacity' of rural economies. It also has been argued that resentments against expellees were more pronounced in rural areas, and that relations between farmers and expellees were especially fraught with problems (Bayerisches Statistisches Landesamt 1950, Connor 2007, Schulze 2002). These tensions between natives and expellees in rural areas might be reflected in lower intermarriage rates and higher support for expellee and anti-expellee parties.

The third hypothesis states that religious differences between expellees and natives shaped integration outcomes. Qualitative regional studies indicate that expellees were more readily accepted in the predominantly Protestant state of Lower Saxony if they were Protestants themselves (Brelie-Lewien and Grebing 1997, Schulze 2002). Studies of Catholic Westphalia and Protestant Northern Hesse reach similar conclusions (Exner 1999, Spiegel-Schmidt 1959). Consequently, religious differences between expellees and natives might have slowed down the social integration of expellees, and might have increased the support for particularist parties. Religious differences might also have been an impediment to economic integration of expellees if they led to discrimination on the labor market.

Summing up the above, we have the following three testable hypotheses:

H1. Higher population shares of expellees deteriorated integration outcomes.

H2. More agrarian regions were less successful in integrating expellees than less agrarian regions.

H3. Religious differences between expellees and non-expellees worsened integration outcomes.

4 Empirical Strategy

We exploit regional variation across West German counties[5] to test the three hypotheses. Our data come from various data sources that we have digitalized for our analysis. The sources

[5]While there are 556 of such counties in 1950, a few of them experienced changes in their administrative borders between 1939 and 1950. We account for these border changes by merging counties, so that county borders are comparable over time (see Appendix A for the details). This leaves us with 526 counties.

include the population and occupation censuses of 1939, 1946, and 1950,[6] the housing census in 1950, administrative statistics on the Bavarian state election for 1950, 1954 and 1958, sales tax statistics for 1935, marriage statistics for 1948 to 1952, and data on war destructions from the 1949 statistical yearbook of German municipalities and the county map (*Kreismappe*) of the Institut für Raumforschung. Appendix B lists the data source for each variable.

4.1 OLS estimation

Let $Y_{i,50}$ be a particular indicator for the economic, social, or political integration of expellees in county i in 1950. Our basic regression specification is:

$$\begin{aligned} Y_{i50} &= \alpha + \beta_1 ExpelleeShare_{i50} + \beta_2 Agriculture_{i39} + \\ &\quad + \beta_3 ReligiousDistance_{i50} + X_{i39}\gamma + u_{i50}, \end{aligned} \tag{5}$$

where $ExpelleeShare_{i50}$ is the population share of expellees in county i in 1950, $Agriculture_{i39}$ is the agricultural employment share in 1939, $ReligiousDistance_{i50}$ is the religious distance between expellees and natives in 1950, X_{i39} is a vector of control variables for 1939 characteristics, and u_i is an error term. As counties vary widely in population size, we estimate population-weighted regressions (and provide unweighted regression results as a robustness check).

We consider three sets of integration indicators (see Section 3). First, we use the labor-force-to-population ratio of expellees as our main indicator for economic integration, and consider the employment-to-population ratio as an alternative indicator. Second, we use intermarriage rates between expellees and non-expellees, calculated separately for expellee men and women, as indicator for social integration. Third, we use the vote share for the anti-immigrant party *Bayernpartei* (BP) as our main indicator for political integration, and consider the sum of the vote share of the BP and the expellee party *Block der Heimatvertriebenen und Entrechteten* (BHE) as an alternative indicator.

[6] To the best of our knowledge, there exist no records of the underlying historical micro census data. Instead, we digitalized aggregated county-level data published mostly by the German Statistical Office.

The hypotheses H1, H2, and H3 imply that the three main explanatory variables of interest–expellee share, agricultural employment share, and religious distance–all have a negative effect on integration.

Population shares of expellees. Consider the expellee share first. Estimating equation (5) by ordinary least squares (OLS) will yield a consistent estimate of β_1 if $Cov(ExpelleeShare_{i50}, u_{i50}) = 0$. This covariance restriction implies that the expellee share must not be correlated with any unobserved factor that affects the economic, social, or political integration of expellees (depending on the outcome variable considered). In particular, the estimate of β_1 will be upward biased if expellees selected, based on unobservable characteristics, into West German regions where they saw higher chances of integration.

The problem of endogenous self-selection is arguably most severe with respect to economic integration, since the primary concern of expellees in the post-war period was economic deprivation (Connor 2007) rather than social or political exclusion. In fact, the inner-German migration of expellees in the 1950s were primarily movitivated by labor market prospects (Ambrosius 1996, Braun and Weber 2016). However, self-selection into thriving labor markets was arguably a minor problem until 1950 when we measure expellee shares. Importantly, the initial distribution of expellees was not driven by local labor market conditions (Braun and Mahmoud 2014, Nellner 1959). As described in Section 2, expellees first fled to regions close to their homelands, and were later transferred to their final destination region by the authorities. They could therefore not choose their destination based on local labor market conditions. Moreover, the occupying powers' military governments did not account for local job prospects when distributing expellees, and the local West German authorities, if functioning at all after the war, had initially no say in the distribution of expellees (Müller and Simon 1959). Once expellees had arrived in a region, they remained severely restricted to move elsewhere.

Overwhelmed by the size and pace of the inflow, the military governments' prime concern was to provide expellees with a roof over their head (Nellner 1959). Expellees were thus over-

represented in rural areas that were less devastated by the war (see again Section 2). If less destroyed areas offered better (worse) integration opportunities, this could potentially bias the effect of expellee density on integration outcomes upwards (downwards). Furthermore, moving restrictions were gradually phased out until 1949. Some expellees might therefore have moved endogenously to counties with better integration prospects by 1950.

We deal with these potential problems in two ways. First, we condition on various indicators of war destructions, and also on other local characteristics that may have influenced the integration prospects of expellees. Second, we use an instrumental variable (IV) strategy. We thereby isolate variation in regional expellee shares that is attributable to the initial placement of expellees and not to subsequent movements. We will discuss our control variables and the IV strategy in subsections 4.2 and 4.3, respectively.

Agrarian regions. Consider next the rurality of a region as measured by the agricultural employment share in 1939. For β_2 to have a causal interpretation, the pre-war agricultural employment share must not be correlated with the error term. We believe that this identifying assumption is likely to hold. In particular, reverse causality is of no concern since agricultural employment is measured in 1939 and thus before the arrival of expellees. However, agricultural employment might still correlate with unobserved determinants of expellee integration. We deal with this potential problem by controlling for regional characteristics that have been discussed as potential determinants of expellee integration (see subsection 4.2).

Religious differences. Focus finally on the religious distance between expellees and natives in 1950, as defined in equation (1). The main identifying assumption for a causal interpretation of β_3 is that religious distance must be uncorrelated with any unobserved factor that affects the economic, social, or political integration of expellees. Reverse causality should again be of little concern since the religious denomination of expellees and natives were pre-determined and changes of confession uncommon at the time. However, had expellees chosen their destination themselves, a high degree of religious distance might correlate with, potentially unobserved, regional characteristics conducive to integration. After all, Catholic expellees would probably

only move to a Protestant region if this region would offer them exceptionally good integration prospects.

Although endogenous moving decisions should be of little concern in our context (as we have discussed before), we can not completely rule them out either. We again deal with this problem in two ways. First, we condition on variables that might have affected expellee integration. Second, we use an IV strategy to isolate variation in religious distance that is attributable to the initial distribution of expellees and not to subsequent movements. We next discuss the control variables and then our IV strategy.

4.2 Control Variables

Our vector of control variables consists of regional characteristics that might have affected expellee settlement pattern and influenced expellee integration. First and foremost, we use rubble at the end of the war per capita in 1939 as a measure of war destruction, following previous work by Brakman et al. (2004), Burchardi and Hassan (2013) and Braun and Kvasnicka (2014). War dislocation might have had an effect on both integration and–through the availability of housing–on expellee settlement patterns. Data on the amount of rubble, published in Deutscher Städtetag (1949), is only available for the 199 largest West German cities. We aggregate the data to the county level, implicitly assuming war destructions to be zero in smaller municipalities.

