Forced Migration and Local Public Policies: Evidence from Post-War West Germany*

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We study the effect of forced migration on public policy setting in the migrant-receiving country. After World War II, eight million expelled Germans arrived in West Germany within five years. We use regional variation in the population share of forced migrants across West German cities to estimate the effect of this inflow on cities' taxation and spending decisions. To identify a causal effect, we pursue an instrumental variable strategy that leverages push factors of the expulsions while being orthogonal to local conditions in the destination regions. Our results show that cities with high inflows of forced migrants increased spending on welfare and education, decreased spending on infrastructure, raised local taxes, and incurred more debt. Part of these effects can be attributed to shifts in political preferences. The migrants held voting rights upon arrival and voted for parties that explicitly catered to their interests and needs.

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1 Introduction

In 2021, the world counted almost 90 million displaced individuals who were forced to flee from violence, war, or natural disasters. Among those, 60% were internally displaced within their own country (UNHCR, 2022). With ongoing wars and conflicts as well as climate change, even larger forced migration flows may occur in the future. Forced migration, even within a country, poses a significant challenge for host communities, not least because the arrival of newcomers is often feared to change society and cause a backlash among natives. For the design of sound migration and integration policies, it is important to understand the consequences of forced migration for the host society. The existing literature has documented substantial hurdles for the integration of forced migrants in the host country (e.g., Bauer et al., 2013, Marbach et al., 2018, Fasani et al., 2022) and shown that large-scale inflows affect natives' political and social preferences (see Becker and Ferrara (2019) for a comprehensive review). What is unclear, however, is whether forced migration actually leads to the implementation of different policies. A large inflow of forced migrants may well change natives' political attitudes, but its impact will be much more profound if governments respond by changing public policies.

In this paper, we study the impact of a large-scale forced displacement episode on public policy setting. In the aftermath of World War II, more than twelve million Germans were expelled from Central and Eastern Europe. This episode was among the largest forced migration movements in history. We analyze how the subsequent inflow of eight million people into West Germany affected local taxation and spending decisions. For our empirical analysis, we exploit substantial variation in the county-level population share of expellees across West Germany, ranging between 2% and 44%. Post-war West Germany provides an ideal laboratory to study the effect of forced migration on local policy setting because local councils were responsible for the provision of social welfare and had great autonomy in spending and revenue decisions. They could independently decide on the level of welfare payments, and spending on education, infrastructure, and health, as well as set local tax rates.

Identifying the causal effect of forced migration on any outcome of interest is challenging because the initial inflow of the expellees across West Germany was unlikely random. The majority of expellees were assigned to their initial place of residence by the Allied Forces, who were governing West Germany after the war and predominantly chose areas that were less destroyed and located closer to the eastern border of West Germany. Other expellees arrived by themselves and could freely choose their first place of residence. This non-random allocation and sorting of the expellees might lead to omitted variable bias because it is impossible to control for all local characteristics that attracted expellees or influenced the assignment of the Allied Forces.

To identify a causal effect, we pursue an instrumental variable strategy based on push factors that are independent of local conditions across West Germany. In a first step, we predict the outflows from the former German territories as well as Poland and Czechoslovakia — countries where many Germans lived before World War II — based on each county's respective number of German inhabitants in the early 1930s. A city with many German inhabitants — for example, Breslau, which became part of Poland — is predicted to have generated a higher number of forced migrants compared to rural areas elsewhere. In a second step, we assign the predicted outflows to

the receiving counties based on bilateral distances, which approximate the expellees' or Allied Forces' moving costs. After being forced to migrate from their homelands, moving further westward within West Germany was considerably more strenuous for the expellees. Likewise, assigning expellees further to the west was more costly for the Allied Forces than assigning them to places in the east of their occupation zones.

An important challenge for our instrumental variable strategy is that the arrival and integration of the expellees coincided with the division of Germany in 1949 and the subsequent closing of the Iron Curtain. Because our instrument is based on receiving counties' distance to the sending regions as a proxy for moving costs, it predicts that more expellees arrived in the eastern part of West Germany. At the same time, West German cities close to the Iron Curtain experienced slower economic growth due to their new-found remoteness after the division of Germany and the closing of borders to Czechoslovakia (Redding and Sturm, 2008). To address this problem, we flexibly control for the minimum distance between each city in West Germany and the Iron Curtain. We show that the first- and second-stage effects are robust to a wide range of parametric and non-parametric controls for distance, the inclusion of state fixed effects, and a proxy for regions' actual loss in market access.

Our results show that cities responded to the expellee inflow by shifting to more redistributive policies. Cities with a large share of expellees significantly increased their spending share on welfare and education, while decreasing relative spending on infrastructure. This suggests that they shifted their resources towards items that were important for the integration of the expellees in the short run, and invested less in infrastructure, which would only pay off in the medium or long run. On the revenue side, we find that cities with a higher share of expellees raised local taxes and incurred more debt than cities with a lower inflow, even if high-inflow cities received more transfers from the federal and state governments. These effects are present both in the short run, when the expellees were moving in, as well as in the medium run, as the expellees integrated into local society. Although some of these effects may appear mechanical, we argue that they are not. We observe an almost immediate shift in public policies in cities with higher shares of expellees, and this shift persists over the full sample period (until the early 1960s). In contrast, cities with high inflows had a higher initial share of welfare recipients (1946-48), but this difference vanished in the early 1950s. Overall, our results are consistent with affected cities permanently adopting more redistributive policies.

We further explore the expellees' political preferences and voting behavior as potential mechanisms behind the observed policy changes. The expellees were considered German citizens and, thus, eligible to vote in all local, state, and federal elections even if they arrived from territories outside pre-war Germany. In high-inflow cities, the expellees formed an important block of voters and may have shifted public policies by changing policymakers' preferences or priorities. Survey data from 1953 suggest that the expellees expressed greater political interest, showed greater political participation, and a greater intention to vote than the incumbent population. Results from federal and local elections further show that cities with a greater expellee share voted for parties that explicitly campaigned for public policies that were closely aligned with the needs of the expellees. We also find that the effect of the inflow on policy setting was stronger in cities where party competition was fiercer, i.e., where parties had a greater incentive to tailor their programs towards the needs of the expellees. Altogether, we take these results as suggestive evidence that the expellees were indeed

able to influence the political process towards greater redistribution in high-inflow cities.

Contribution to the Literature on Forced Migration and Internal Displacement Although the expulsion of Germans after World War II was a unique event in many ways, our paper provides general lessons about the economic and political effects of forced migration. As laid out by Becker and Ferrara (2019), the process of forced migration is fundamentally different from the process of voluntary migration. Forced migrants often cannot return to their original location, and the life-changing experience of fleeing profoundly affects their preferences and choices. They might also, at least initially, be perceived differently by the local population and fall under different legislation compared to economic migrants.

The results of this paper also enhance our understanding of internal displacement. Most expellees were internally displaced; they were German citizens and lived in German territories until their expulsion. Internal displacement following wars, decolonization, secession, or natural disasters has frequently occurred around the world and will likely occur in the future.

Our central contribution to the literature on forced migration and internal displacement is to show that forced migration can lead to profound policy changes in the receiving regions. For West German cities, the sudden inflow of the expellees represented a significant increase in population size, a change in the income and wealth distribution, and a change in the political preferences of the voter base. Our paper shows that this inflow led to a significant change in policy setting; cities with high inflows increased spending as well as taxation. These results suggest that local governments need to react to the inflow of migrants, and thereby implement policy changes that affect all citizens, not just the migrants. At the same time, if the migrants have voting rights — as is often the case with internally displaced persons — they may directly or indirectly influence the political process.

Our focus on taxation and spending also offers a new angle on the economic consequences of (forced) migration flows. The paper complements a large body of evidence on the labor market effects of refugee inflows (e.g., Card, 1990, Angrist and Kugler, 2003, Dustmann et al., 2016, Foged and Peri, 2016, Tumen, 2016, Borjas and Monras, 2017, Clemens and Hunt, 2019) as well as the impact of migration on economic development and growth (e.g., Paserman, 2013, Hornung, 2014, Maystadt and Duranton, 2018, Murard and Sakalli, 2020). Several studies also document the effects of refugee inflows on social preferences and voting (e.g., Dustmann et al., 2019, Steinmayr, 2020, Fiorini et al., 2020, Rozo and Vargas, 2021, Albarosa and Elsner, 2022). Our paper shows that the political effects go beyond a mere effect on attitudes and preferences; the inflow of refugees can change the *implementation* of public policies.

Another lesson from our results is about the effects of internal displacement. Our findings show that political effects can materialize soon after the displacement and lead to persistent changes in policy setting. These findings complement evidence from other displacement episodes. Evidence from Colombia shows that the arrival of displaced persons can have adverse effects on the labor market outcomes of natives (Calderón-Mejía and Ibáñez, 2015) and can drive up local rents (Depetris-Chauvin and Santos, 2018). Similarly, negative results on the employment and wages of non-displaced workers have been found after the repatriations of French and Portuguese citizens from former colonies in Africa (Hunt, 1992, Carrington and De Lima, 1996, Mäkelä, 2017, Edo, 2020). Internal

displacement can also have long-term effects on social capital. For example, 60 years after the partition of India, Bhattacharya and Mukhopadhyay (2022) document significantly lower levels of social capital in areas with high inflows of displaced persons.

Our paper also contributes to the literature on the economic consequences of the large-scale expulsions across Europe after World War II. For receiving regions, the available evidence suggests that the overall labor market effects of the inflow of expellees were modest (Braun and Omar Mahmoud, 2014, Braun and Weber, 2021), although the inflow led to lasting changes in regions' economic structure. Research on Germany (Braun and Kvasnicka, 2014, Peters, 2022) and Finland (Sarvimäki et al., 2022) shows that the inflow of expellees accelerated the transition from agriculture to manufacturing, causing lasting impacts on economic development. In Sudeten (today's Czech Republic), areas that were previously inhabited by Germans — and received many displaced Czechs after the war — had lower economic output (Testa, 2020) and higher rates of in- and out-migration (Guzi et al., 2021) after 1990 compared to neighboring regions that were traditionally inhabited by Czechs. Evidence for Poland shows that areas with high inflows of displaced Poles saw lower public goods provision during socialism but higher incomes after 1990 (Charnysh, 2019). A plausible explanation for this effect is provided by Becker et al. (2020), who document that displaced people in the west of Poland invested significantly more in education compared to non-displaced persons in the same areas. Evidence by Burchardi and Hassan (2013) further shows that some expellees acquired valuable social capital in transit. German expellees who first arrived in the Soviet occupation zone and subsequently moved to West Germany made use of their social ties to East Germany, which led to stronger economic growth in West Germany after reunification. The contribution of our paper to this literature is to show that the expulsions had profound political consequences in the receiving regions.

Contribution to the Literature on the Political Economy of Redistribution Our paper also provides novel insights into the political economy of redistribution. One strand of this literature tests median voter models (Romer, 1975, Roberts, 1977, Meltzer and Richard, 1981), which predict that greater income inequality leads to more redistribution as the median voter becomes poorer. The inflow of the expellees in West Germany can be seen as a sudden shock that simultaneously increased the size and composition of the voter base. Given that the expellees were considerably poorer than the incumbent population, high-inflow cities saw a sudden drop in the income of the median voter. In line with standard median voter models, we find that the inflow of poor people led to greater redistribution. This result also relates to studies on immigrant enfranchisement (e.g., Vernby, 2013, Ferwerda, 2021, Sabet and Winter, 2022), which demonstrate that providing voting rights to immigrants increases the demand for redistribution.[1]

Another strand of the literature on political economy is concerned with the impact of immigration on preferences for redistribution and public goods provision. The theory posits that immigration reduces support for redistribution because it enhances in-group bias and reduces natives' willingness to contribute to public goods (e.g., Alesina et al., 1999, Putnam, 2007). A large empirical literature

[1] Another episode of mass migration where migrants gained citizenship and voting rights upon arrival in the case of the Russian migration to Israel in the early 1990s. As in our case, Russian migrants represented around 20% of the population and exercised a political influence that affected institutions (Powell et al., 2017).

has tested these hypotheses with data from surveys and experiments (see Elsner and Concannon, 2022, for a review). At the sub-national level, many studies support this hypothesis: individuals in regions with many immigrants tend to be less in favor of redistribution. On the contrary, information experiments that prime subjects about immigration do not yield significant effects on preferences for redistribution (Naumann and Stoetzer, 2018, Alesina et al., forthcoming). The contribution of our paper is to focus on actual policy setting. Our findings go against the results by Tabellini (2020a) on immigration in the U.S. in the 1920s, Tabellini (2020b) on the Great Migration of Blacks to cities in the northern U.S. in the early 1900s and Jofre-Monseny et al. (2016) on the large-scale migration to Spain in the 1990s, who find that immigration reduces redistribution. In contrast, we find that immigration leads to an increase in redistribution. The fact that the expellees had voting rights upon arrival provides a plausible explanation for the difference in findings.

2 The Expulsion of Germans after World War II

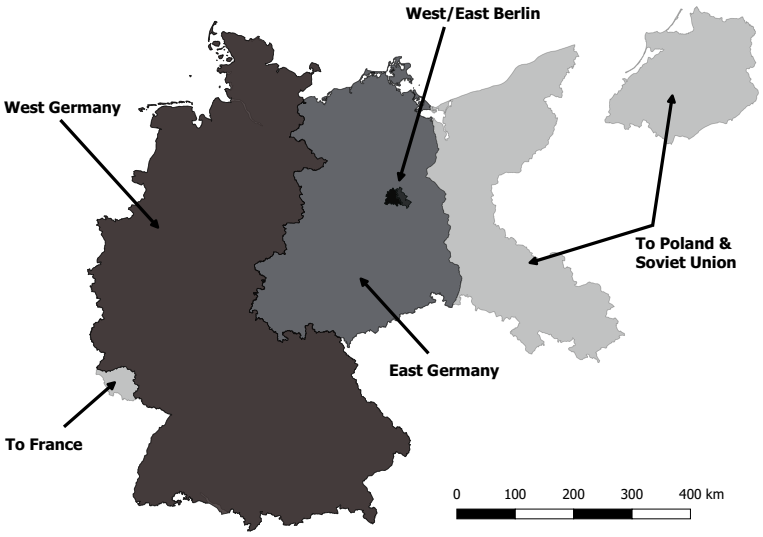
The context of this study is the expulsion and resettlement of over twelve million ethnic Germans in the aftermath of World War II. This episode is acknowledged as one of the largest forced population movements in history (Douglas, 2012). The expulsions were triggered by the advancing Red Army in the final phase of the war and institutionalized by the Potsdam Agreement in August 1945. The agreement appropriated around 25% of Germany's pre-war territory — Silesia, Pomerania, East Brandenburg, and East Prussia — to Poland and the Soviet Union (see Figure 1). Any ethnic German living outside of the newly-drawn German borders was to be expelled and forced to resettle within the borders of post-war Germany. This was true irrespective of whether the people in question were German citizens from the recently lost territories or ethnic Germans from communities in Central and Eastern Europe.[2] The largest inflow comprised approximately three million ethnic Germans who lived in the *Sudetenland* along the border between Czechoslovakia and Germany (Merten, 2012, ch. 1).

Overall, around eight of the twelve million expelled Germans arrived in the U.S., British, and French occupation zones between 1944 and 1950, either on foot or through mass transports that were organized by the U.S. and British forces (Douglas, 2012). The arrival of the expellees increased the West German population by almost 17% (Connor, 2007). The remaining 4.3 million expellees initially settled in the Soviet occupation zone. Estimates on the number of expellees who perished during the population transfers vary broadly, from around 400,000 to 2,239,500, with Overmans (cited in Ther, 1996), providing a best estimate of 600,000 casualties.

Whereas the Soviet Union soon implemented the foundations of socialism in its occupation zone, the three Western Allies laid grounds for the creation of new democratic and market principles. This ideological division was institutionalized in 1949 when the Federal Republic of Germany (FRG) — *West Germany* — and the German Democratic Republic (GDR) — *East Germany* — were founded. Between 1949 and 1961, that is, the year of the construction of the Berlin Wall, an estimated 800,000 expellees left the GDR for West Germany, especially after the recognition of the Polish border by the German government dashed their hopes of returning to their homeland (Ther, 1996). Moreover,

[2] Before the expulsions, many ethnic Germans had lived in Poland, the Free City of Danzig, Hungary, the Soviet Union, Romania, Yugoslavia and Austria (Statistisches Bundesamt, 1953).

Figure 1: Germany before and after World War II



Notes: This map shows Germany and its borders before and after World War II. The Saarland was ceded to France after the war and rejoined West Germany in 1957. The figure is based on shapefiles provided by the Max Planck Institute for Demographic Research (MPIDR) and the Chair for Geodesy and Geoinformatics, University of Rostock (2011).

between 1949 and 1961, almost two million East German non-expellees moved to West Germany.

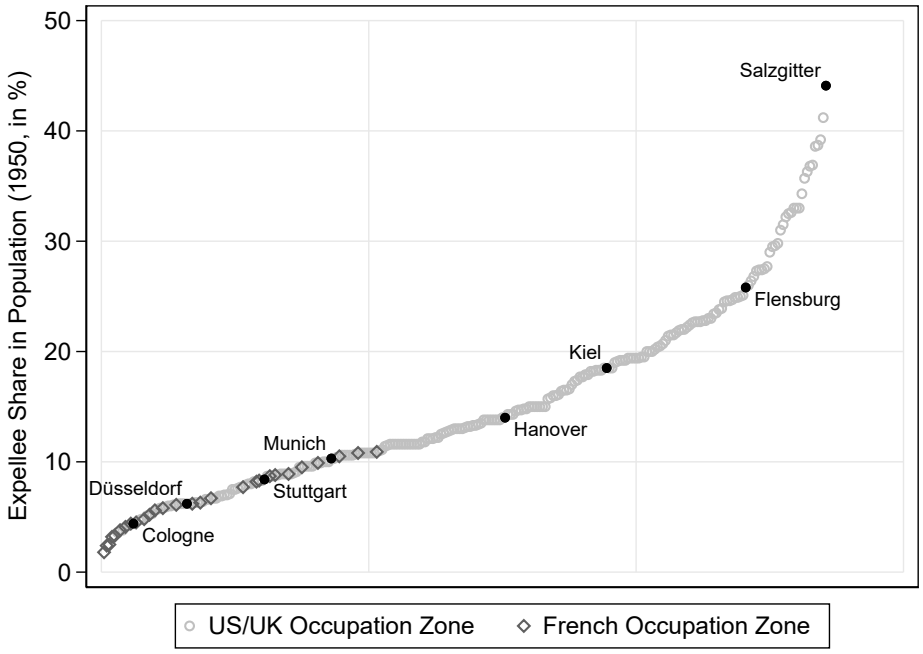
The Allocation of Expellees across West Germany After reaching the West German territory, the majority of expellees were first transferred to temporary refugee camps and subsequently assigned to municipalities in the U.S. or British occupation zones. Because France suffered from greater war destruction than the U.S. or the UK and had not taken part in the Potsdam conference, no expellees were assigned to the French occupation zone before mid-1949 (Douglas, 2012).

The allocation of expellees across West Germany did not follow a systematic protocol. Initially, the Allied Forces aimed at allocating the expellees according to demographic and economic factors such as population density or economic potential. However, due to the severe destruction of most cities and the rapid inflow of refugees within a short period, the availability of accommodation became a decisive factor. An estimated 23% of the country's pre-war housing stock was destroyed, with considerable variation between cities as well as between urban and rural areas. For example, in Cologne, West Germany's fourth largest city at the time, 70% of all dwellings had been destroyed. On top of the destruction, the housing stock was further reduced by the requirement of the Allied Forces to accommodate their administration and armed forces. In 1949, the accommodation shortfall was estimated at 1.8 million dwellings (Connor, 2007). As a consequence, the expellees were disproportionately assigned to rural areas and smaller cities, where the destruction of the housing stock was less severe (Henke, 1985, Connor, 2007).

Another decisive factor for the assignment of expellees was geographic proximity to the former

homelands. Expellees who moved before the Potsdam Agreement mainly sought shelter in regions of West Germany that were closest to their former homelands and thus most accessible to them (Müller and Simon, 1959). The same holds for the organized transports in the post-Potsdam period, which brought expellees to reception points in the east of each occupation zone. For example, Braun et al. (2020) state that "the initial distribution was driven by the geographic proximity to expellees' origin regions, not by integration prospects." The allocation of expellees to the east of the country also reflects that the west of the West German territory had been more severely affected by war destruction than the east. This was mainly due to its greater industrialization and geographical proximity to England, from where many air strikes had been launched (Burchardi and Hassan, 2013).

Figure 2: The Population Share of Expellees by County in West Germany, 1950



Notes: This graph plots the population share of expellees as of September 1950 for all West German counties in our sample. The data are taken from the *Statistical Yearbook of Expellees* (Statistisches Bundesamt, 1953), see Appendix A for details.

Figure 2 illustrates the variation in the local inflows by plotting the population share of expellees for each county in our baseline estimation sample in 1950 (see Section 3 for details). The data come from the *Statistical Yearbook of Expellees* and constitute the first available nationwide account of the inflow. Two facts are worth noting. First, the size of the inflow greatly varied across space, with the county-level share of expellees ranging from 1.8% to 44.1%. Second, in line with the imposed settlement restrictions, counties in the French zone were among those with the lowest population shares of expellees. Appendix Figure B.1 displays the corresponding spatial distribution of expellees across West Germany. It shows that most expellees were allocated to the states of Schleswig-Holstein and Lower Saxony in the north, as well as Bavaria in the southeast of the country. By contrast, expellee shares in the federal states of North Rhine-Westphalia, Rhineland-Palatinate, and Baden-Württemberg in the (south-)west were substantially lower.

Until late 1949, mobility restrictions for the expellees were enforced by the Allied Forces, preventing

them from relocating within West Germany in the first years after their arrival (Müller and Simon, 1959). Based on additional county-level data from the population censuses in 1950 and 1961 (see Appendix Table A for details), we compute the county-level correlation coefficient of the share of expellees over both years, which amounts to 0.82. This result shows that the internal mobility of expellees after 1950 was rather limited.

The Integration of the Expellees Upon arrival, the economic situation of the expellees was dire. The expellees had lost their homes, jobs, and virtually all their possessions and real assets in transit, and were destitute upon arrival in Germany.[3] While many West German natives had also experienced severe losses during the war, they still owned the remaining real assets such as agricultural land, livestock, properties, or businesses. Unlike the expellees, many West Germans were also able to draw upon their existing social networks to find employment or obtain loans. Additionally, the 1948 currency reform hurt the expellees more than the local populations because their meager assets were devalued more than those of the locals who owned real estate or goods. Moreover, in addition to their economic deprivation and despite their shared ethnicity, the expellees were often not welcome by the West German population.[4] Anecdotal evidence abounds of West Germans expressing hostility towards the expellees, in an episode described as "*racism of Germans against German expellees*" (Kossert, 2008, ch. 4).

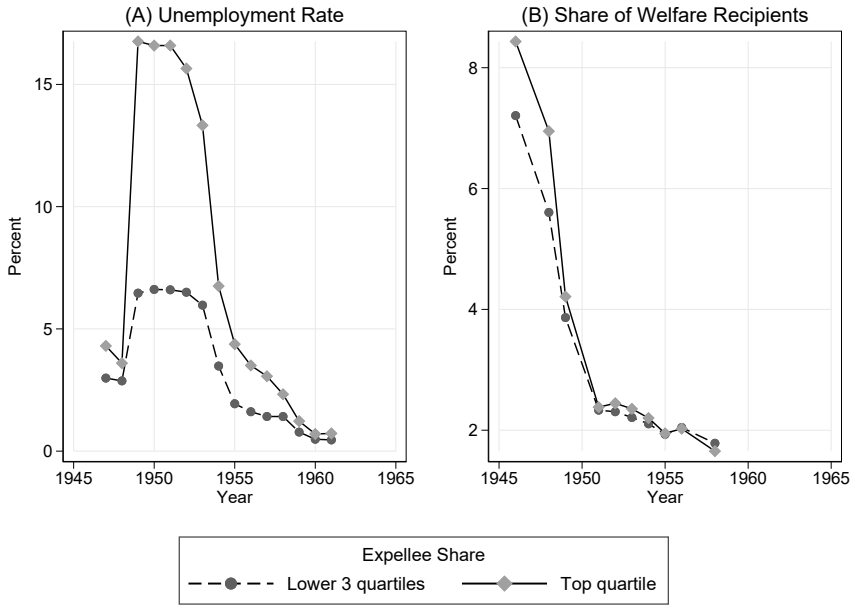
Unsurprisingly, the inflow of eight million expellees presented a tremendous challenge to the newly-founded Federal Republic. While the provisional West German government and the Allied Forces initiated a set of comprehensive national-level policies, much of the administrative and fiscal burden was borne locally.[5] Among others, cities were responsible for the provision of social welfare for the expellees. At the same time, local unemployment surged. In December 1949, 36.3% of the expellees were unemployed while the overall unemployment rate in Western Germany was only 10.3%, having risen from 3.2% in June 1948 (Connor, 2007). Figure 3 illustrates these two dimensions. From Panel (A), we can see that unemployment rates increased much more in cities with a particularly high population share of expellees. This finding is in line with evidence from Braun and Omar Mahmoud (2014), who identify negative effects of the expellee inflow on local wages and employment for those areas that saw particularly large inflows of expellees. At the same time, we can see from Panel (B) that the surge in unemployment was initially accompanied by a rise in the local share of welfare recipients, although it quickly converged by 1950 among low- and high-inflow cities.

[3] According to Ther (1996), the expellees were allowed to carry only one bag per person during the organized transports and that those possessions were *almost as a rule* damaged or stolen during transport. According to survey evidence by the American Military Government in September 1949, 90% of expellees had no cooking or household equipment, and only a few had appropriate clothing or footwear (Connor, 2007).

[4] In Appendix Figure B.3, we compare counties from the ceded Eastern Territories with those in the west of Germany regarding pre-war characteristics. Apart from differences in their religious denomination, ceded territories and West German counties were quite similar in terms of observable characteristics on average.

[5] The Equalization of Burdens Act of 1952 (*Lastenausgleichsgesetz*) provided financial compensation to expellees and non-expellees who suffered from material losses due to the expulsions or war destruction. The 1953 Federal Expellee Law (*Bundesvertriebenengesetz*) aimed at improving the economic situation of the expellees. However, the evidence shows that the law did not meet its goals (Falck et al., 2012, Bauer et al., 2013).

Figure 3: Forced Migration, Unemployment and the Share of Welfare Recipients



Notes: This graph shows how the average local unemployment rate (Panel (A)) and the population share of welfare recipients (Panel (B)) evolved in cities with low to medium and high inflows of expellees, respectively. See Appendix Table A.1 for a description of each variable and the underlying data source.