In a robustness check, we use the share of dwellings built until 1945 that were damaged in the war as an alternative measure. This measure, based on data from Statistisches Bundesamt (1956), has the advantage that it is available at the county level. However, it is not a direct measure of war destructions, as it relates only to residential housing that survived the war and could accommodate residents in 1950. In a second robustness check, we use a dichotomous variable, published by Institut für Raumfoschung (1955), that measures the loss in housing space in three categories ('no or minor losses', 'substantial losses', 'very substantial losses'). The dichotomous variable, which–given the lack of a comprehensive Germany-wide statistic–is also endorsed in Müller and Simon (1959), is based on various administrative sources at the

national and federal state level.

Second, we control for the share of a county's population in 1939 that lived in cities with at least 10,000 inhabitants to account for pre-war differences in urbanisation, drawing on data published in Statistisches Reichsamt (1940). City dwellers might be more open to 'newcomers', as they had more contact with people from different backgrounds than inhabitants of rural areas (Connor 2007). At the same time, urban areas were more likely to be devastated in the Allied bombing campaign and thus received lower expellee inflows after the war.

Third, we include a dummy for regions located at the post-war inner German border (distance smaller than 75 kilometers). The inner German border might have impaired (economic) integration outcomes as regions at the inner-German border experienced a disproportionate loss in market access after World War II (Redding and Sturm 2008). At the same time, regions at the inner-German border also experienced high inflows of expellees because of their geographic proximity to the former eastern territories of the German Reich (see Section 2).

Fourth, we add a dummy for whether the majority of a region was Catholic in 1939, based on data published in Statistisches Reichsamt (1941). Religious affiliation might have influenced voting patterns in Bavaria and might also be more generally correlated with economic outcomes (Becker and Woessmann 2009, Weber 1904/05).

Finally, we use state-level fixed effects to control for unobserved factors common to all counties located in a state. State-level fixed effects also account for unobserved factors at the occupation-zone level (as each state is located in just one occupation zone).

4.3 IV Estimation

Our regression analysis conditions on covariates that might have affected the initial regional distribution of expellees, and also on other local characteristics that may have influenced the integration prospects of expellees. This distribution was very persistent in the first few years after the war, since the Allies severely restricted the freedom of movement until 1949 (see Section 2). However, some expellees might still have endogenously moved by 1950, leaving

behind their initial destination. If this re-location is based on unobserved characteristics, which in turn affect expellee integration, OLS estimates of β_1 and β_3 might be biased. In particular, one might expect β_1 to be upward biased if expellees relocated to regions with greater employment opportunities.

To deal with potential endogenous self-selection in the late 1940s, we use an IV strategy and isolate the variation in expellee shares and religious distance which is due to the initial placement of expellees only. In particular, we use the expellee share in October 1946, when severe restrictions on mobility were still in place, as an instrument for the expellee share in September 1950. The first stage regression for the expellee share in 1950 is:

$$\begin{aligned} ExpelleeShare_{i50} &= \eta + \kappa_1 ExpelleeShare_{i46} + \kappa_2 Agriculture_{i39} \\ &\quad + \kappa_3 ReligiousDistance_{i50} + X_{i39}\kappa_4 + v_{i50}, \end{aligned} \tag{6}$$

where $ExpelleeShare_{i46}$ is the population share of expellees in county i in 1946 and X_{i39} is the same set of covariates as in equation (5). The key identifying assumption of the IV regression is $Cov(ExpelleeShare_{i46}, u_{i50}) = 0$. The assumption states that (i) there is no unobserved factor that drives both Y_{i50} and $ExpelleeShare_{i46}$, and that (ii) the expellee share in 1946 affects integration in 1950 only through its effect on the expellee share in 1950. In addition, we need the expellee share 1946 to be relevant for explaining the expellee share in 1950.

In a similar spirit, we also isolate the variation in religious distance that is due to the initial placement of expellees. Recall that religious distance is measured as:

$$\begin{aligned} ReligiousDistance_{i50} &= \Bigg[\left(share_{i50}^{cath,nat} - share_{i50}^{cath,exp}\right)^2 + \left(share_{i50}^{prot,nat} - share_{i50}^{prot,exp}\right)^2 \\ &\quad + \left(share_{i50}^{other,nat} - share_{i50}^{other,exp}\right)^2\Bigg]^{0.5}. \end{aligned} \tag{7}$$

Our instrument replaces the 1950 share of expellees belonging to a certain confession with the correspondent 1946 share. Unfortunately, we do not have regional data on the religious mark-up of expellees who lived in West Germany in 1946. Instead, we use data on the origin regions of expellees and the pre-war shares of the different confessions in these origin regions.

The data allow us to distinguish seven origin regions (Silesia, East Brandenburg, Pomerania, East Prussia, CSSR (Sudetenland), Poland, Danzig). Let $ExpelleeShare^{s}_{i46}$ be the 1946 share of expellees from origin region s among all expellees in region i and let $share^{s,j}_{39}$ be the 1939 share of the population in origin region s belonging to confession $j = \{cath, prot, other\}$. We then approximate the predicted share of expellees in region i belonging to confession j in 1946 as:

$$share^{j}_{i46} = \sum_{s} ExpelleeShare^{s}_{i46} \times share^{s,j}_{i39}. \tag{8}$$

In principle, non-expellees might also have moved endogenously after moving restrictions were abolished. To address this potential problem, we replace the 1950 share of natives in region i belonging to confession j, $share^{j,nat}_{i50}$, by the corresponding 1939 share, $share^{j,nat}_{i39}$.

Our instrument is then given by

$$\begin{aligned} ReligiousDistance_{i46} \;=\; & \Bigg[\left(share^{cath,nat}_{i39} - share^{cath,exp}_{i46}\right)^2 + \left(share^{prot,nat}_{i39} - share^{prot,exp}_{i46}\right)^2 \\ & + \left(share^{other,nat}_{i39} - share^{other,exp}_{i46}\right)^2\Bigg]^{0.5}. \end{aligned} \tag{9}$$

The first stage regression for the predicted religious distance is:

$$\begin{aligned} ReligiousDistance_{i50} \;=\; & \delta + \lambda_1 ReligiousDistance_{i46} + \lambda_2 ExpelleeShare_{i50} \\ & + \lambda_3 Agriculture_{i39} + X_{i39}\lambda_4 + u_{i50}, \end{aligned} \tag{10}$$

The key identifying assumption of the IV regression is $Cov(ReligiousDistance_{i46}, u_{i50}) = 0$.

5 Empirical Evidence

The figures in Section 3 show substantial heterogeneity in integration outcomes across regions and reveal clear regional clusters. The following section aims at explaining this heterogeneity in order to understand what hampers and what promotes integration. In particular, we explore how the population share of expellees, the rurality of the receiving region, and the

religious distance between expellees and natives determine integration outcomes. We consider three dimensions of integration: economic, political, and social integration. Causal evidence for each of these three dimensions is presented in the following subsections.

5.1 Economic Integration

We start with the determinants of expellees' economic integration, where economic integration is measured by success on the labor market. In a first set of regressions, we use the labor force participation rate of expellees in 1950 as the dependent variable. For a start, we focus on the size of regional expellee inflows. Column (1) of Table 3 presents estimates from an OLS model that includes the population share of expellees in 1950 as the variable of interest as well as our set of control variables (see Section 4.2). The correlation between the share of expellees arriving and the share of expellees in the labor force is negative and statistically significant (column (1)). In other words, the more expellees settled in a county, the lower the share of those who became economically integrated in the labor market. The estimated coefficient of -0.305 implies that a one standard deviation increase in the 1950 share of expellees (s.d. 0.089) reduces labor force participation of expellees by 0.44 standard deviations, or 6.0% relative to the mean labor force participation rate across all counties.

In Figure C, panel (a) in the Appendix we draw the (unconditional) linear regression line on the scatter plot between the population share of expellees in 1950 and the labor force participation rate. The figure illustrates that the relationship between the labor force participation rate of expellees and their population share is approximately linear and not driven by outliers. As this is true for all of our independent and dependent variables of interest (panels (b) to (i)), we stick to linear specifications in all following regressions.

Table 3: Baseline results - forced migration and labor force participation of expellees

Dependent variable:	labor force participation rate 1950							employment rate 1950	
	OLS	OLS	OLS	OLS	OLS	IV	IV	IV	IV
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Expellee share 1950	-0.305***			-0.158***	-0.155***	-0.186***	-0.257***	-0.281***	-0.330***
	(0.068)			(0.040)	(0.056)	(0.037)	(0.059)	(0.054)	(0.072)
Agricultural employment share 1939		-0.230***		-0.191***	-0.149***	-0.184***	-0.141***	-0.259***	-0.217***
		(0.028)		(0.025)	(0.018)	(0.024)	(0.017)	(0.021)	(0.022)
Religious distance 1950			-0.002	0.000	-0.007	0.004	0.000	0.057***	0.015
			(0.019)	(0.015)	(0.010)	(0.017)	(0.011)	(0.018)	(0.016)
Population share living in cities with at least 10,000	0.047**	-0.031*	0.056**	-0.021	0.011	-0.018	0.008	-0.026***	-0.017
inhabitants 1939	(0.018)	(0.017)	(0.024)	(0.014)	(0.009)	(0.014)	(0.008)	(0.009)	(0.011)
Rubble per capita 1939	1.126	1.091**	2.257*	0.704	0.464	0.638	0.335	0.655	0.580*
	(0.732)	(0.550)	(1.246)	(0.477)	(0.372)	(0.459)	(0.312)	(0.441)	(0.329)
Distance to inner German border is smaller than 75 km (0/1)	0.022	-0.010	0.002	0.003	-0.001	0.005	0.001	-0.011	-0.005
	(0.014)	(0.007)	(0.013)	(0.008)	(0.007)	(0.008)	(0.007)	(0.010)	(0.010)
Majority is Catholic in 1939 (0/1)	-0.010	0.007	-0.002	0.001	-0.004	0.000	-0.006	0.000	-0.004
	(0.009)	(0.007)	(0.009)	(0.008)	(0.005)	(0.008)	(0.005)	(0.009)	(0.007)
R^2	0.573	0.662	0.458	0.687	0.777	.	.	.	.
Weak identification test (Cragg-Donald Wald F statistic)	.	.	.	.	.	1027.51	759.96	1038.50	766.90
Shea's Partial R^2: expellee share 1946	.	.	.	.	.	0.920	0.842	0.925	0.850
Shea's Partial R^2: predicted religious distance	.	.	.	.	.	0.799	0.751	0.813	0.766
State dummies	no	no	no	no	yes	no	yes	no	yes
Number of observations	526	526	526	526	526	526	526	487	487

Notes: In columns (1) to (7), the dependent variable is the labor force participation rate of expellees in 1950. In columns (8) and (9), the dependent variable is the employment rate of expellees in 1950. The IV regressions in columns (6) to (9) use the expellee share in 1946 and the predicted population-weighted religious distance as instruments for the expellee share 1950 and the religious distance 1950, respectively. Columns (5), (7), and (9) include dummies for each of the nine West German states. Regressions are weighted with population in 1939. $***$, $**$ and $*$ denote statistical significance at the 1%-, 5%- and 10%-level, respectively. Standard errors clustered at the labor market region level are in parentheses. The weak identification test refers to the Cragg-Donald F statistic; critical values from Stock and Yogo (2005) suggest the instruments to be strong.

Next, we turn to our second variable of interest: the agricultural employment share in 1939. The correlation between pre-war agricultural employment and the labor market integration of expellees is negative and statistically significant (point estimate: -0.230, column (2)). This is consistent with the idea that agrarian regions had little capacity to absorb expellees, as the amount of agricultural land was limited (Grosser 2006). In terms of magnitude, a one standard deviation increase in the agricultural employment share in 1939 lowers expellees' labor force participation rate by 0.86 standard deviations.

In column (3), we consider the correlation between the labor force participation rate in 1950 and the religious distance between expellees and natives in that year. The results show no correlation between religious dissimilarity and economic integration (point estimate: -0.002).

As discussed earlier, expellees were primarily settled in rural regions where more intact housing was available. In fact, expellee shares in 1950 and agricultural employment shares in 1939 are positively correlated. In a next step, we therefore include all three variables of interest in one regression model to separate the influence of expellee share and agricultural employment. The results in column (4) show point estimates that are somewhat smaller in absolute size. Still, we find that expellee inflow and a county's pre-war agricultural employment are economically and statistically significant determinants of economic integration. The coefficients of our control variables remain insignificant: Neither did counties at the inner-German border perform worse than other counties in terms of economic integration nor did rubble per capita affect expellees' labor force participation.

In column (5), we probe the robustness of our results and add fixed effects for the nine West German states to the set of control variables. These state dummies purge any unobserved factors at the state level which might simultaneously affect our explanatory variables of interest and the integration of expellees into the labor force.[7] That is, we exclusively use the within-state variation to identify the effect of the different explanatory variables on economic integration. The coefficient of the expellee share is virtually unchanged at -0.155. That is, a one standard deviation increase in the 1950 share of expellees reduces labor force

[7]Note that adding state dummies has the downside of removing a lot of variation from our data set: regressing the 1950 share of expellees on state dummies gives an R^2 of 0.67.

participation of expellees by 0.23 standard deviations (or 3% relative to the mean). The coefficient of the agricultural employment share is very similar to before and clearly reveals worse economic integration prospects in more agrarian counties: A one-standard-deviation increase in the agricultural employment share reduces labor force participation of expellees by as much as -0.56 standard deviations. We still find no effect of religious distance on the economic integration of expellees in Germany.

As discussed in Section 2, expellees did not sort with a view to economic integration prospects and faced very tight moving restrictions. To alleviate concerns that some expellees might nevertheless have endogenously moved by 1950, we estimate IV regressions. There are two instruments that we use. First, we use the expellee share in 1946 as an instrument for the 1950 expellee share. Second, we use the predicted religious distance calculated with 1939 and 1946 values as instrument for the religious distance observed in 1950. Our IV strategy thus isolates the variation in expellee shares and religious distance that is due to the initial placement of expellees only (see Section 4 for a discussion of the instruments and the identifying assumptions).

Columns (6) and (7) in Table 3 contain the IV regression results for the labor force participation rate as dependent variable (without and with state-fixed effects, respectively). These are our preferred specifications. The lower part of the table presents summary results for the first-stage regressions. The Cragg-Donald Wald F statistic varies between 759 and 1028, suggesting that we do not have a weak instrument problem (for critical values see Stock and Yogo (2005)). Both of our instruments are relevant as shown by Shea's partial R^2 above 0.7. The detailed first stage regression results in the appendix reveal a strong economical and statistical relationship between the expellee share 1946 and the expellee share 1950 as well as between the predicted religious distance and the actual religious distance 1950 (see Table D1).