Voting Rights, Welfare Eligibility and Political Representation The German citizenship law of 1913 is based on the principle of *jus sanguinis*, meaning that "[...] Germans living outside the Reich could retain and pass on their citizenship indefinitely" (Demshuk, 2006). In line with this law, the expellees were considered German citizens upon arrival. They were eligible for social welfare and had full voting rights in local, state, and federal elections.[6] Until 1950, Allied law prohibited the expellees from forming parties (Connor, 2007). When the law was lifted, the expellees founded a political party, the GB/BHE (*Gesamtdeutscher Block/Bund der Heimatvertriebenen und Entrechteten*). The goal of the GB/BHE was to improve the expellees' economic situation in West Germany through redistribution, as well as lobbying for a return of their properties in Germany's former Eastern Territories (Stöss, 1986). In addition, the right-wing party *Deutsche Partei (DP)*, founded in the immediate aftermath of World War II, explicitly catered to the demands of the expellees and German army veterans (Schmollinger, 1986). In the empirical analysis, we use voting for these parties as an indicator of the expellees' voting in their own interest. It should be noted, though, that the main parties were also actively competing for the expellees' vote. As early as May 1946, the leader of the social democratic party (SPD) announced that "we will make the refugee issue our own" (cited in Connor, 2007), and adopted pro-expellees policies such as refusing to recognize the new Polish border, or pushing for a "social equalization of burdens" (Connor, 2007). However, both the SPD and the conservative parties (CDU/CSU) found it difficult to integrate the expellees into their party structures.

[6] The electoral law for the first election of the West German Federal Parliament (*Bundestag*) in 1949 ruled that German citizens and individuals of German ethnic origin who were permanent residents of West Germany were allowed to vote. Electoral laws at the state and local levels included similar provisions.

3 Data

For the empirical analysis, we draw upon a variety of administrative data sets at both the municipality and county levels. A municipality (*Gemeinde*) is the smallest administrative unit in Germany. A county (*Kreis*), the next higher administrative unit, typically comprises multiple municipalities, although larger cities often constitute a municipality as well as a county on their own. Because our main data set contains information on municipalities with more than 10,000 inhabitants, and these municipalities are typically cities, we refer to municipalities interchangeably as *cities*. In our main analysis, the unit of observation is a city, although our baseline explanatory variable of interest — the local population share of expellees — varies at the county level. Appendix A provides a detailed description of each variable and its respective source.

Expellee Inflow Our preferred measure of the expellee inflow is the county-level share of expellees in the population in 1950, which we take from the *Statistical Yearbook of Expellees*, published by the German Federal Statistical Office. This yearbook constitutes the earliest available representative account of the inflow of expellees across West Germany. As an alternative measure of the inflow, we also use the municipality-level share of expellees in 1952, which we extract from the *Statistical Yearbook of German Municipalities*. While the latter variable is measured at the same level as the outcomes, it provides an account of the distribution of expellees across West Germany *after* the ban on expellees' mobility was lifted and, thus, could be correlated with local characteristics that affected policy decisions. Note, however, that both measures are highly correlated ($\rho = 0.935$), and that the estimates are very similar when we use the alternative measure of treatment.

Outcomes Our goal is to estimate the effect of the expellee inflow on local policy setting. German cities have had far-reaching autonomy in fiscal matters — both regarding revenue collection and spending — since the early 19th century. These prerogatives were substantially expanded and harmonized with the implementation of the German Municipal Code (*Deutsche Gemeindeordnung*) in 1935. The general principles of this code served as the basis for the fiscal self-government rules of cities in West Germany after World War II and, with some modifications, remain in place until today.

For revenue collection, *local taxes* represent the cities' main policy instrument. During the sample period, cities could set three major tax rates: (i) a tax on the value of agricultural land (*Grundsteuer A*), (ii) a tax on the value of residential property (*Grundsteuer B*), and (iii) a joint tax on firms' capital and profits (*Gewerbesteuer*). For each of these taxes, the federal government defined the valuation of the tax base — for example, the value of a house — and set a benchmark tax rate. Cities annually and autonomously decided upon the so-called collection rate, which is the share or multiple of the benchmark tax rate.[7] In the 1950s, the three local taxes accounted for roughly 90% of the cities' overall tax revenue and more than 70% of their total revenue during the sample period. For ease of presentation and interpretation, we use a standardized index of the three tax rates in our baseline analysis, but report effects on individual tax rates in the appendix. We construct the index by averaging each tax rate over the period 1950–1959 and extracting the first principal component from

[7] If, for example, the benchmark property tax rate was 1% and a municipality's collection rate amounted to 500%, the effective local tax rate was $1\% \times 500\% = 5\%$.

these averages. We then standardize this index to have a mean of zero and a standard deviation of one. As an alternative, we also construct an index that weights each tax rate by its relative importance in revenue collection.[8]

Throughout the 1950s, *debt* became another important source of financing for cities. After World War II, the currency reform of 1948 eliminated 90% of cities' debt. However, from 1950 onward, local debt steadily increased from 1.2% of West Germany's total public debt to over 30% in 1965 (Statistisches Bundesamt, 2016, Table 1.1). The third relevant source of revenue was *transfers* from higher levels of government such as the respective state or federal government. Transfers serve as financial support for local governments and redistribute funds across space to foster regional development. In the empirical analysis conducted below, we investigate the effects of the expellee inflow on these different sources of local revenue.

Cities were — and are to this day — also responsible for the financing and provision of a wide range of public goods and services. In the 1950s, cities had considerable discretion over the level of *spending* for many different items, including welfare. When deciding about local spending, city councils had to follow budget rules and adhere to minimum standards for the provided goods and services. Once cities met these minimum standards, it was yet the councils' decisions whether to spend more on welfare, education, infrastructure, or housing and health care. For example, although cities were obliged to provide social benefits, housing assistance, access to health care, and support with nutrition and clothing for people in need, there was considerable variation in welfare generosity across cities. Welfare payments aligned with local costs of living and followed the principle that benefits had to be lower than local wages (Willing, 2001, Föcking, 2009). In the empirical analysis, we investigate the expellees' impact on total spending as well as spending per capita and spending shares. We consider four broad spending categories: (i) welfare, (ii) education and administration, (iii) public infrastructure, and (iv) health and housing.

Data on all fiscal outcomes are taken from the *Statistical Yearbooks of German Municipalities*, an annual statistical publication for all German municipalities with more than 10,000 inhabitants. All monetary variables are deflated to 1950 price levels using information from the German Federal Statistical Office. Appendix Figure B.2 displays the geographic location of all 271 cities included in the baseline sample. The baseline sample covers 39.4% of all West German counties and represents 3.395 million, or 43%, of the expellees in 1950. The panel data set spans the period between 1935 to 1964. It is unbalanced; not every outcome is measured each year, and not all cities are covered in the Statistical Yearbooks throughout the sample period. In the baseline analysis, we average the outcomes over the respective post-war sampling periods. To better understand the dynamics of the estimated average effects we also investigate effects for different periods.

Voting To investigate the potential role of the expellees' political engagement and their political influence on cities' shifts in public policies, we draw upon three distinct data sources. First, we test for differences in the political engagement and attitudes of natives versus expellees by drawing upon information from the *Bundesstudie*, a representative survey of over 3,000 West German citizens

[8] As there are no comprehensive data on tax revenues at the municipality level before World War II, we use information on tax revenues from 1950. We acknowledge that this variable is potentially endogenous to the inflow of expellees.

from 1953. Although the Bundesstudie includes an identifier for whether a person was an expellee, it does not include location information beyond the level of the federal states and can therefore not be matched with the local expellee inflow. Second, we draw upon city-level information from the *Statistical Yearbooks of German Municipalities* on the results of the 1953 federal election and the several local elections that took place from 1946 to 1961 to estimate the expellees' direct impact on local election outcomes.[9] Third, we draw upon comprehensive data from the *German Federal Statistical Office* and investigate the expellees' overall representation in German politics. To this end, we use bibliographical information on 4,273 candidates (64% of all candidates) at all federal elections between 1949 and 1961 which we matched to the county in which they ran for parliament.

County-Level Controls To control for social and economic differences across West Germany before the expellee inflow, we predominantly rely on county-level data from King et al. (2008), who provide detailed information on counties' religious composition, party preferences, and economic situation in the 1920s and 30s. We enriched this data source by digitizing county-level population and labor market data from the *Statistical Yearbook of the German Reich in 1939* as well as information on counties' tax revenue collection from the *Assessment of Income and Corporate Tax Revenues 1932/33*, published by the Statistical Office of the German Reich. Moreover, to account for differences in the extent of war destruction — an important potential confounder — we collected data on the local extent of destroyed housing in the aftermath of World War II from the German Federal Statistical Office. Finally, to proxy for the local economic costs of the closing of the Iron Curtain we rely on estimates by Ziegler (1992), who assesses the economic performance of local labor markets across West Germany in 1933 and 1961.[10]

Descriptive Statistics Table 1 displays descriptive statistics for the regressor of interest, namely the county-level population share of expellees, and the set of city-level *post-war* outcome variables for the baseline estimation sample. Appendix Table B.1 provides the corresponding descriptive statistics for the set of control variables.[11] Panel A of Table 1 shows that the average population share of expellees amounts to 15.1% in our baseline estimation sample. This figure is slightly lower than the expellee share for the whole of West Germany, which amounts to 17%. The discrepancy most likely stems from the fact that our data source covers cities with more than 10,000 inhabitants, which received relatively fewer expellees compared to smaller towns and rural areas (cf. Section 2).

Panels B, C, and D summarize the public finance data. In line with the empirical analysis, we report averages over the respective sample periods. The descriptive statistics for total spending, debt, and transfers are presented in Panel B. In the empirical analysis, we use the log of these outcomes. Panel C displays municipalities' average spending shares on different items. These differ considerably across municipalities, which highlights local policymakers' discretion in setting those parameters. On average, local expenditure was highest on public infrastructure (50% of total spending), followed by spending on education and administration (29%), welfare (11%), and health and housing (10%).

[9] Because the electoral data are only available for cities with more than 20,000 inhabitants, the corresponding estimation sample is slightly smaller (see Appendix A for details).

[10] Local labor markets usually comprise multiple counties.

[11] Table B.2 and Figure B.4 in the Appendix show descriptives for the survey as well as the candidate data.

Table 1: Descriptive Statistics for the Main Variables

	Mean	Std Deviation	Minimum	Maximum	Observations
A. Expellee Inflow (in %)					
County-Level Expellee Share (1950)	15.14	8.43	1.80	44.10	271
B. Revenues and Spending (in 1,000 DM)					
Mean Annual Total Spending (1950-59)	10,949.44	20,852.49	761.32	141,021.16	271
Mean Annual Total Debt (1949-64)	23,730.17	49,859.15	1,306.20	461,090.56	256
Mean Annual Total Transfers (1949-64)	4,656.94	9,152.62	39.67	65,143.33	271
Mean Annual Total Tax Revenues (1950-59)	9,757.32	18,326.83	671.00	130,191.41	271
C. Spending Shares (in %)					
Mean Annual Spending Share on Welfare (1950-59)	0.11	0.04	0.01	0.24	271
Mean Annual Spending Share on Public Infrastructure (1950-59)	0.50	0.06	0.25	0.67	271
Mean Annual Spending Share on Education/Admin (1950-59)	0.29	0.06	0.16	0.51	271
Mean Annual Spending Share on Health/Housing (1950-59)	0.10	0.05	0.01	0.29	271
D. Local Tax Rates (in %)					
Mean Agricultural Land Tax (1950-59)	1.56	0.43	0.93	3.00	271
Mean Property Tax (1950-59)	2.23	0.42	0.99	3.60	271
Mean Business Tax (1950-59)	0.54	0.06	0.44	0.71	271
Mean Tax Index (1950-59)	0.00	1.00	-1.85	2.73	271
E. 1953 Federal Election Vote Shares (in %)					
Vote Share CDU/CSU	43.83	9.59	21.00	66.70	221
Vote Share SPD	31.29	7.94	12.30	55.70	221
Vote Share Expellee Parties (GB/BHE + DP)	6.82	5.06	0.90	27.80	221
Vote Share Liberal Parties (FDP + DVP)	10.25	5.69	1.90	28.30	221
Vote Share Other Parties	7.79	4.62	2.00	34.90	221
F. Local Elections Results (1949-1961)					
1(GB/BHE or DP in Local Parliament)	0.57	0.50	0.00	1.00	221

Notes: This table provides descriptive statistics for our regressor of interest and the set of city-level outcome variables. All monetary variables are expressed in 1950 prices. See Appendix A for information on each variable.

However, variation across cities was substantial, amounting to 12% (*sd relative to the mean*) in spending on infrastructure, 21% in spending on education/administration, 36% in welfare spending, and 50% for spending on health and housing. Panel D further shows that post-war average tax rates on agricultural land, property as well as firms' capital and profits varied between 0.5% and 2.2%. Again, cross-sectional differences are quite sizable, amounting to 28% (*sd*/*mean*) for the agricultural land tax rate, 18% for the property, and 11% for the businesses tax rate.

Finally, Panel E provides descriptive statistics for local election outcomes. The two major German parties — the conservatives (*CDU/CSU*) and the social democrats (*SPD*) — received the majority of votes in the federal election in 1953. In turn, the two parties that explicitly catered to the needs of the expellees — the *GB/BHE* and the *DP* — received on average 6.8% of the votes. However, the parties' electoral success was substantially higher in some regions, with their vote share reaching up to 27.8%. Besides their representation in the federal parliament, the expellee parties also entered a vast number of local parliaments (see Panel F). Throughout the late 1940s and until the mid-1960s, the two parties were represented in 57% of the local councils elected.

4 Empirical Strategy

4.1 Empirical Model

We estimate the effect of the expellee inflow on local policy variables such as spending and tax rates by using the following linear model:

$$y_m = \beta \; ExpShare_{c(m)} + \boldsymbol{X}'_{\boldsymbol{m}}\boldsymbol{\rho} + f\left(dist\_border_{c(m)}\right) + \delta_{s(m)} + \varepsilon_m. \tag{1}$$

The post-war outcome y_m refers to a policy variable of city m located in county c and state s. In most specifications, the outcome is computed as the mean over the respective sample period. The regressor of interest, $ExpShare_{c(m)}$, represents the initial share of expellees among the population of county c, measured in 1950.