Table 4: Robustness checks - forced migration and labor force participation of expellees

Dependent variable: labor force participation rate 1950	calculated over overall population						calculated over population of working age	
	unweighted		with alternative measure for damage I		with alternative measure for damage II			
	IV	IV	IV	IV	IV	IV	IV	IV
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Expellee share 1950	-0.142***	-0.164***	-0.169***	-0.212***	-0.186***	-0.240***	-0.232***	-0.377***
	(0.029)	(0.047)	(0.035)	(0.059)	(0.034)	(0.073)	(0.049)	(0.081)
Agricultural employment share 1939	-0.134***	-0.131***	-0.180***	-0.143***	-0.201***	-0.139***	-0.153***	-0.198***
	(0.012)	(0.011)	(0.019)	(0.017)	(0.031)	(0.017)	(0.027)	(0.024)
Religious distance 1950	0.011	0.003	0.005	0.001	0.003	0.001	0.004	0.009
	(0.010)	(0.009)	(0.014)	(0.011)	(0.016)	(0.011)	(0.022)	(0.015)
Population share living in cities with at least 10,000	0.004	0.005	-0.024*	0.003	-0.020	0.009	0.036***	0.018
inhabitants 1939	(0.007)	(0.007)	(0.013)	(0.009)	(0.019)	(0.009)	(0.010)	(0.012)
Rubble per capita 1939	0.338	0.394					0.206	0.499
	(0.402)	(0.331)					(0.480)	(0.440)
Distance to inner German border is smaller than 75 km (0/1)	0.001	0.003					0.014	0.008
	(0.005)	(0.004)					(0.011)	(0.009)
Majority is Catholic in 1939 (0/1)	0.003	-0.008**	0.001	-0.007	-0.001	-0.007	-0.003	-0.013*
	(0.004)	(0.003)	(0.008)	(0.005)	(0.008)	(0.005)	(0.012)	(0.007)
Loss in housing space, 3 categories								
[reference category: minor losses]								
substantial losses			-0.007	-0.004				
			(0.005)	(0.005)				
very substantial losses			0.025***	0.017**				
			(0.009)	(0.008)				
Damaged dwellings 1945					0.003	0.014		
					(0.018)	(0.018)		
Weak identification test (Cragg-Donald Wald F statistic)	1103.24	711.82	1005.04	751.37	289.30	291.42	1027.51	759.96
Shea's Partial R^2: expellee share 1946	0.890	0.754	0.928	0.812	0.923	0.800	0.920	0.842
Shea's Partial R^2: predicted religious distance	0.814	0.778	0.795	0.749	0.795	0.749	0.799	0.751
State dummies	no	yes	no	yes	no	yes	no	yes
Number of observations	526	526	526	526	526	526	526	526

Notes: The dependent variable in columns (1) to (6) is the labor force participation rate of expellees in 1950 calculated over the overall population. The dependent variable in columns (7) and (8) is the labor force participation rate of expellees in 1950 calculated over the population of working age (aged 18 to 65 years). All regressions are IV regressions using the expellee share in 1946 and the predicted population-weighted religious distance as instruments for the expellee share 1950 and the religious distance 1950, respectively. Columns (2), (4), (6), and (8) include dummies for each of the nine West German states. Regressions in columns (3) to (8) are weighted with population in 1939. $***$, $**$ and $*$ denote statistical significance at the 1%-, 5%- and 10%-level, respectively. Standard errors clustered at the labor market region level are in parentheses. The weak identification test refers to the Cragg-Donald F statistic; critical values from Stock and Yogo (2005) suggest the instruments to be strong.

The second stage results in columns (6) and (7) of Table 3 confirm that expellee inflows and the 1939 agricultural employment share had a highly significant negative impact on expellees' labor force participation rates–irrespective of whether we include state fixed effects or not. The coefficient estimates on the share of expellees are -0.186 (s.e. 0.037) and -0.257 (s.e. 0.059) without and with state fixed effects, respectively. The point estimate of -0.257 in the fully-fledged specification with state fixed effects suggests that an increase in the share of expellees settling in a county by one standard deviation reduces their labor force participation rate by 0.37 standard deviations or 5%. An increase in the agricultural employment share by one standard deviation worsens expellees' labor force participation rate by 0.53 standard deviations or 7.7% (point estimate with state fixed effects, column (7)).

To further probe the robustness of our results we use the employment rate as an alternative dependent variable (columns (8) and (9)). To wit, we focus on active persons with employment only (and disregard active persons without employment). Note that this information is available for a subset of 487 counties only so that we have to run the following regressions on a smaller subsample. Based on the regression without (with) state fixed effects we see a one standard deviation increase in expellee inflow to reduce employment by 0.30 (0.35) standard deviations, respectively. The corresponding results for the agricultural employment share are a reduction in employment by 0.71 (without state fixed effects) and 0.59 (with state fixed effects) standard deviations, respectively.

Table 4 present additional robustness checks to our preferred specifications (from Table 3, columns (6) and (7)). First, we run unweighted regressions in columns (1) and (2). And second, we use the loss in housing space in three categories (columns (3) and (4)) as well as the share of damaged dwellings (columns (5) and (6)) as alternative measures of war destruction. Reassuringly, in all of these robustness checks our point estimates hardly change. Finally, in columns (7) and (8), we use the labor force participation rate of expellees calculated over the population of working age, instead of over the population as a whole, as an alternative dependent variable. Since data on the expellee population by age is not available at the county level, we rely on data at the more aggregated district level (see Footnote 3 for details). We

again find that the expellee share and agricultural employment have a strong negative effect on labor force participation.

5.2 Social Integration

Next, we investigate the determinants of social integration. We measure social integration by the intermarriage rate between expellees and natives. Table 5 presents our core results on how expellee shares, pre-war agricultural employment of the receiving county, and religious distance affect intermarriage behavior. We begin by regressing the intermarriage rate separately on each of our variables of interest (conditional on our standard set of covariates). Column (1) shows an economically and statistically significant negative correlation between the expellee share in 1950 and the intermarriage rate. This is consistent with the view that higher expellee shares made it easier for expellees to keep to themselves and intensified animosity between natives and expellees (Connor 2007), both leading to lower intermarriage rates. Column (2) displays a significant negative correlation between the agricultural employment share in 1939 and intermarriage behavior, conditional on covariates. As hypothesised, more agrarian communities were thus less inclined to socially intermix (Bayerisches Statistisches Landesamt 1950, Connor 2007, Schulze 2002). We again do not find any relationship between religious distance and integration (column (3)).

In columns (4) and (5), we combine all explanatory variables in one OLS regression. The specifications in columns (4) and (5) differ in that state fixed effects are added in column (5), which thus only exploits within-state variation. Compared to the simple regressions in the first columns, the coefficients for both expellee and agricultural employment shares decrease somewhat but remain economically and statistically significant. An increase in the 1950 expellee share by one standard deviation lowers the intermarriage rate by 0.30 standard deviations or 6.9% (estimate of -0.366, column (5)). A one-standard-deviation increase in the agricultural employment share has about two thirds of this effect and decreases the intermarriage rate by 0.18 standard deviations (estimate of -0.079, column (5)). Note that the coefficient on the religious distance turns significant at the 5%-level once we only exploit within-state

variation by including state-fixed effects. The effect of religious distance is moderate: The point estimate suggests that a one-standard-deviation increase in religious distance reduces intermarriage rates by 0.11 standard deviations.

To deal with expellees who potentially moved endogenously based on unobserved factors, we again estimate IV regressions without and with state-fixed effects. Results are presented in columns (6) and (7), respectively. Differences between the OLS and IV estimation results are small and confidence intervals overlap. This suggests that endogenous self-selection of expellees into regions between 1946 and 1950 is a minor issue (in line with historical writings on this issue by, e.g., Müller and Simon (1959) and Ziemer (1973)).

So far, we have studied overall intermarriage rates. These overall rates, however, potentially mask important differences in social integration between male and female expellees. In columns (1) and (2) of Table 6, we therefore provide OLS and IV estimation results for the intermarriage rate between male expellees and female natives only. As we can see from the table, the social integration of male expellees is much more susceptible to the environment. In particular, an increase in the share of expellees arriving in a county markedly reduces the probability of male expellees to marry a female native: we find that an increase in the 1950 expellee share by one standard deviation lowers the intermarriage rate of male expellees by 0.46 standard deviations or 10.4% (OLS estimate of -0.553, column (1) of Table 6) compared to 0.30 standard deviations or 6.9% for all expellees (OLS estimate of -0.366, column (5) of Table 5). Also, religious dissimilarity appears to have been particularly detrimental for the social integration of male expellees.