The vector X_m comprises a set of control variables that account for social and economic differences at either the city or county level across West Germany before or immediately after World War II. In all specifications, we control for three variables that would otherwise confound the estimation of β, namely indicators for the three occupation zones, the log of the population in 1939, and the share of destroyed housing after World War II.[12] The occupation zone indicators control for differences in the assignment of the expellees across the three occupation zones. The controls for population size and the share of destroyed housing account for the fact that the expellees were disproportionately assigned to cities that were smaller and experienced less destruction. In more comprehensive specifications, we also control for social as well as economic differences before World War II that may have affected both the number of expellees as well as local taxation and spending. These additional control variables, all measured at the county level, include the unemployment rate in 1933, the share of workers in manufacturing in 1933, the average vote share for the NSDAP (Hitler's party) in the five national elections between 1928–1933, the share of protestants in 1925, as well as the (log) income tax revenue as a proxy of economic output.

In our baseline specification, we also control flexibly for each city's distance to the Iron Curtain. This control addresses a central challenge to our identification strategy, namely that the arrival and integration of the expellees coincided with the division of Germany and the closing of Eastern Europe behind the Iron Curtain. As illustrated in Section 2 and Appendix Figure B.1, the population share of expellees was particularly high in counties close to the inner-German and Czech-German border. At the same time, the division of Germany may have affected the local policy setting of cities closer to the newly-created inner-German border irrespective of the inflow of expellees. Redding and Sturm (2008) show that West German cities closer to the inner-German border experienced slower economic growth after the country's division because of the cities' new-found remoteness. Similarly, the onset of the cold war put all countries to the east of West Germany behind the Iron Curtain, which brought economic interactions to a halt. To remove these confounding effects, we first condition on state fixed effects $\delta_{s(m)}$, which absorb the average distance between cities located in the same state and the Eastern borders. If cities in, say, Hesse were differently affected by the division of Germany compared to cities in states further west, the state fixed effects would account

[12] We use county-level data because the population data are not available for all cities in 1939.

for any average differential effect across states. Second, we directly account for a county's distance to the Iron Curtain, i.e., the minimum distance to the inner-German or the international border with Czechoslovakia, $f\left(dist\_border_{c(m)}\right)$, in parametric or non-parametric ways.

The error term ε_m summarizes all remaining determinants of public policies that are not captured by the control variables. In light of the rather small number of cities covered ($N = 271$), we correct standard errors for small sample size. In our baseline specification, we further cluster the standard errors at the county level to account for any potential correlation in the error term across cities within a county. Because few counties contain more than one municipality with a population large enough to be part of our sample, most clusters are singletons. To assess the sensitivity of statistical inference along this margin, we report heteroskedasticity-robust standard errors and exclude counties with more than one city in our sample (as they face the same expellee share by definition). In addition, we report standard errors that account for spatial autocorrelation (Conley, 1999), use permutation-based inference as well as a jackknife procedure to assess whether the IV estimates are sensitive to outliers.

Interpretation of the Estimates The coefficient β is to be interpreted as a reduced-form coefficient, which measures the *total* effect of the initial inflow on public policy setting. It summarizes many channels through which the inflow of expellees may have affected local policy setting. The inflow increased the size of the population and voter base, which may have directly caused a change in taxation and spending policies; for example, through changes in voting. However, there are also important indirect effects through which the expellee inflow might have affected policy setting. One such effect is the structural shift of the economy away from agriculture and towards more productive industries. It has been shown that the inflow of a large number of workers led to an expansion of the manufacturing sector and a higher per-capita income (Braun and Kvasnicka, 2014, Braun et al., 2020, Peters, 2022). The higher income, in turn, may have influenced cities' decisions to adopt different taxation and spending policies. A related channel is education and human capital. Bauer et al. (2013) document that the expellees demanded more education than the non-expellees, which may have also contributed to higher economic growth and a shift in local policies.

Another potential channel is the mobility of the expellee and the non-expellee population after the inflow. Prior research has shown that immigrant inflows can lead to outflows of the native population or reduce native inflows into an area (e.g., Card, 2001, Borjas, 2006, Dustmann et al., 2016). With the expellee inflow, two scenarios are plausible. It could have triggered an outflow of natives because of labor market competition, or it could have led to a population inflow due to agglomeration effects. The existing evidence suggests that the mobility of both populations was fairly low in the post-war period, either due to agglomeration effects (Schumann, 2014, Braun et al., 2020) or a limited housing stock in the early years after the war. Another important population movement was the migration from East to West Germany before the full closure of the inner-German border in 1961. Between 1949 and 1961, an estimated 2.7 million East German citizens — including around 800,000 expellees who initially settled in the Soviet occupation zone — escaped to West Germany. It is possible that the East-West migrants — be they expellees or not — settled in the same places as the initial group of expellees who came in the 1940s, e.g. because these places were growing faster than others. Thus, the subsequent movement from East to West in the 1950s may be part of the explanation for the observed

effects of the initial expellee inflow on local policy setting. In sum, our reduced-form estimate for β should be interpreted as the aggregate effect of the initial expellee inflow over the following ten to fifteen years.

4.2 Instrumental Variable Strategy

If the size of the inflow of expellees was randomly distributed across cities, an OLS estimation of Equation (1) would deliver a causal estimate for β, that is, the marginal effect of an increase in the share of expellees on the outcome of interest. However, there are many reasons to believe that the inflow of expellees across West Germany was not random. A large share of expellees was assigned their initial place of residence by the Allied Forces, who presumably had good reasons to assign more expellees to certain places. We should also assume that those expellees who found their initial accommodation themselves made a deliberate choice. To address endogeneity concerns due to non-random sorting, we employ an instrumental variable strategy that leverages geographic differences in the size of the outflows across the sending regions but is orthogonal to the local conditions of the receiving counties.

Figure 4: German Population in the Sending Counties in the late-1920s/early-1930s

Notes: This map shows the distribution of sh_i^{1930}, the share of the German population in county i among the total German population in the ceded Eastern Territories (Pomerania, Silesia, East Prussia), Poland, Bohemia and Moravia in the late-1920s/early-1930s. Darker colors indicate a higher relative share of Germans. Sources: Population censuses of the German Empire, Czechoslovakia, and Poland. See Appendix A for a detailed description of the data sources.

Construction of the Instrument Our goal is to predict the inflow of expellees into a West German county c based on factors that are unrelated to the local economic conditions in that county. For this purpose, we construct an instrument that is based on predicted outflows from each sending county i using county-level data on the number of Germans in the ceded German territories (Silesia,

Pomerania, East Prussia), Poland, Bohemia, and Moravia in the late-1920s/early-1930s.[13] The distribution of the German population was highly uneven across the sending counties, with some large urban centers mostly inhabited by Germans — for example, Breslau, Stettin, or Königsberg with several 100,000 inhabitants each — and sparsely populated rural areas with relatively few Germans. Figure 4 displays for each sending county the relative share of Germans among the total number of Germans to be expelled, with darker colors referring to sending counties with more Germans before World War II. The regions with the largest numbers of Germans were the ceded territories as well as Sudeten — the region in Bohemia bordering Germany.

In the second step, we impose a simple functional form to assign the predicted outflows to the receiving counties c based on bilateral distances between sending and receiving counties. The distance serves as a proxy for moving costs to a given place in the west and any other reason that might have rendered municipalities located closer to the border more attractive for the refugees (cf. Section 3). Note that not all of the largest sending districts are located close to the border, which means that there is no perfect correlation between the relative share of Germans and the distance to West Germany. Moreover, while Sudeten Germans could simply cross Czechoslovakia's borders, most expellees had to cross the Soviet Occupation Zone. Altogether, the correlation between sending counties' share of Germans among the total population of expelled Germans and distance to West Germany is $\rho = -0.108$.

More precisely, we construct the instrument as

$$IV_{c(m)} = \sum_i K(dist_{ic}) \times sh_i^{1930}, \text{ with } sh_i^{1930} = \frac{Germans_i^{1930}}{\sum_i Germans_i^{1930}}. \tag{2}$$

The term sh_i^{1930} refers to the population share of Germans in sending county i in the late-1920s/early-1930s among the entire German population in all sending counties (cf. Figure 4). The function $K(dist_{ic})$ assigns the predicted outflows to West German counties as a non-linearly decreasing function of the bilateral Euclidean distance between sending county i and receiving county c. For this function, we use a Gaussian Kernel:

$$K(dist_{ic}) = \rho\left(\frac{dist_{ic}}{bw}\right), \tag{3}$$

whereby $\rho(\cdot)$ refers to the density of the standard normal distribution and bw is the bandwidth that governs how strongly the weights decline with distance.[14] In our baseline specification, we choose as bandwidth the mean bilateral distance between sending and receiving counties in our sample (667km), but also perform robustness checks with shorter and longer bandwidths.

[13] See Appendix A for details on the respective data sources for the ceded territories, Poland and Czechia.

[14] As the bandwidth goes to infinity, all distances get equal weight, as $\lim_{bw\to\infty} \rho(dist_{ic}/bw) = (2\pi)^{-\frac{1}{2}}$, which is independent of distance. As the bandwidth goes to zero, short distances receive a high weight and far distances a weight close to zero. This approach is similar to the one by Kamhöfer et al. (2018), who instrument individuals' decision to attend college using their distance to colleges. Note that due to kernel function, the instrument and the regressor of interest are not on the same scale, even though both represent a population share.

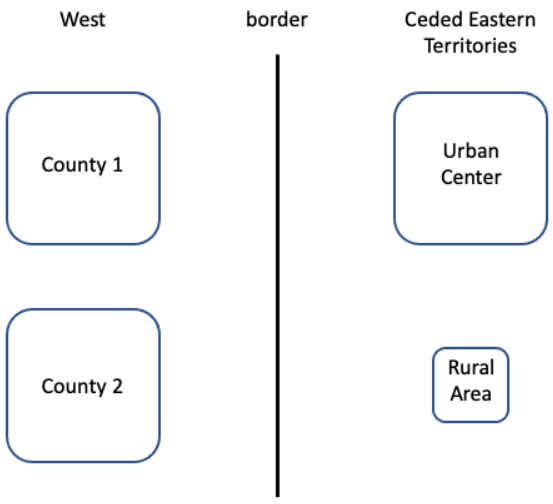
The First Stage The first-stage relationship between the instrument and the county-level expellee share is given by:

$$ExpShare_{c(m)} = \gamma_0 + \gamma_1 IV_{c(m)} + \boldsymbol{X}'_{\boldsymbol{m}}\boldsymbol{\psi} + f\left(dist\_border_{c(m)}\right) + \alpha_{s(m)} + \eta_m. \quad (4)$$

The instrument predicts the expellee inflow into West German counties based on two sources of variation, namely the distance to the sending regions and the relative share of Germans in a sending region over the total number of Germans to be expelled. Because of the Kernel distance weights in Equation (2), counties located closer to the ceded Eastern territories are predicted to receive more expellees.

As we discuss in greater detail below, this variation poses a challenge for identification because the distance to the East is potentially correlated with post-war developments in West Germany that vary from East to West irrespective of the expellee inflows. For this reason, our IV strategy isolates variation in the *relative closeness* of West German counties to urban centers in the sending regions, as illustrated in Figure 5. In this simple example, both counties in West Germany are at the same distance to the sending regions, but *County 1* is closer to an urban center. The instrument predicts that *County 1* receives more expellees than *County 2* due to its relative closeness to the urban center. In the first- and second-stage equations, we isolate the relative closeness by controlling for the minimum distance to the Iron Curtain, $f\left(dist\_border_{c(m)}\right)$, and state fixed effects. This means that our identification is based on a comparison of counties within the same state that are at a similar distance to the Iron Curtain but have different — actual or predicted — shares of expellees; the predicted variation in the share of expellees being driven by the relative distance to larger population centers in the ceded territories.

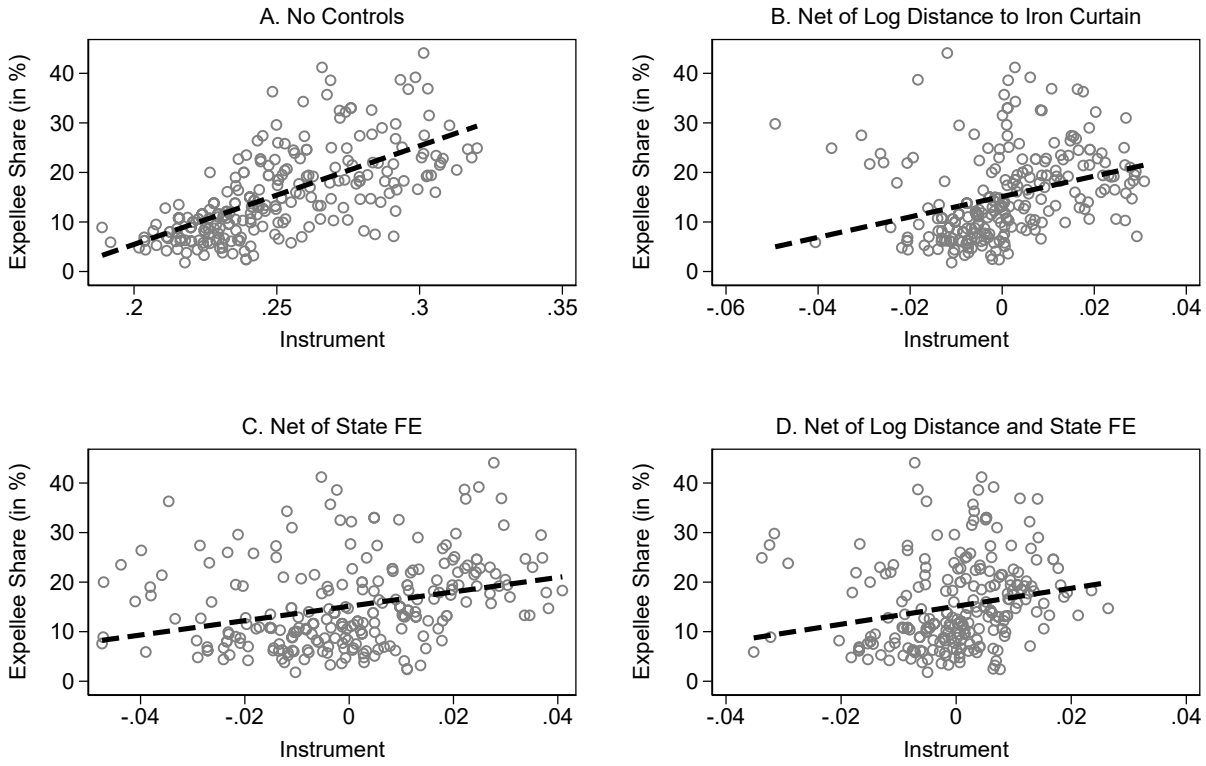
Figure 5: Identifying Variation: Relative Distance to Urban Centers



Notes: This graph illustrates the identifying variation. Both counties in West Germany have the same minimum distance to the Iron Curtain. *County 1*, however, is closer to an urban center in the East compared to *County 2*, such that the instrument predicts a higher inflow into *County 1*.

To illustrate the variation of the instrument conditional on controls for distance, we display the correlation between the share of expellees and the instrument in Figure 6. Panel A shows that the instrument and the population share of expellees are positively correlated. Panel B shows that this positive correlation remains when the (log) minimum distance from the receiving county to the Iron Curtain is controlled for. This control is necessary to account for the economic effect of the partition of Europe after the war. In Panel C, we consider an alternative control for distance, namely state fixed effects. The fixed effects absorb the average distance between cities located in the same federal state and the Iron Curtain, such that the instrument only relies on within-state variation. Again, the positive correlation between the instrument and the local expellee share prevails. Finally, in Panel D, we jointly control for state fixed effects and the (log) minimum distance to the Iron Curtain. In this case, the variation in the instrument captures the *relative closeness* to former population centers in the sending regions *within the same West German state*. The corresponding figure indicates that even if two counties in the same state have the same distance to the Iron Curtain, the county that is relatively closer to a larger population center is predicted to have a higher share of expellees in 1950.

Figure 6: First-stage Correlation between the Expellee Share and the Instrument



Notes: This graph displays the correlation between the instrument and expellee share in 1950. Each panel is a scatter plot of the 271 municipalities in our estimation sample. In Panel B, we control for the log distance to the Iron Curtain. In Panel C we condition on state fixed effects. In Panel D we condition on state fixed effects and the log distance to the Iron Curtain.

Instrument Validity The 2SLS estimator delivers consistent estimates of a causal effect under two assumptions, namely that the instrument is as good as randomly assigned (*conditional independence*) and affects the outcome through the regressor of interest but no other channel (*exclusion restriction*).

To ensure conditional independence, we construct the instrument such that it is independent of the local conditions in the destination regions. The instrument in Equation (2) is a push-driven instrument: it is a projection of the sending counties' population shares in the late-1920s/early-1930s — a predictor for the number of forced migrants who were pushed out by the Potsdam Agreement — onto the receiving counties based on bilateral distances between sending and receiving counties. It excludes any destination-specific pull factors such as economic or political conditions that may have driven the inflows into certain destinations. In some specifications, we additionally control for these factors, but they do not enter the construction of the instrument.

Table 2: Balancing Tests on Local Pre-War Spending, Tax Rates, and Measures of Economic Power

	Expellee Share			Instrument		
	(1)	(2)	(3)	(4)	(5)	(6)
A. Municipality-Level Spending (N=69)						
Total Log Spending (1936-38)	-0.211	-0.887***	-0.952***	0.058	-0.005	0.098
	(0.167)	(0.283)	(0.298)	(0.127)	(0.167)	(0.250)
Spending Share: Welfare (1936-38)	-0.416***	0.129	0.165	-0.273***	0.040	0.197
	(0.124)	(0.319)	(0.353)	(0.096)	(0.198)	(0.261)
Spending Share: Education and Admin (1936-38)	0.813***	0.399	0.523*	0.304**	-0.258	-0.336
	(0.145)	(0.307)	(0.291)	(0.140)	(0.224)	(0.378)
Spending Share: Public Infrastructure (1936-38)	-0.355**	-0.329	-0.570*	-0.172	0.274	-0.131
	(0.152)	(0.336)	(0.330)	(0.144)	(0.256)	(0.419)
Spending Share: Health and Housing (1936-38)	-0.259	-0.705**	-0.704*	0.247**	0.062	0.471
	(0.179)	(0.348)	(0.380)	(0.118)	(0.209)	(0.315)
B. Municipality-Level Tax Rates (N=430)						
Tax Index (1938-44)	-0.145***	-0.327***	-0.389***	-0.018	0.016	-0.024
	(0.053)	(0.073)	(0.076)	(0.056)	(0.070)	(0.115)
Agricultural Land Tax Rate (1938-44)	-0.032	-0.222***	-0.280***	0.066	0.029	-0.051
	(0.053)	(0.079)	(0.083)	(0.059)	(0.071)	(0.118)
Property Tax Rate (1938-44)	-0.161***	-0.523***	-0.601***	-0.009	-0.061	-0.216
	(0.054)	(0.081)	(0.085)	(0.053)	(0.083)	(0.139)
Business Tax Rate (1938-44)	-0.171***	-0.151**	-0.173**	-0.103*	0.024	0.103
	(0.054)	(0.070)	(0.074)	(0.055)	(0.070)	(0.130)
C. County-Level Measures of Economic Power (N=556)						
Log Population (1939)	-0.342***	-0.260***	-0.274***	-0.323***	0.027	-0.048
	(0.043)	(0.069)	(0.069)	(0.037)	(0.045)	(0.079)
Log Income Tax Revenues (1932-33)	-0.391***	-0.479***	-0.469***	-0.365***	-0.100**	0.025
	(0.042)	(0.066)	(0.066)	(0.039)	(0.048)	(0.094)
Log Business Tax Revenues (1932-33)	-0.280***	-0.383***	-0.384***	-0.233***	-0.035	0.020
	(0.042)	(0.071)	(0.072)	(0.043)	(0.058)	(0.103)
Index of Regional Economic Development (1933)	-0.278***	-0.221***	-0.214***	-0.268***	-0.040	0.071
	(0.043)	(0.062)	(0.063)	(0.038)	(0.050)	(0.098)
Unemployment Share (1933)	-0.043	-0.128***	-0.149***	0.066	0.116*	0.094
	(0.036)	(0.037)	(0.039)	(0.043)	(0.067)	(0.143)
State Fixed Effects		Yes	Yes		Yes	Yes
Log Distance To Iron Curtain			Yes			Yes

Notes: This table shows the effect of the expellee share and the instrument on various measures of municipalities' spending and tax rates as well as counties' economic power before World War II, respectively. See Table A.1 for information on each outcome variable. The number of underlying observations is 69 for outcomes displayed in Panel A, 430 for outcomes in Panel B, and 556 for outcomes in Panel C. We control for federal state fixed effects in columns (2) and (5), and additionally for the log disstance to the Iron Curtain in columns (3) and (6). Standard errors are clustered at the county level. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

We corroborate the conditional independence assumption through balancing tests using information on pre-war spending, tax rates, and measures of economic performance at both the city and county levels (see Appendix A for details on each variable and its source). Table 2 presents the corresponding results. Each coefficient is the result of a separate regression of a pre-war variable on the treatment, displayed in Columns (1)–(3), or the instrument, displayed in Columns (4)–(6). We estimate three different specifications, one without any controls in Columns (1) and (4), one with state fixed effects in Columns (2) and (5), as well as one with state fixed effects and the log minimum distance to the Iron Curtain as an additional control variable in Columns (3) and (6).

The results in Columns (1)–(3) reveal a pronounced sorting of the expellees into locations that were less populated, had lower tax rates and tax revenues, and were economically less developed before the war. This pattern is consistent with historical evidence showing a disproportionate allocation of expellees to smaller cities and rural areas due to greater housing availability. With respect to most outcomes, the sorting prevails when we control for state fixed effects and the distance to the Iron Curtain. In contrast, the results displayed in Columns (4)–(6) suggest that the instrument — conditional on controls for distance — is as good as randomly assigned. When controlling for state fixed effects and counties' minimum distance to the Iron Curtain only a few statistically significant coefficients can be detected.

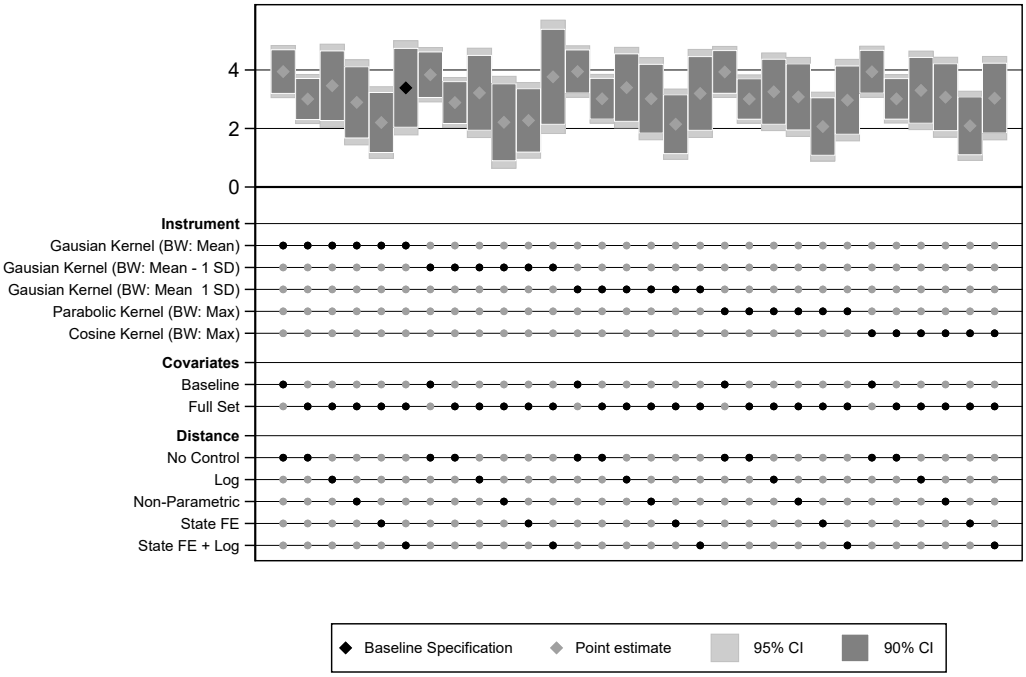
The second condition for instrument validity is the exclusion restriction, which requires that the instrument affects the outcomes of interest only through the expellee inflow but no other channel. The central challenge to the exclusion restriction is the fact that the inflow and integration of the expellees coincided with the division of Germany and the closing of Eastern Europe behind the Iron Curtain, which led to unequal economic growth between cities close to and far away from the Eastern border. As discussed above, we address this challenge by controlling for the shortest distance between the centroid of county c and the Iron Curtain, and we conduct a series of robustness checks with different functional forms of distance. Additionally, we construct an indicator of regions' post-war loss in market access to directly capture this channel.

5 Main Results — The Effect of the Expellee Inflow on Public Policies

5.1 First-stage Relationship

We begin by presenting the first-stage relationship between the predicted and actual inflow of expellees into West German counties. Figure 7 presents the estimates and corresponding 90% and 95% confidence intervals of the first-stage coefficient, term γ_1 in Equation (4), using different kernel functions and bandwidths as well as varying sets of control variables. The figure shows that the instrument is a strong predictor of the actual inflow of expellees across West German counties irrespective of the Kernel function and the functional form of the distance controls. All first-stage coefficients are positive and statistically significant at the 95% level or above and have similar magnitudes. Our preferred specification, based on the Gaussian kernel and a bandwidth equal to the mean distance, implies that a one-standard-deviation increase in the predicted share of expellees increases the actual share of expellees by around 3.4 percentage points. The corresponding F-statistics — to be shown along with the second-stage results in Section 5.2 below — indicate that the first

Figure 7: First-Stage Estimates with Different Kernels, Bandwidths and Controls



Notes: This figure displays the estimates and corresponding 90% and 95% confidence intervals of the first-stage relationship between the instrument and the county-level expellee share as given in Equation (4). Our preferred specification, using a Gaussian kernel and a bandwidth equal to the mean distance, is highlighted by the dark diamond. The dark dots in the lower panel of the figure indicate the exact specification used, i.e., the kernel and bandwidth used for instrument construction as well the set of covariates controlled for. Standard errors are clustered at the county level.

stage is sufficiently strong to allow for reliable inference. Although the F-statistic decreases when controlling for receiving counties' distance to the Iron Curtain, it still ranges from 15 to 23 in our most demanding specifications.

5.2 Effects on Local Public Finances

Effects on Spending Table 3 displays the estimated effects of the expellee inflow on total spending as well as the respective spending shares for different items — capturing municipalities' total spending — for a variety of specifications. All outcomes are averages over the period 1950–1959. Columns (1) and (2) display OLS estimates with controls for the local extent of destroyed housing stock, occupation zone fixed effects, as well as economic and political conditions before World War II. In Column (2), additional controls for municipalities' distance to the Iron Curtain are added to the model. Columns (3)–(8) display the corresponding 2SLS estimates with different sets of controls (for distance to the Iron Curtain). Our preferred specification, displayed in Column (8), includes state fixed effects and controls for the (log) minimum distance to the Iron Curtain. In this specification, we compare cities with different levels of inflows that are in the same federal state and at a similar distance to the Iron Curtain, such that identification comes from cities' relative proximity to population centers in the ceded territories.