Table 5: Baseline results - forced migration and marriage behavior: all expellees

	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	IV (6)	IV (7)
Expellee share 1950	-0.373***			-0.298***	-0.366***	-0.238**	-0.210*
	(0.072)			(0.093)	(0.115)	(0.100)	(0.122)
Agricultural employment share 1939		-0.164***		-0.086*	-0.079**	-0.102**	-0.092***
		(0.032)		(0.048)	(0.031)	(0.048)	(0.030)
Religious distance 1950			-0.073	-0.072	-0.057**	-0.069	-0.058**
			(0.056)	(0.052)	(0.024)	(0.057)	(0.026)
Population share living in cities with at least	0.084***	0.032	0.090***	0.048*	0.000	0.044*	0.006
10,000 inhabitants 1939	(0.017)	(0.020)	(0.019)	(0.026)	(0.017)	(0.026)	(0.017)
Rubble per capita 1939	0.890	1.349**	2.086***	0.617	0.675*	0.751	0.864**
	(0.617)	(0.677)	(0.733)	(0.615)	(0.356)	(0.630)	(0.399)
Distance to inner German border is smaller	0.055***	0.020	0.027	0.038*	0.045**	0.033	0.042**
than 75 km (0/1)	(0.019)	(0.018)	(0.017)	(0.020)	(0.018)	(0.020)	(0.017)
Majority is Catholic in 1939 (0/1)	-0.018	-0.004	-0.007	-0.008	-0.032***	-0.006	-0.029***
	(0.017)	(0.019)	(0.020)	(0.019)	(0.009)	(0.019)	(0.009)
R^2	0.349	0.328	0.308	0.373	0.609	.	.
Weak identification test (Cragg-Donald Wald F statistic)						714.167	218.586
Shea's Partial R^2: expellee share 1946						0.916	0.847
Shea's Partial R^2: predicted religious distance						0.760	0.722
State dummies	no	no	no	no	yes	no	yes
Number of observations	458	458	458	458	458	458	458

Notes: In all columns, the dependent variable is an index measuring expellee-native-marriages in 1950. The IV regressions in columns (6) and (7) use the expellee share in 1946 and the predicted population-weighted religious distance as instruments for the expellee share 1950 and the religious distance 1950, respectively. Columns (5) and (7) include dummies for each of the nine West German states. Regressions are weighted with population in 1939. $***$, $**$ and $*$ denote statistical significance at the 1%-, 5%- and 10%-level, respectively. Standard errors clustered at the labor market region level are in parentheses. The weak identification test refers to the Cragg-Donald F statistic; critical values from Stock and Yogo (2005) suggest the instruments to be strong.

Table 6: Robustness checks - forced migration and marriage behavior

Dependent variable: index for marriages between	male expellee and female native		expellees and natives					
			unweighted		with alternative measure for damage I		with alternative measure for damage II	
	OLS	IV	OLS	IV	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Expellee share 1950	-0.553***	-0.456***	-0.486***	-0.360***	-0.469***	-0.345***	-0.400***	-0.262**
	(0.116)	(0.125)	(0.080)	(0.096)	(0.121)	(0.123)	(0.110)	(0.118)
Agricultural employment share 1939	-0.062**	-0.070**	-0.088***	-0.094***	-0.086**	-0.093***	-0.080**	-0.086***
	(0.031)	(0.031)	(0.029)	(0.029)	(0.034)	(0.033)	(0.033)	(0.032)
Religious distance 1950	-0.061***	-0.062**	-0.044**	-0.036*	-0.062**	-0.051*	-0.064***	-0.055**
	(0.023)	(0.024)	(0.017)	(0.020)	(0.024)	(0.027)	(0.023)	(0.025)
Population share living in cities with at least 10,000	-0.011	-0.007	0.004	0.009	-0.022	-0.018	-0.031	-0.027
inhabitants 1939	(0.018)	(0.017)	(0.016)	(0.016)	(0.019)	(0.018)	(0.019)	(0.018)
Rubble per capita 1939	0.670**	0.787**	0.586	0.728				
	(0.317)	(0.331)	(0.471)	(0.481)				
Distance to inner German border is smaller than 75	0.054***	0.052***	0.055***	0.055***				
km (0/1)	(0.017)	(0.016)	(0.011)	(0.010)				
Majority is Catholic in 1939 (0/1)	-0.030***	-0.029***	-0.045***	-0.042***	-0.034***	-0.034***	-0.038***	-0.038***
	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Loss in housing space, 3 categories								
[reference category: minor losses]								
substantial losses					0.011	0.015		
					(0.011)	(0.011)		
very substantial losses					0.019	0.027**		
					(0.015)	(0.013)		
Damaged dwellings 1945							0.075**	0.094***
							(0.031)	(0.030)
R^2	0.614	.	0.495	.	0.591	.	0.598	.
Weak identification test (Cragg-Donald Wald F statistic)		568.557		560.839		546.218		550.516
Shea's Partial R^2: expellee share 1946		0.847		0.745		0.819		0.812
Shea's Partial R^2: predicted religious distance		0.722		0.755		0.715		0.715
State dummies	yes	yes	yes	yes	yes	yes	yes	yes
Number of observations	458	458	458	458	458	458	458	458

Notes: In all columns, the dependent variable is an index measuring expellee-native-marriages in 1950. The dependent variable in columns (1) and (2) is the marriage index for male expellee-female native-couples. The dependent variable in columns (3) to (8) is the index for marriages between expellees and natives. The IV regressions in columns (2), (4), (6), and (8) use the expellee share in 1946 and the predicted population-weighted religious distance as instruments for the expellee share 1950 and the religious distance 1950, respectively. All columns include dummies for each of the nine West German states. Regressions in columns (1) and (2) as well as columns (5) to (8) are weighted with population in 1939. $***$, $**$ and $*$ denote statistical significance at the 1%-, 5%- and 10%-level, respectively. Standard errors clustered at the labor market region level are in parentheses. The weak identification test refers to the Cragg-Donald F statistic; critical values from Stock and Yogo (2005) suggest the instruments to be strong.

As a robustness check, we additionally estimate unweighted regressions, taking the OLS and IV regression with covariates and state fixed effects on all expellees as our benchmark (columns (5) and (7) of Table 5). Columns (3) and (4) of Table 6 show the results. Point estimates are larger but statistically indistinguishable from the benchmark. This also holds true if we take the loss in housing space in three categories (columns (5) and (6)) or the share of damaged dwellings (columns (7) and (8)) as alternative measures of war destruction. Taken together, the results on intermarriage rates show that a stronger inflow of expellees, a more rural society and a larger religious distance hampered expellees and natives to socially intermix.

5.3 Political Integration

In a third set of results, we consider expellees' political integration. Our main indicator for (slow) political integration is the vote share of the anti-expellee party *Bayernpartei* (BP) in the Bavarian federal state election in 1950.[8] We again start by regressing the vote share for BP separately on each of our three main variables (conditional on our standard covariates) and subsequently combine all variables into one OLS and IV regression, respectively. Results are reported in Table 7, columns (1) to (5). The vote share for the anti-expellee party increases with the population share of expellees, with pre-war agricultural employment of the county and with the religious distance between expellees and natives. The combined OLS (IV) regression suggests that a one standard deviation increase in the share of expellees adds as much as 2 percentage points (2.8 percentage points) to the vote share of the anti-expellee party BP. Given that the average vote share of BP was 18.6% at that time, this corresponds to an increase of 10.8% (15.0%). Correspondingly, a one standard deviation increase in the agricultural employment share (in religious distance) raises the vote share by about 4 percentage points (2 percentage points).

As an alternative dependent variable we consider the vote share for special interest parties, namely the sum of the vote share of the BP and of the expellee party *Block der Heimatver-*

[8]Note that the fact that we are exploiting a federal state election renders state fixed effects superfluous.

triebenen und Entrechteten (BHE). Columns (6) and (7) of the table show in an OLS and IV regression that the larger the share of expellees, the larger the agricultural employment share and the larger the religious distance between expellees and natives, the more are election outcomes driven by vested interests. In terms of magnitude, we find that a one-standard-deviation increase in the share of expellees leads to a 6.4 percentage points higher vote share for special interest parties and a one-standard-deviation increase in the agricultural employment share to an increase by 4.1 percentage points (calculations based on estimates from column (7)). A one-standard-deviation larger religious distance increases the vote share by 2.4 percentage points.

Our regressions on the vote share of BP are based on the vote share in the overall population, v_i^{pop}, that is, the number of votes for BP divided by the total number of votes. What we are eventually interested in, however, is the propensity of natives in a county i to vote for BP, v_i^{nat}, and how this share relates to the population share of expellees in that county, $ExpelleeShare_{i50}$. If we are ready to assume that expellees do not vote for BP and its anti-expellee election program, we can derive the share of natives who vote for BP by rewriting the population vote share for BP

$$v_i^{pop} = (1 - ExpelleeShare_{i50})v_i^{nat} \tag{11}$$

as

$$v_i^{nat} = \frac{v_i^{pop}}{(1 - ExpelleeShare_{i50})}. \tag{12}$$

This implies that the relationship between share of expellees and native votes for the anti-expellee party is even stronger than displayed in Table 7.[9]

[9]To see this consider the derivative of v_i^{nat}, $v_i^{nat'} = \frac{v_i^{pop'}}{(1-ExpelleeShare_{i50})} + \frac{v_i^{pop}}{(1-ExpelleeShare_{i50})^2}$ and compare it to the derivative of v_i^{pop}. As $v_i^{nat'} > v_i^{pop'} \forall ExpelleeShare_{i50} > 0$, we underestimate the effect by looking at the vote share in the overall population.

Table 7: Baseline results - forced migration and political integration: state election in 1950

Dependent variable: vote share for	Bayernpartei (anti-expellee party)					Bayernpartei + BHE (special interest parties)	
	OLS	OLS	OLS	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Expellee share 1950	0.461***			0.367***	0.509***	0.920***	1.159***
	(0.122)			(0.116)	(0.129)	(0.130)	(0.141)
Agricultural employment share 1939		0.210***		0.156***	0.139***	0.191***	0.162***
		(0.036)		(0.036)	(0.036)	(0.044)	(0.044)
Religious distance 1950			0.123***	0.105***	0.121***	0.082**	0.117**
			(0.038)	(0.035)	(0.041)	(0.039)	(0.047)
Population share living in cities with at least	-0.023	0.057**	-0.057***	0.055**	0.056***	0.030	0.033
10,000 inhabitants 1939	(0.016)	(0.023)	(0.015)	(0.022)	(0.021)	(0.027)	(0.026)
Rubble per capita 1939	-0.216	-2.122***	-1.001	0.342	1.073	1.369	2.666*
	(0.780)	(0.465)	(0.754)	(1.111)	(1.314)	(1.031)	(1.381)
Distance to inner German border is smaller than 75	-0.027**	-0.026**	-0.030**	-0.020*	-0.018	-0.005	-0.002
km (0/1)	(0.011)	(0.012)	(0.012)	(0.011)	(0.012)	(0.012)	(0.013)
Majority is Catholic in 1939 (0/1)	0.100***	0.084***	0.131***	0.129***	0.138***	0.128***	0.146***
	(0.011)	(0.012)	(0.018)	(0.018)	(0.021)	(0.020)	(0.023)
R^2	0.507	0.532	0.488	0.580	.	0.718	.
Weak identification test (Cragg-Donald Wald F statistic)					250.45		250.45
Shea's Partial R^2: expellee share 1946					0.754		0.754
Shea's Partial R^2: predicted religious distance					0.775		0.775
Number of observations	186	186	186	186	186	186	186

Notes: The IV regressions in columns (5) and (7) use the expellee share in 1946 and the predicted population-weighted religious distance as instrument for the expellee share 1950 and the religious distance 1950, respectively. Regressions are weighted with population in 1939. $***$, $**$ and $*$ denote statistical significance at the 1%-, 5%- and 10%-level, respectively. Robust standard errors are in parentheses. The weak identification test refers to the Cragg-Donald F statistic; critical values from Stock and Yogo (2005) suggest the instruments to be strong.

Table 8: Additional results - forced migration and political integration: state election in 1950

Dependent variable: vote share for Bayernpartei (national party) among non-expellees					
	OLS	OLS	OLS	OLS	IV
	(1)	(2)	(3)	(4)	(5)
Expellee share 1950	0.856***			0.730***	0.915***
	(0.154)			(0.147)	(0.163)
Agricultural employment share 1939		0.296***		0.204***	0.182***
		(0.049)		(0.047)	(0.047)
Religious distance 1950			0.145***	0.125***	0.149***
			(0.051)	(0.046)	(0.052)
Population share living in cities with at least	-0.033	0.063**	-0.096***	0.068**	0.070**
10,000 inhabitants 1939	(0.020)	(0.032)	(0.022)	(0.028)	(0.027)
Rubble per capita 1939	0.817	-2.716***	-1.391	1.429	2.410
	(1.165)	(0.647)	(0.968)	(1.601)	(1.878)
Distance to inner German border is smaller than 75	-0.038**	-0.039**	-0.046***	-0.029*	-0.027*
km (0/1)	(0.015)	(0.016)	(0.017)	(0.015)	(0.015)
Majority is Catholic in 1939 (0/1)	0.129***	0.101***	0.158***	0.163***	0.176***
	(0.015)	(0.017)	(0.024)	(0.025)	(0.029)
R^2	0.563	0.552	0.495	0.626	.
Weak identification test (Cragg-Donald Wald F statistic)					250.45
Shea's Partial R^2: expellee share 1946					0.754
Shea's Partial R^2: predicted religious distance					0.775
Number of observations	186	186	186	186	186

Notes: The IV regression in column (5) uses the expellee share in 1946 and the predicted population-weighted religious distance as instruments for the expellee share 1950 and the religious distance 1950, respectively. Regressions are weighted with population in 1939. $***$, $**$ and $*$ denote statistical significance at the 1%-, 5%- and 10%-level, respectively. Standard errors clustered at the labor market region level are in parentheses. The weak identification test refers to the Cragg-Donald F statistic; critical values from Stock and Yogo (2005) suggest the instruments to be strong.

Given this insight, we use the approximated vote share of BP among natives, v_i^{nat}, as an alternative dependent variable. Results are shown in Table 8. Columns (1) to (3) again present the correlations with each of our main variables of interest (conditional on our standard covariates). Columns (4) and (5) display the results of OLS and IV regressions, respectively, that combine all of these variables. The estimated effect of the expellee share on the propensity to vote for BP for natives is about twice as large as is the propensity to vote for BP in the overall population which we estimated above. In the combined OLS (IV) regressions, we find that a one standard deviation increase in the share of expellees adds 4 percentage points (5 percentage points) to the vote share of the anti-immigrant party BP in the native population.

We complete our analysis on the political integration of expellees by studying the medium run vote shares for BP and for special interest parties. More precisely, we look at state election outcomes in 1954 and in 1958. That is, we analyze voting behavior more than ten years after the arrival of expellees. For each of the elections, we again consider the vote share for BP (the national party) and the vote share for special interest parties. OLS and IV results are reported in Table 9. We expect our variables of interest to lose explanatory power with time as expellees become more politically integrated. That is what we find for the expellee share and agricultural employment. While the coefficient on the expellee share in the BP regression is 0.509 in 1950 (Table 7, column (5)) it recedes to 0.365 in 1958 (Table 9, column (4)). Similarly, the coefficient on the agricultural employment share in 1958 shrinks to one third of its 1950 value and turns statistically insignificant. These findings reflect the advancing integration of expellees into West German society.