Panel A of Table 3 displays the corresponding effects on (log) total spending. As displayed in Columns (1) and (2), the estimated effects from simple OLS regressions are small and statistically

insignificant. In contrast, the instrumental variable estimates consistently show that cities with larger inflows had higher levels of spending during the 1950s. Recall that the vector of control variables includes the log population in 1939, which accounts for the fact that larger cities spend more in absolute terms. Across specifications, we find that a one-percentage-point increase in the share of expellees increases total spending by 4 to 12%, and 10.5% in our preferred specification in Column (8).

Table 3: The Effect of the Expellee Inflow on Spending

	OLS		Instrumental Variables					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Total Spending (Log)								
Expellee Share	-0.008	-0.009	0.037*	0.060**	0.110**	0.123**	0.064*	0.105**
	(0.009)	(0.011)	(0.019)	(0.027)	(0.043)	(0.053)	(0.037)	(0.050)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
B. Spending Share: Welfare								
Expellee Share	0.104**	-0.108*	0.448***	0.548***	0.608***	0.509**	0.346*	0.424**
	(0.045)	(0.057)	(0.098)	(0.133)	(0.191)	(0.241)	(0.200)	(0.214)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
C. Spending Share: Education/Administration								
Expellee Share	0.147*	0.204**	0.196	0.376*	0.239	0.482	0.607**	0.497
	(0.075)	(0.095)	(0.136)	(0.200)	(0.274)	(0.335)	(0.272)	(0.308)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
D. Spending Share: Infrastructure								
Expellee Share	-0.237***	0.001	-0.653***	-0.761***	-0.809***	-0.883***	-0.544**	-0.654**
	(0.053)	(0.078)	(0.120)	(0.172)	(0.243)	(0.323)	(0.271)	(0.297)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
E. Spending Share: Health/Housing								
Expellee Share	-0.012	-0.095	0.014	-0.155	-0.025	-0.097	-0.405*	-0.259
	(0.068)	(0.076)	(0.127)	(0.172)	(0.253)	(0.335)	(0.235)	(0.291)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
Destroyed Housing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Zone FE	Yes		Yes	Yes	Yes	Yes		
Pre-WWII Controls		Yes		Yes	Yes	Yes	Yes	Yes
Log Distance		Yes			Yes			Yes
100km Distance Bins						Yes		
Federal State FE		Yes					Yes	Yes

Notes: This table displays the OLS and 2SLS estimates of the effect of the expellee inflow on spending outcomes, accounting for the controls listed at the bottom. The regressor—the share of expellees in the population in 1950—is measured in percentage points (0-100), as are the spending shares in Panels B–E. All outcomes represent averages over the period 1950–1959. Standard errors, clustered at the county level, are displayed in parentheses. The number of clusters is 219. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

In Panels B–E, we assess how the inflow of expellees affected the allocation of municipal funds, that

is, we implicitly hold the amount of spending constant and focus instead on the relative importance of a given expenditure item. From Panel B we first infer that the inflow of expellees increased relative spending on welfare. Across all IV specifications, we find a positive and statistically significant effect. In our preferred specification, a one-percentage-point increase in the share of expellees leads to an increase in the share of welfare spending by 0.42 percentage points.

The effect on the share of spending on education and administration in Panel C of Table 3 is of similar size, albeit less precisely estimated. In our preferred specification, a one-percentage-point increase in the share of expellees is associated with an increase in the corresponding spending share by around 0.5 percentage points. These large increases in cities' relative spending on welfare as well as education and administration are, in turn, compensated by a significant decrease in relative spending on local public infrastructure. Column (8) of Panel D shows that a one-percentage-point increase in the expellee share leads to a reduction in the spending share on infrastructure by around -0.65 percentage points. The estimated effect on the spending share on health and housing is negative, too, but statistically insignificant in our preferred specification and quite volatile across IV specifications (see Panel E).

The rather inconclusive finding for spending on health and housing may appear surprising. However, increased demand for housing due to the inflow of migrants was largely met by policy responses at the national level. The *First Housing Construction Law of 1950* made it the "obligation of the Federal government not only to plan for new housing construction each year but also to secure the means of its financing", mostly through tax incentives to housing associations (Wertheimer, 1958). The expellees also benefited from the *Equalization of Burdens Act of 1952* and the *Second Housing Construction Law of 1956*, which gave them preferential treatment in the allocation of rental housing and subsidized loans for building a house or acquiring home ownership (Kossert, 2008, Connor, 2007).

In sum, the size of the estimates presented in Panels B–E suggests that the expellee inflow led to a substantial shift in cities' spending behavior. Our preferred specification in Column (8) suggests that an increase in the share of expellees by one standard deviation – equivalent to 8.43 percentage points – increased the spending share of welfare by around 3.6 percentage points, the spending share of education and administration to increase by 4.2 percentage points, and decreased the spending share of infrastructure as well as health and housing by around 5.5 and 2.2 percentage points, respectively.

The IV estimates are fairly stable across specifications and larger in absolute terms than the corresponding OLS estimates. Moreover, unlike the IV estimates, the OLS estimates are sensitive to the included set of controls, in particular regarding controls for municipalities' distance to the Iron Curtain. The differences between the OLS and IV estimates, $|\beta^{OLS}| < |\beta^{IV}|$, appears plausible given the sorting of expellees revealed by the balancing tests in Table 2. These showed that the expellees disproportionately went to places with lower economic potential, revenues, and spending before the war. If these outcomes have some persistence, the sorting leads to a downward bias in the OLS estimates. For example, if the expellees mainly went to places with low tax rates in the 1930s and these same places had lower tax rates in the early 1950s for reasons other than the inflows, we would obtain a negative association between the expellee inflow and local tax rates. The instrumental variable removes this confounding correlation, thereby leading to larger estimates.

Alternative explanations for the discrepancy between the OLS and 2SLS estimates are (i) measurement error in the share of expellees and (ii) the fact that the regression weights in the 2SLS estimator depend on the degree to which cities comply with the instrument. We consider both explanations to be less important. We obtain similar results when using the 1952 municipality-level expellee share as the main variable of interest (see Section **??**), suggesting that measurement error is unlikely to explain the differences between OLS and 2SLS results. We also control for a large variety of pre-determined economic, political and geographic local characteristics, which should absorb differences in compliance across cities. Hence, differences in OLS and IV estimates are unlikely to be driven by differential compliance with the instrument.

Effects on Taxes, Debt, and Transfers In Table 4, we turn to the effect of the expellee inflow on municipal revenues. During the 1950s, German cities had two main sources of revenue, namely local taxes and transfers from higher levels of government. Whereas municipalities were free to set tax rates on local agricultural and residential property as well as firms' profits and capital stock annually, transfers from higher levels of government were allocated via set rules. In addition, cities could balance their budgets by incurring debt.

Table 4 shows the estimated effects of the expellee inflow on cities' local tax rates, transfers from higher levels of government, and debt. Each outcome is the average over the period from the early 1950s to the late 1950s/early 1960s, respectively (see the Data Appendix A for details). Panels A and B display the estimated effects of the expellee inflow on standardized indices of local tax rates — the index in Panel A is unweighted, and the index in Panel B is weighted by the revenue share of each tax rate in 1950. The IV estimates in Columns (3)–(8) show that the inflow of expellees led to an economically meaningful and statistically significant increase in tax rates. According to our preferred specification in Column (8), an increase in the share of expellees by one percentage point led to an increase in local tax rates by around 8.4 to 9.3% of a standard deviation. Put differently, an increase in the share of expellees by one standard deviation is associated with an increase in tax rates by around 70 to 80% of a standard deviation. While these are large effects, they are nonetheless realistic. As displayed in Appendix Table C.1, we find that a one-standard-deviation increase in the expellee share is associated with an increase in the property tax rate of around 0.3%, which is equivalent to 14% of the average tax rate. Correspondingly, the respective baseline IV estimate for municipalities' business tax rate indicates that a one-standard-deviation increase in the expellee share leads to an increase in the local business tax rate by around 8% relative to the mean tax rate.

In Panels C and D of Table 4, we show that cities with a larger share of expellees received more transfers from higher levels of government but also incurred more debt. Given that we control for population size in 1939, the results can be interpreted as the effect of an increase in the share of expellees on transfers and debt in percent *for a given city size*. Our preferred specification in Column (8) shows that an increase in the share of expellees by one percentage point increased the number of annual transfers by around 14% and debt by around 12%, respectively. For comparison, the average city in the 1950s spent 156 DM per capita per year, received transfers of around 66.5 DM per capita per year, and had an average debt level of 339 DM per capita.[15] Holding the pre-war population

[15] These numbers are based on the total amount of spending, transfers, and debt in Table B.1 divided by the average city

Table 4: The Effect of the Expellee Inflow on Taxes, Transfers and Debt

	OLS		Instrumental Variables					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Tax Index (Unweighted)								
Expellee Share	0.059***	-0.030***	0.123***	0.124***	0.170***	0.126**	0.089**	0.084*
	(0.011)	(0.010)	(0.024)	(0.034)	(0.051)	(0.053)	(0.042)	(0.045)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
B. Tax Index (Weighted by 1950 Tax Revenues)								
Expellee Share	0.003	0.019	0.047*	0.116***	0.189***	0.202***	0.057	0.093*
	(0.013)	(0.016)	(0.027)	(0.038)	(0.062)	(0.067)	(0.039)	(0.052)
Number of Observations	219	219	219	219	219	219	219	219
Kleibergen-Paap *F*-Statistic			72.20	43.67	25.03	17.73	19.13	19.03
C. Total Transfers (Log)								
Expellee Share	0.004	-0.028	0.099***	0.128***	0.167**	0.217***	0.103*	0.143**
	(0.014)	(0.018)	(0.028)	(0.041)	(0.067)	(0.082)	(0.053)	(0.071)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
D. Total Debt (Log)								
Expellee Share	0.016*	-0.003	0.077***	0.101***	0.162***	0.173***	0.083**	0.119**
	(0.009)	(0.013)	(0.021)	(0.028)	(0.048)	(0.063)	(0.036)	(0.056)
Number of Observations	256	256	256	256	256	256	256	256
Kleibergen-Paap *F*-Statistic			71.07	45.04	20.16	14.39	19.18	18.61
Destroyed Housing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Zone FE	Yes		Yes	Yes	Yes	Yes		
Pre-WWII Controls		Yes		Yes	Yes	Yes	Yes	Yes
Log Distance		Yes			Yes			Yes
100km Distance Bins						Yes		
Federal State FE		Yes					Yes	Yes

Notes: This table displays the OLS and 2SLS estimates of the effect of the expellee inflow on local taxes, transfers and debt, adjusting for the controls listed at the bottom. The regressor—the share of expellees in the population in 1950—is measured in percentage points (0-100). The tax indices are a standardized covariance-weighted indices of three local tax rates (mean zero, standard deviation one). The tax indices refer to the average over the period from 1950-1959, transfers and debt to the respective averages over the time period 1949-1964. Standard errors,clustered at the county level, are displayed in parentheses. In Panels A-C, the number of clusters amounts to 219, in Panel D to 204. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

constant, an increase in the share of expellees by one standard deviation thus led to a near-doubling of both the cities' annual transfers per capita and their average level of debt per capita.

5.3 Discussion of the Main Results

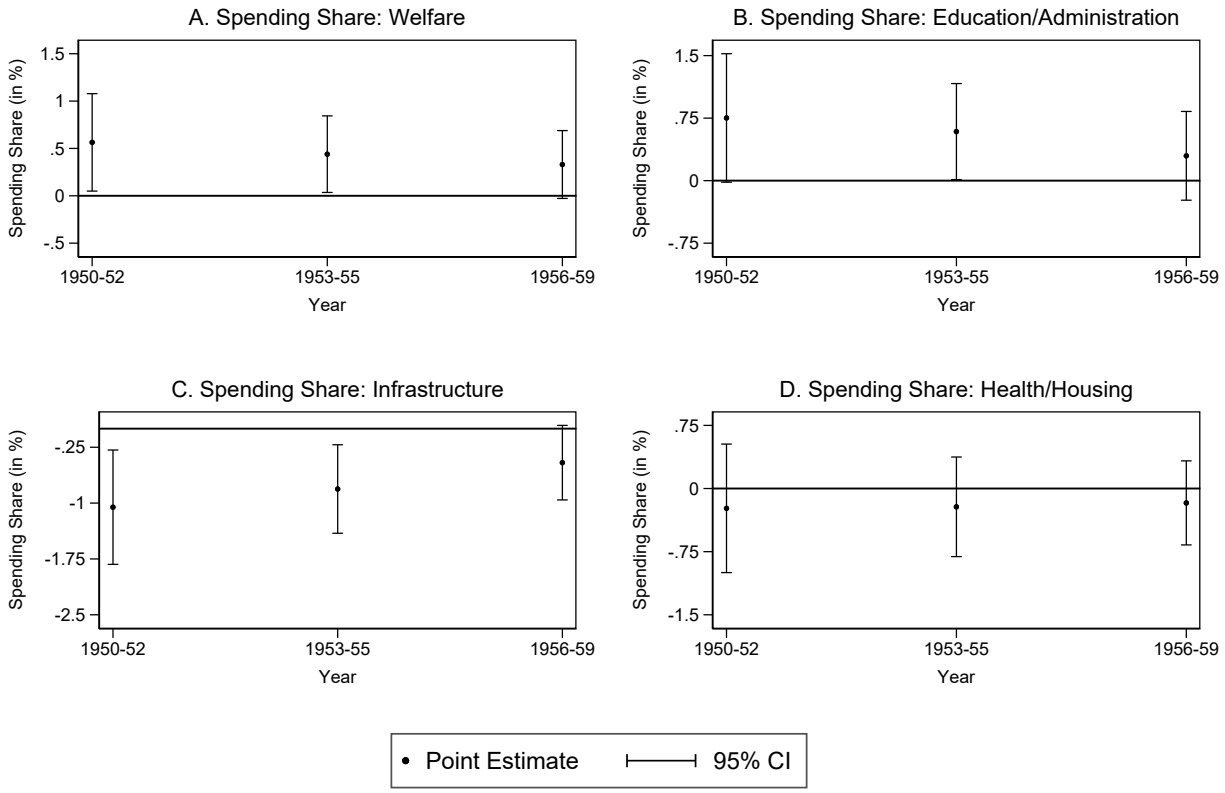
The results in Tables 3 and 4 show that the inflow of expellees into West German cities had a profound impact on public policy setting. Cities with a high share of expellees shifted their spending from infrastructure to welfare and education, raised local taxes, incurred more debt, and received more transfers. Most of these outcomes are policy variables over which the cities had a large amount of control, in particular spending, taxation, and debt take-up. These were set by city councils that had

size of 70,000 inhabitants in 1952.

to operate within budget rules and were legally responsible for the provision of certain services such as the upkeep of infrastructure or the provision of basic social welfare. However, within these rules, councils were free to decide on their spending priorities.