Table 9: Medium-run results - forced migration and political integration: state elections in 1954 and 1958

Dependent variable: vote share for	Bayernpartei (national party)				Bayernpartei + BHE (special interest parties)			
	in 1954		in 1958		in 1954		in 1958	
	OLS	IV	OLS	IV	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Expellee share 1950	0.489***	0.562***	0.297***	0.365***	0.966***	1.066***	0.730***	0.821***
	(0.100)	(0.108)	(0.086)	(0.092)	(0.119)	(0.121)	(0.095)	(0.103)
Agricultural employment share 1939	0.024	0.017	0.047*	0.042	0.024	0.012	0.019	0.011
	(0.032)	(0.032)	(0.028)	(0.027)	(0.038)	(0.037)	(0.032)	(0.031)
Religious distance 1950	0.119***	0.122***	0.111***	0.104***	0.104***	0.116***	0.098***	0.094***
	(0.034)	(0.037)	(0.031)	(0.032)	(0.037)	(0.042)	(0.033)	(0.036)
Population share living in cities with at least	0.012	0.013	0.018	0.020	0.004	0.005	0.011	0.013
10,000 inhabitants 1939	(0.019)	(0.018)	(0.015)	(0.014)	(0.022)	(0.021)	(0.018)	(0.017)
Rubble per capita 1939	1.773	2.101*	1.671*	1.894**	2.395**	2.913**	1.987**	2.320**
	(1.145)	(1.228)	(0.910)	(0.954)	(1.124)	(1.267)	(0.838)	(0.919)
Distance to inner German border is smaller than 75	-0.053***	-0.052***	-0.043***	-0.043***	-0.044***	-0.043***	-0.039***	-0.038***
km (0/1)	(0.010)	(0.010)	(0.008)	(0.008)	(0.012)	(0.012)	(0.009)	(0.009)
Majority is Catholic in 1939 (0/1)	0.117***	0.120***	0.093***	0.092***	0.119***	0.126***	0.102***	0.103***
	(0.018)	(0.020)	(0.015)	(0.015)	(0.020)	(0.022)	(0.016)	(0.017)
R^2	0.529	.	0.427	.	0.614	.	.	.
Weak identification test (Cragg-Donald Wald F statistic)		250.45		250.45		250.45		250.45
Shea's Partial R^2: expellee share 1946		0.754		0.754		0.754		0.754
Shea's Partial R^2: predicted religious distance		0.775		0.775		0.775		0.775
Number of observations	186	186	186	186	186	186	186	186

Two points are remarkable though. First, comparing the 1954 to the 1950 regression results reveals that political integration takes a considerable amount of time: The coefficients on the expellee share and on religious distance in the 1954 regressions are very similar to the corresponding ones in the 1950 regressions (both OLS and IV). And second, the 1958 regressions show that even ten years after the arrival of expellees their political integration is far from being completed: the statistically significant coefficient on the share of expellees in column (4) suggests that a one-standard-deviation increase in the share of expellees still increases the vote share of the national party BP by 2.0 percentage points in 1958.

These patterns also become visible when we turn to the vote share for special interest parties as dependent variable (results reported in columns (5) to (8)). Our OLS and IV regressions provide evidence for deepening but sluggish political integration. In 1958 a one-standard-deviation increase in the share of expellees leads to 4.5 percentage points more votes for special interest parties (column (8)), compared to 6.4 percentage points eight years earlier. While the agricultural employment share is no longer a statistically significant determinant of the electoral support for BP and BHE, religious distance between expellees and natives remains a strong predictor for the success of these parties in 1958.

6 Conclusion

This paper contributes to the growing literature on the integration of forced migrants. In particular, we provide novel insights on the local factors that impede or facilitate the integration of forced migrants. Such insights are crucial for designing resettlement programs that account for the effect of resettlement locations on integration outcomes. We consider three much debated potential determinants of economic, social, and political integration: the population share of migrants, the rurality of the receiving region, and religious differences between migrants and natives.

To shed light on each of these factors, we exploit quasi-experimental variation in the spatial distribution of refugees, arising from the flight and expulsion of ethnic Germans from

Eastern Europe after World War II. About 8 million displaced Germans were resettled in West Germany, where they accounted for 16.5% of the population in 1950. Most importantly for our identification strategy, expellees were distributed very unevenly across West Germany and regardless of their integration prospects.

Using newly digitalized high-quality data at the county level, we embrace a broad concept of integration and investigate local labor market outcomes, marriage market behavior, and voting pattern. Our results show that local conditions play an important role in shaping integration outcomes, and bring a trade-off to light which policymakers in the current "refugee crisis" also face today: On the one hand, refugees should be evenly dispersed across regions as higher population shares of refugees deteriorate economic, social and political integration outcomes. On the other hand, refugees should be sent to more urban areas as these provide significantly better integration prospects. This result cautions against the widely held belief that today's refugees should be mainly sent to rural areas to avoid the formation of ghettos in the cities and to foster rural revival (Bloem 2014, Martínez Juan 2017).

While the literature has so far mainly focused on how the innate characteristics of refugees affect their integration outcomes, this is only part of the story. The decision of policymakers where to re-settle immigrants proves an important driver of integration. Since the resettlement location is a policy variable, while the innate characteristics of refugees are not, the former warrants further analysis. We thus conclude by highlighting the need for future work in the area. In particular, our results are specific to an episode of mass immigration, in which natives and refugees were very similar in many respects, including their mother tongue and cultural background. An important tasks for future work is to assess whether similar findings hold for the resettlement of refugees into religiously and culturally more distant locations.

A Merging of counties

The administrative borders of some West German counties changed between 1939 and 1950. In order to make county borders comparable over time, we first merge counties which, at any time between 1939 and 1950 formed one county. The counties of Hildesheim and Marienburg, for instance, were separate entities in 1939, but were merged to join the new county of Hildesheim-Marienburg in 1946. Consequently, the 1946 and 1950 censuses only contain data on Hildesheim-Marienburg. We thus merge Hildesheim and Marienburg already in the 1939 census. We proceed analogously for the counties of Bremerhaven and Wesermünde; city and rural districts of Bremen; Rhein-Wupper Kreis and Leverkusen; Kreis der Eder, Kreis des Eisenberges and Kreis der Twiste; city and rural districts of Konstanz; Coburg and Rodach bei Coburg; city and rural districts of Dinkelsbühl; city and rural districts of Donauwörth, city and rural districts of Lüneburg.

In addition, there were some smaller border changes, in which municipalities were moved from one county to another. To deal with these border changes, we first compare the 1939 population of each county in its 1950 borders to the 1939 population of the same county in its 1939 borders. Since the majority of administrative borders remained unchanged between 1939 and 1950, the 1939 population figure is usually the same regardless of whether we use 1939 or 1950 borders. Moreover, we do not take any action if the difference between the two population figures is less than 5%. If the difference is larger than 5%, we merge the counties that exchanged municipalities. This applies to the counties of Osterholz, Verden and Bremen; Bergstraße, city and rural districts of Worms; Goslar, Wolfenbüttel and Salzgitter; Mainz, Groß-Gerau and Wiesbaden; Böblingen, Eßlingen and Stuttgart; city and rural districts of Osnabrück; city and rural districts of München; city and rural districts of Kulmbach; Lörrach and Neustadt; Norden and Emden; Braunschweig and Peine.

Finally, we drop counties that have lost or gained more than 5% of its 1939 population to regions outside West Germany, in particular to counties in the Soviet Occupation Zone. These counties include Blankenburg (Rest); Helmstedt; Birkenfeld; Zweibrücken; Saarburg; Trier; Mellrichstadt; Osterode; Lüneburg.