The results displayed in Table 3 suggest that they used this discretion. The inflow of expellees created an immediate need to spend more on welfare, education, and administration. In turn, cities reduced or postponed spending on longer-term investments such as infrastructure. The increase in local taxes is considerable, too, given that local tax revenues in the 1950s accounted for 87% percent of the average city's spending. However, the results in Table 4 suggest that not the entire need for funds was covered by tax increases; a considerable amount of spending was financed through additional transfers from higher levels of government as well as debt. Cities had no control over transfers, which followed national and state-specific allocation rules. The fact that we see large effects on taxation and spending despite the increase in transfers may have two non-mutually exclusive explanations. One is that the additional transfers were insufficient to provide the funds required for the integration of the expellees. A second potential explanation is that the arrival of large numbers of poor voters also shifted a city's preferences towards more generous spending and higher taxation. We will elaborate further on this point in the next section.

Figure 8: The Effect of the Expellee Inflow on Spending over Time



Notes: This graph shows the 2SLS estimates (and corresponding 95% confidence interval) of the effect of the expellee inflow on spending shares for various expenditure items over time (1950–52, 1953–55, 1956–59). All estimates are based on the most comprehensive IV specification as displayed in Column (8) of Table 3. The regressor — the share of expellees in the population in 1950 — and explanatory variables are measured in percentage points (0-100). Standard errors are clustered at the county level.

Although the increase in welfare spending appears mechanical, we argue that it is not — at least not entirely. In the initial phase, a greater number of welfare recipients meant that cities had no choice but to spend more on welfare. However, as shown in Figure 3, the share of welfare recipients in cities with high versus low relative inflows of expellees rapidly converged. If the observed effect on welfare spending was purely mechanical, we should observe a strong effect on welfare spending right after the inflow and a rather strong decline of the estimated coefficient over time as expellees became more integrated into society and the need for social benefits decreased. In Figure 8, we test for treatment effect dynamics by separately estimating effects on cities' average spending shares in 1950–52, 1953-1955, and 1956–59. The results on social welfare, displayed in Panel A, point to quite persistent effect over time that only mildly weakens over time. Indeed, using a Hausman test, we cannot rule out that effects of the expellee inflow on relative welfare spending during the period 1950–52 and 1956-59 are statistically equal (p-value: 0.192).

Panel B of Figure 8 shows a similar pattern for relative spending on education and administration. The effect is more pronounced in the early 1950s and slightly decays over time, but remains economically significant throughout the 1950s. Moreover, we fail to reject the hypothesis that coefficients for the early and late 1950s are equal—the corresponding p-value being 0.199. For relative spending on infrastructure, the pattern is a bit more pronounced. Panel C shows that the negative impact of the expellee inflow on the share of spending on infrastructure declines over time but remains statistically significant at the 10% level in the late 1950s. We take this finding as suggestive evidence that the inflow of expellees led to long-run changes in the allocation of local expenditures towards welfare and education at the expense of infrastructure. This finding is consistent with earlier evidence by Bauer et al. (2013) and Becker et al. (2020), who show that forced migrants tend to have stronger preferences for education.

We arrive at similar conclusions when looking at cities' per capita spending (on various expense items), see Appendix Table C.2 and Appendix Figure C.1. Overall, we find a positive, statistically significant and persistent effect of the expellee inflow on welfare spending per capita. Similar patterns can be observed for per-capita spending on education and — going in the opposite direction — for per-capita spending on infrastructure. We acknowledge that these results are less precisely estimated and somewhat difficult to interpret, given that the expellee inflow affected both the numerator (the amount spent) and the denominator (the number of inhabitants in the municipality). However, the persistence of the effects indicates that cities chose to change the allocation of their budget.

The overall shift in spending is concurrent with changes on the revenue side. Cities with a larger share of expellees considerably raised local taxes, in particular on residential property and business profits (cf. Table 4 and Appendix Table C.1). The statutory incidence for these taxes falls on property and business owners and, therefore, mostly on natives. As indicated by Appendix Figure C.2, these average effects are not the result of an initial uptick and subsequent decay but are very stable throughout the 1950s. Altogether, we take the dynamic effects as well as the per-capita spending effects as evidence that is consistent with the notion that those cities that received a larger share of expellees implemented lasting changes in their policies on taxation and redistribution.

Mobility as a Potential Confounder The evolution of the effects over time is also helpful to assess the importance of population mobility as a potential confounder. In the post-war period, there were significant movements of the population, for example, the internal mobility of expellees and non-expellees in the 1950s, the East-West migration of expellees who initially settled in the Soviet occupation zone, and the general East-West migration before the construction of the Berlin Wall and the closure of the Iron Curtain in 1961. Each of these movements can be a confounder as well as a mediator. The movements can be a confounder if the instrument nudges subsequent cohorts of internal migrants to settle in the same places as the initial wave of expellees. In that case, the instrument would potentially affect public policy setting through a different channel than the settlement of the expellees, thereby violating the exclusion restriction and yielding inconsistent estimates. However, the movements of subsequent immigrant cohorts could also be a mediator, i.e., lie on the causal path between the local share of expellees in 1950 and the outcome. This could be the case if the initial inflow of expellees affected the settlement of subsequent migrants, for example, because the initial inflow led to higher economic growth and agglomeration rents. If internal mobility is a mediator, it affects the interpretation of the estimates — that is, it partially explains why cities with high-inflows set different public policies — but it does not lead to inconsistent estimates.

Of the aforementioned internal migration flows, the internal migration of expellees and non-expellees in the 1950s is likely a mediator, whereas the migration from the Soviet occupation zone/the German Democratic Republic could be both a confounder or mediator. In Appendix C.1, we illustrate the role of East-West migration as a mediator and confounder in a directed acyclic graph (DAG). Although it is impossible to prove that this episode of migration is not a confounder, the estimated effects for the early 1950s suggest that, if anything, the confounding influence is small. Annual data on overall out-migration from the Federal Statistical Office shows that the vast majority of migrants from the GDR to the FRG moved after the uprising of 1953 — 2.7 million people in total, comprising expellees and non-expellees. In contrast, the number of East-West migrants in 1951 and 1952 stood at less than 200,000 people per year (Lichter et al., 2020), which is a small number compared to the eight million expellees who arrived before 1950. The fact that we find large effects in those years, when internal migration was unlikely a confounder suggests that internal migration had little confounding influence altogether.

5.4 Robustness Checks

Inference We next test whether estimated effects are robust to alternative ways of drawing inference. Appendix Tables C.3 and C.4 report the p-values form alternative methods along with those from our baseline specification for the ease of comparison. We first show that clustering standard errors at the city rather than the county level does not affect inference. We perform this test because the majority of municipalities in our baseline sample constitute the only observed unit in a given county (196 out of 271), which yields many singleton clusters.

A more important concern is the potential presence of spatial autocorrelation in the error term. In our main regressions, we allow for a correlation of the error term within counties. However, it is possible that the spatial correlation reaches beyond county borders, which can lead to an underestimation of the standard errors and an increased likelihood of obtaining a false positive result.

To address this challenge, we follow Conley (1999) and allow for spatial autocorrelation within a radius of 25km and 50km around a county's centroid, respectively. The corresponding p-values show that results for most outcomes remain statistically significant at the 5% or 10% level.

In light of the small sample size, baseline inference may also be misleading in case the standard errors do not follow a normal distribution. To address this concern, we report permutation-based p-values that do not rely on parametric assumptions. Each p-value is based on the empirical distribution of 500 placebo estimates, whereby the outcome is randomly re-shuffled with each permutation. The p-value indicates the share of placebo estimates that are larger than the point estimate in absolute value. The permutation-based p-values are similar to the p-values based on parametric inference, which indicates that inference is robust to parametric assumptions.

Finally, we follow Young (2022) and re-estimate our preferred IV model for N subsamples obtained by excluding one observation from the sample at a time. In Figures C.3 and C.4, we report the results of this jackknife strategy by plotting the corresponding point estimates and standard errors. For all outcomes, the distribution of point estimates is tight, highlighting that estimates are insensitive to outliers. The same is true for inference. For most outcomes, the estimates remain statistically significant at conventional levels when excluding one observation at a time.

City-level Expellee Share in 1952 In our baseline model we use the population share of expellees at the county level in 1950 as explanatory variable of interest, which is the earliest available comprehensive account of the regional inflow of the expellees. A potential concern with this choice is that the share of expellees in a county may not accurately measure the share of expellees in a city within this county. For example, more expellees may have settled in the rural part of a county rather than an urban center. To address this concern, we re-estimate our preferred IV specification using the 1952 city-level share of expellees as the regressor of interest. In Columns (1)–(4) of Appendix Tables C.5 and C.6, we contrast the corresponding effects. We obtain very similar results using both measures, which suggests that our baseline results are not contaminated by measurement error.

Loss of Market Access To account for potential confounding effects due to the partition of Germany that coincided with the inflow of the expellees, we control for state fixed effects and cities' (log) distance to the Iron Curtain in our preferred specification. By doing so, we implicitly assume that within federal states, West German cities within the same distance to the Iron Curtain experienced identical economic consequences. This assumption may not hold if, for example, cities with an equal distance to the Iron Curtain differed in their economic ties to eastern parts of pre-war Germany. We address this concern by directly controlling for cities' loss in market access. We use data from Ziegler (1992) who provides measures of local labor markets' economic power in 1933 and 1961, respectively.[16] The respective measures, described in Appendix A, are based on information about local labor markets' GDP per capita, average wages in manufacturing, and the local unemployment rate. We take the simple difference in the measures between 1933 and 1961 as a proxy for differential changes in market access across West Germany and plot the corresponding results when including this variable in Columns (5) and (6) of Appendix Tables C.5 and C.6. We find that estimated

[16] Local labor markets often combine several counties that are economically integrated.

coefficients for each outcome are virtually unchanged when adding this control variable.

Municipality Selection Finally, we address the concern that counties with more than one city in the baseline sample are over-represented in the western part of the country, which might in turn affect estimates. Excluding those cities slightly reduces the precision of the estimated coefficients but leaves overall conclusions unchanged; see Columns (7) and (8) of Appendix Tables C.5 and C.6.

6 Potential Mechanism: Shift in Preferences

Our results show that the inflow of eight million expellees had a profound impact on public policy setting in West German cities. In this section, we use survey and election data to provide suggestive evidence that the observed effects can be attributed to changes in the policy preferences of the local population. Given that the expellees were a large group and had voting rights upon arrival, it is indeed plausible that they used their voting rights to influence local politics. Moreover, it is possible that the inflow of the expellees affected natives' preferences. Although, absent individual voting data, we cannot fully disentangle the two mechanisms, we provide evidence of an overall change in political preferences as well as differences in preferences between expellees and non-expellees.

A strong indicator for whether the expellees voted in favor of greater redistribution is the vote shares of two parties that acted as advocacy groups for the expellees, namely the GB/BHE (*Gesamtdeutscher Block/Bund der Heimatvertriebenen und Entrechteten*) and the DP (*Deutsche Partei*). Both parties were active from 1950 and 1945 onward, respectively, and were part of several federal and state governments in the 1950s. The DP was particularly strong in North Germany (Lower Saxony, Schleswig-Holstein, Hamburg, and Bremen), whereas the GB/BHE had a strong representation across all West German states. Eventually, the GB/BHE and DP merged to form a new party, the *Gesamtdeutsche Partei* (GDP). The two parties' political demands are illustrated by exemplary election posters in Appendix C.2. Both the DP and GB/BHE demanded the redistribution of wealth from the West German population to the expellees, a fair sharing of the burden from war losses, fair wages, affordable housing, price controls on food, and sufficient pensions for the expellees.

Survey Evidence We begin by documenting differences in political interest, engagement, and attitudes between expellees and non-expellees shortly after the expulsion. For this purpose, we use individual-level data from the *Bundesstudie*, a representative survey of West Germans in 1953. The dataset covers 3,246 individuals and provides information about their demographics, economic situation, and political attitudes. Importantly, it also includes information on the respondents' place of residence before World War II, which allows us to distinguish expellees from non-expellees. Among all respondents, the share of expellees is 22%, which is comparable to their overall population share. Note that the survey does not include information on residence beyond the level of the federal states, such that we cannot link the local expellee share to individual statements.