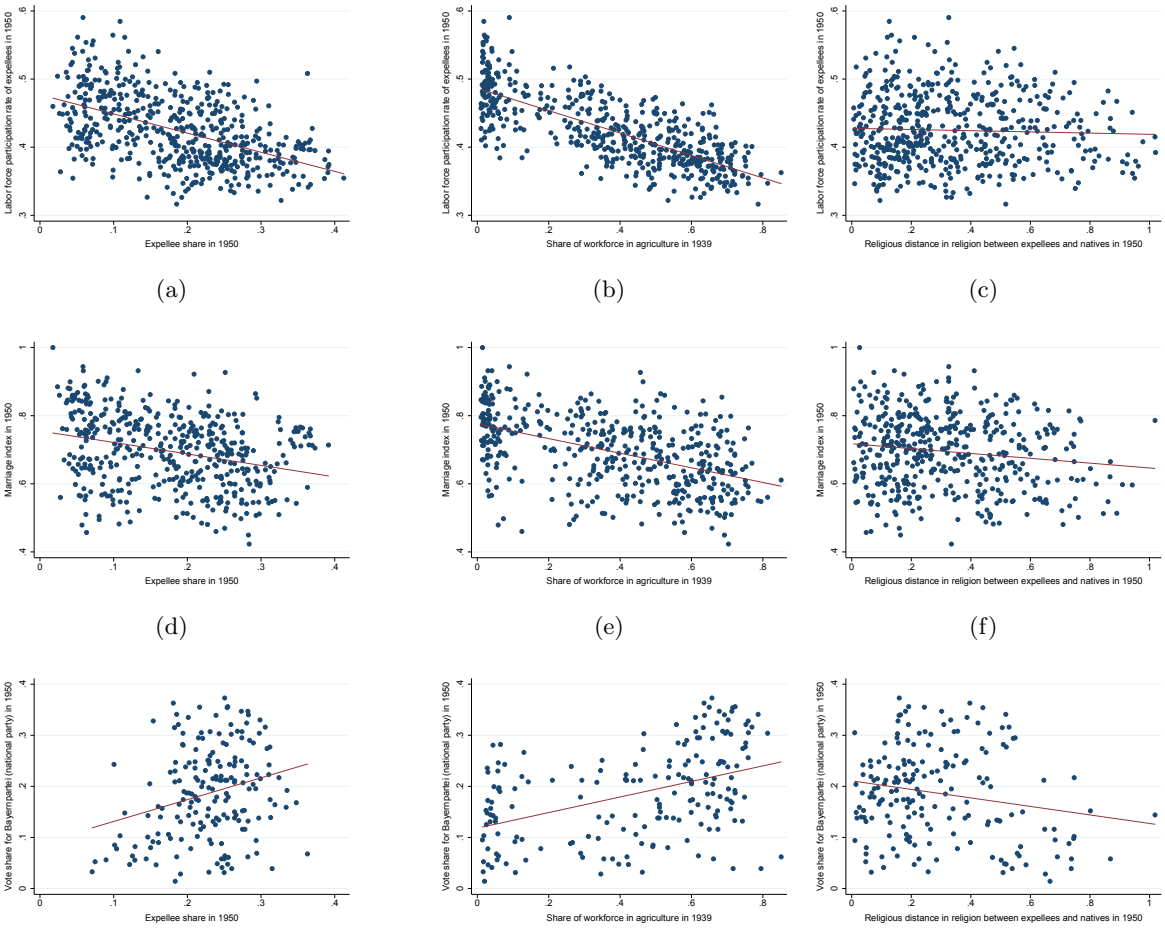
B Data sources

Table B1: Data sources

Variable	Description and data source
Dependent variables	
Expellee labor force participation rate 1950	The share of economically active persons in the total expellee population in 1950, based on data from Statistisches Bundesamt (1955).
Expellee employment rate 1950	Calculated as (100 − Expellee unemployment rate) × Expellee labor force participation rate. Data on expellee unemployment rate comes from Pfeil (1958).
Intermarriage rates 1950	Index for intermarriage rates between expellees and non-expellees in 1950, taken from Poepelt (1959).
Vote shares of Bayernpartei (and BHE) 1950/54/58	Vote share of Bayernpartei (and BHE) in the Bavarian state elections of 1950, 1954, and 1958, as published in Bayerisches Statistisches Landesamt (1951), Bayerisches Statistisches Landesamt (1955), and Bayerisches Statistisches Landesamt (1959).
Main explanatory variables	
Expellee share in 1950	The share of expellees in the 1950 population, based on data from Statistisches Bundesamt (1952) and Statistisches Bundesamt (1955).
Expellee share in 1946	The share of expellees in the 1946 population, based on Statistisches Bundesamt (1950).
Agricultural employment share in 1939	The share of the workforce in agriculture in 1939, as published in Statistisches Reichsamt (1939)
Religious distance 1950	The Euclidean distance between the religious affiliations of expellees and non-expellees in 1950, based on data from Statistisches Bundesamt (1952). Data on religious affiliations in 1939, required for calculating the instrument in equation (9), comes from Statistisches Reichsamt (1941).
Control variables	
Population share living in cities with at least 10,000 inhabitants 1939	The 1939 share of population living in cities with at least 10,000 inhabitants, based on data from Statistisches Reichsamt (1940).
Rubble per capita 1939	Untreated rubble at the end of the war over the population in 1939, as taken from Deutscher Städtetag (1949).
Damaged dwellings 1945	Share of dwellings built before 1945 damaged in the war, based on data from Statistisches Bundesamt (1956).
Distance to inner German border < 75 km (0/1)	Dummy for whether a county is located within 75 kilometers from the inner-German border.
Majority is Catholic in 1939 (0/1)	Dummy for whether the majority of a county was Catholic in 1939, based on data from Statistisches Reichsamt (1941).

C Additional descriptives

Figure C: Scatter plots for dependent and main independent variables



(a) (b) (c)

(d) (e) (f)

(g) (h) (i)

Notes: Scatter plots (a)-(c) show the correlations between our main variables of interest and the labor force participation rate of expellees in 1950. Scatter plots (d)-(f) show the correlations for the marriage index, and scatter plots (g)-(i) show the correlations for the vote share for the *Bayernpartei* as anti-expellee party.

D First stage results

Table D1: First stage results - forced immigration and labor force participation

	(1)	(2)
Dependent variable: Expellee share 1950		
Expellee share 1946	0.879***	0.895***
	(0.017)	(0.027)
Agricultural employment share 1939	-0.001	-0.025***
	(0.008)	(0.009)
Predicted religious distance 1939/1946	-0.002	-0.004
	(0.003)	(0.004)
Population share living in cities with at least 10,000	0.006	-0.007
inhabitants 1939	(0.005)	(0.005)
Rubble per capita 1939	-0.570***	-0.362**
	(0.165)	(0.150)
Distance to inner German border is smaller than 75 km (0/1)	0.007**	0.006*
	(0.003)	(0.003)
Majority is Catholic in 1939 (0/1)	-0.001	-0.001
	(0.002)	(0.002)
Dependent variable: Religious distance 1950		
Expellee share 1946	0.044	0.104
	(0.076)	(0.157)
Agricultural employment share 1939	-0.111**	-0.082*
	(0.044)	(0.043)
Predicted religious distance 1939/1946	0.776***	0.767***
	(0.030)	(0.032)
Population share living in cities with at least 10,000	-0.022	-0.005
inhabitants 1939	(0.015)	(0.022)
Rubble per capita 1939	-1.354*	-1.237*
	(0.694)	(0.729)
Distance to inner German border is smaller than 75 km (0/1)	-0.027*	-0.021
	(0.014)	(0.014)
Majority is Catholic in 1939 (0/1)	0.062***	0.053***
	(0.013)	(0.015)
State dummies	no	yes
Number of observations	526	526

Notes: The table presents the first stage regression results pertaining to columns (6) to (9) of Table 2, columns (3) and (4) of Table 4, columns (5) and (6) of Table 4, columns (6) and (7) of Table 5, and column (2) of Table 6 . The first stage regressions use the expellee share in 1946 and the predicted population-weighted religious distance as instrument for the expellee share 1950 and the religious distance 1950, respectively. Column (2) includes dummies for each of the nine West German states. Regressions are weighted with population in 1939. $***$, $**$ and $*$ denote statistical significance at the 1%-, 5%- and 10%-level, respectively. Standard errors clustered at the labor market region level are in parentheses.

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