In Table 5, we compare the overall political interest and specific party preferences of the expellees to the incumbent population. We regress binary outcomes on an indicator of whether a person was an expellee and control for age, gender, and religious denomination as well as federal state

Table 5: Political Participation and Preferences: Natives vs. Expellees

	Political Interest	Political Participation	Intention to Vote	Stated Party Preference for CDU/CSU	SPD	GB/BHE & DP	FDP & DVP	Other Parties
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Expellee	0.058***	0.040**	0.024**	-0.048**	-0.026	0.162***	-0.031***	-0.041***
	(0.021)	(0.019)	(0.011)	(0.020)	(0.018)	(0.016)	(0.010)	(0.010)
Number of Observations	3,225	3,234	2,805	3,244	3,244	3,244	3,244	3,244
Variable Mean	0.37	0.24	0.92	0.31	0.24	0.07	0.07	0.07

Notes: This table compares natives and expellees with regard to their interest and engegament in politics as well as party preferences. Results are based on individual-level survey data from the Federal Study 1953, see Appendix A for details. All regressions control for indivduals' gender, age (in bins), denomination and federal state of residence. Standard errors are heteroscedasticity robust. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

fixed effects. The results point to a significantly stronger political involvement of the expellees, as well as differences in political attitudes between expellees and non-expellees. Expellees were more likely to indicate that they (i) are interested in politics, (ii) engage in politics, and (iii) intend to vote. These differences are economically relevant. For example, the results displayed in Columns (1) and (2) indicate that the expellees were 5.8 percentage points more likely to express political interest and four percentage points more likely to attend political events. These effects amount to around 15% of the respective outcome mean. The greater participation in the political process might have given expellees' preferences an even greater weight in the setting of policies. In terms of party preferences, expellees were less likely to support the conservatives (CDU/CSU), social democrats (SPD), or liberals (FDP/DVP), and showed stronger support for the expellee parties (GB/BHE and DP). Column (6) shows that the likelihood of expellees reporting an intention to vote for one of the two expellee parties was 16.2 percentage points higher than among non-expellees.

Voting in National and Local Elections As a second piece of evidence for changes in political preferences, we consider results at national and local elections. Both types of elections are based on a representative system. There is little incentive for tactical voting, and — subject to passing an electoral threshold — the share of votes directly translates into seats.

In Table 6, we explore whether the descriptive survey evidence on voter preferences carries over to actual voting results. To this end, we first use data on city-level vote shares in the 1953 federal election and re-estimate our baseline IV model. The results, displayed in Columns (1)–(5), show that cities with a higher share of expellees saw significantly stronger vote shares for parties that were pro-redistribution, especially the GB/BHE and DP, and a lower vote share for liberal parties (the FDP & DVP), which were pro-laissez-faire. Quantitatively, a one-standard-deviation increase in the county-level expellee share is associated with a 3.1 percentage points increase in the vote share of the expellee parties. In contrast, the vote share of the liberal parties decreased by 4.8 percentage points in response to a one-standard-deviation increase in the population share of expellees.

In Column (6), we turn to local election results and test whether the expellees also gained political representation in local councils, which may have allowed them to directly influence political decisions. The local elections happened at different times, which is why we test whether the expellee share had an effect on the presence of the GB/BHE or DP in a local parliament during the period from the late

Table 6: The Effect of the Expellee Inflow on Voting Outcomes

	1953 Federal Elections Vote Shares (in %)					Local Elections
	CDU/CSU	SPD	GB/BHE & DP	FDP & DVP	Others	GB/BHE or DP in Parliament
	(1)	(2)	(3)	(4)	(5)	(6)
Expellee Share	-0.223	0.099	0.369**	-0.570**	0.347*	0.049**
	(0.329)	(0.335)	(0.147)	(0.256)	(0.189)	(0.021)
Number of Observations	221	221	221	221	221	221
Kleibergen-Paap *F*-Statistic	19.31	19.31	19.31	19.31	19.31	19.31
Variable Mean	43.83	31.29	6.82	10.25	7.79	0.57

Notes: This table displays 2SLS estimates of the effect of the expellee inflow on voting outcomes in the 1950s, adjusted for the same controls as in Column (8) of Table 3. The regressor—the county-level expellee share in 1950—is measured in percentage points (0-100), as are the election vote shares. The outcome in column (5) is a binary indicator that equals unity if an expellee party was ever present in a city council during the late 1940s to early 1960s. Standard errors, clustered at the county level, are displayed in parentheses. The number of clusters is 187. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

1940s to early 1960s. Overall, the expellee parties were present in 57% of the local councils covered in our sample, and, conditional on being in the council, had 8.5% of seats. This statistic in itself shows that many expellees voted for parties that catered for their particular interests. Moreover, we find that an increase in the share of expellees by one standard deviation increased the likelihood of the expellee parties winning at least one seat by 41 percentage points. Taken together, the results suggest that the expellees used their voting rights to vote in their own interest, for parties that were in favor of greater redistribution.

Political Concentration and Local Policies To further assess whether the expellees managed to influence local policy decisions, we test whether the impact of the expellee inflow was greater in municipalities with fiercer competition among parties. We hypothesize that in places with stronger competition there was a greater scope for the expellees to influence politics because parties had to compete for their votes and had a greater incentive to adjust their programs to cater to the expellees. To test this hypothesis, we construct a Herfindal-Hirschman Index (HHI) of local party concentration based on the first local election outcomes after World War II. The HHI is defined as $\sum_i^N \tau_i^2$, where τ_i refers to each party's local vote share. A lower index indicates stronger competition among local parties. We then generate a binary indicator that equals unity if a municipality has a below-median party concentration index — that is, a high degree of political competition — and zero otherwise. We last re-estimate our baseline IV specification as a full interaction model of the concentration dummy variable and the expellee share as explanatory variables of interest, using the corresponding interaction terms of the index and the instrument in the 2SLS model.

Across outcomes, we see that the effects of the expellee inflow are stronger in cities where political power was less concentrated, i.e., where competition was fiercer. The effects of the expellee inflow on the tax index, as well as the spending shares on welfare, education, and infrastructure are larger in absolute terms when political power is less concentrated. Although the coefficients are not statistically significantly different from each other, we take these results as additional suggestive evidence that the inflow of expellees led to a shift in political preferences that translated into actual policy setting.

Table 7: Heterogeneous Effects on Tax Rates & Spending by Political Concentration

	Tax Index	Spending on Welfare	Spending on Education	Spending on Infrastructure
	(1)	(2)	(3)	(4)
Expellee Share X Low Political Concentration	0.070*	0.388*	0.347	-0.585**
	(0.041)	(0.200)	(0.298)	(0.256)
Expellee Share X High Political Concentration	0.049	0.256	0.277	-0.403*
	(0.036)	(0.179)	(0.274)	(0.234)
Number of Observations	221	221	221	221
Kleibergen-Paap *F*-Statistic	9.95	9.95	9.95	9.95
Destroyed Housing	Yes	Yes	Yes	Yes
Pre-WWII Controls	Yes	Yes	Yes	Yes
Log Distance	Yes	Yes	Yes	Yes
Federal State FE	Yes	Yes	Yes	Yes

Notes: This table displays 2SLS estimates of the effect of the expellee inflow on tax rates and spending outcomes when allowing for heterogenous impacts across politically-contested versus poltically-uncontested cities, adjusting for the controls listed at the bottom. The regressor – the share of expellees in the population in 1950 – is measured in percentage points (0-100), as are the spending shares. The tax index is standardized to mean zero and standard deviation one. All outcomes represent averages over the period 1950-1959. Standard errors, clustered at the county level, are displayed in parentheses. The number of clusters is 187. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Candidate Selection Finally, we provide suggestive evidence for the influence of the expellees within the mainstream parties. As a proxy for their influence, we use the number of expellees selected by each party to run for office as so-called *direct candidates* in the federal elections between 1949 and 1961.[17] As each constituency only elects one representative in a winner-takes-all contest, candidates are usually very carefully chosen and need to be highly influential within a party. In Appendix Figure B.4, we correlate this measure of expellees' local political influence with the county-level expellee share. The figure suggests that across all parties an expellee's likelihood of nomination was substantially higher in areas with a relatively larger expellee inflow. This proportional relationship is remarkable because one would not expect to see many minority candidates unless the minority group had the majority of voters in a constituency or the candidate had strong political networks. With the expellees, neither of these conditions was fulfilled. As newcomers, the expellees typically did not have strong political networks, and their numbers were not large enough to form the majority of the population in any West German constituency. We view the fact that we see a proportional representation as an additional piece of evidence that the expellees were politically active and could influence politics.

7 Conclusion

This paper studies the impact of internal migration on local public policy setting based on one of the largest forced population movements in history. The expulsion of Germans after World War II led to the arrival of eight million forced migrants in West Germany within five years. Our empirical analysis exploits substantial variation in the population share of expellees across West German counties and an instrumental variable approach to estimate the effect of the inflow on local public

[17] Note that there is no equivalent information on candidates' place of birth for local elections.

policy setting. We find that cities responded to the expellee inflow by substantially changing their public policies. Cities with a larger share of expellees significantly increased their relative spending on welfare and education, while decreasing spending on infrastructure; they also raised local taxes and incurred more debt than cities with lower inflows. Using data on voting, we present evidence that the expellees used their voting rights to vote in their interest. This finding provides one plausible explanation for the observed changes in taxation and spending policies.

Our findings offer important insights to better understand the economic and political effects of forced migration. Internal conflicts, natural disasters, and climate change will likely increase the incidence of migration around the globe, and historical episodes like the expulsions after World War II can teach us about the likely consequences. In many host countries, forced migrants are assigned to local authorities, which are responsible for the provision of necessities. This often means that the administrative and fiscal burden of migration is unevenly spread across regions. Our results show that the assignment of forced migrants can spur significant changes in local taxation and spending policies. These results are particularly relevant for internal displacement episodes, where migrants are culturally similar to non-migrants and have voting rights.

In this regard, the results of this study can also inform the public debate about immigrant voting rights. In many receiving countries, immigrants do not have voting rights in most elections upon arrival, but an exception is often made for municipality-level elections.[18] The public debate often evolves around the conditions under which migrants can obtain voting rights and the likely consequences. In line with studies on enfranchisement through naturalization (e.g., Vernby, 2013, Ferwerda, 2021, Sabet and Winter, 2022), our results show that immigrant voting rights can lead to changes in policy setting. Immigrants are often poorer than the native population; if they vote in their interest, immigrant enfranchisement may result in the adoption of more redistributive policies.

The study also provides general insights into the political economy of redistribution. Our results are consistent with the predictions of standard median voter models (Romer, 1975, Roberts, 1977, Meltzer and Richard, 1981). Cities with high inflows of poor people implemented more redistributive policies. Testing these models is often challenging because inequality changes gradually, making it difficult to separate causation from correlation. The literature commonly uses franchise extensions to test median voter models (e.g., Cascio and Washington, 2013, Fujiwara, 2015). In these settings, the population remains the same but the distribution of voting rights changes. In our setting, every citizen has voting rights but internal migration changes the geographic distribution of the population. Thus, our results are relevant for countries with significant internal mobility, be it voluntary internal migration or forced internal displacement. If internal migration changes the local income distribution, one can expect an impact on the setting of taxation and spending policies.

[18] For example, European citizens can vote in municipal and EU elections in their country of residence. The UK and some US constituencies have similar rules allowing votes of non-citizens in local elections.

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Appendix

A Data Appendix and Descriptive Statistics

For our analysis, we draw upon a variety of datasets, which we explain in detail in what follows.

To investigate the effects of the expellee inflow on public policy setting and voting throughout the 1950s and early 1960s, we collected and harmonized historical municipality- and county-level data from various (statistical) publications. Data on the county-level share of expellees in 1950 were taken from the "Statistical Yearbook of the Expellees" (*Statistisches Taschenbuch über die Heimatvertriebenen in der Bundesrepublik Deutschland und in West-Berlin*), published by the Federal Statistical Office of West Germany in 1953. Information on the 1952 city-level share of expellees stem from the "Statistical Yearbook of German Municipalities" (*Statistisches Jahrbuch Deutscher Gemeinden, Jahrgang 1953*). Our outcome variables on city-level tax rates, spending, debt and voting (in local and federal elections) stem from various editions of this latter source, too. Post-war data on local public spending, debt and electoral results are given for cities (*Kreisfreie Städte*) as well as municipalities with at least 20,000 inhabitants. Pre-war information on local spending for the period 1936–39 is available for the 67 largest municipalities. Data on local tax rates are available for cities and municipalities with at least 10,000 inhabitants and given for the period from 1938–59.

Information on economic and social county-level differences prior to World War II are taken from three distinct sources. First, we make use of data from King et al. (2008), available for download from Gary King's website (`https://gking.harvard.edu/data`). Second, we digitized information on county-level population and labor-market data from the Statistical Yearbook of the German Reich in 1939 (*Statistisches Jahrbuch für das Deutsche Reich, 1939*) as well as data on county-level income tax revenues from the "Assessment of Income and Corporate Tax Revenues 1932/33" (*Einkommen- und Körperschaftsteuerveranlagung 1932/33*), published by the Statistical Office of the German Reich. Last, information on the county-level share of destroyed housing stock as of 1950 stem from the "1950 West German Building Census" (*Gebäude- und Wohnraumzählung in der Bundesrepublik Deutschland vom 13. September 1950*), published by the Federal Statistical Office in 1956. We would like to thank Sebastian Braun for sharing these data with us. Data on the economic performance of local labor markets in 1933 and 1961 are taken from *Astrid Ziegler (1992): Regionale Strukturpolitik: Zonenrandförderung - ein Wegweiser?*.

For the construction of the instrument, we use county-level population data from the "Statistical Yearbook of the German Reich 1925", as well as data from the Czech and Polish censuses on the county-level number of ethnic Germans in 1930 and 1931, respectively (Ourednicek et al., 2015, Central Statistical Office of the Polish Republic, 1931). Euclidean distances between sending and destination counties are calculated using shapefiles provided by the Max Planck Institute for Demographic Research (MPIDR) and the Chair for Geodesy and Geoinformatics, University of Rostock (2011), Ourednicek et al. (2015) and Statistics Poland.

In order to asses the share of expellee candidates for each major party in the federal elections between 1949 and 1961, we draw upon data from the German Federal Statistical Office, which lists the names of all direct candidates for the German parliament in a brochure (*Die Wahlbewerber zum Deutschen Bundestag*). We additionally extracted biographical information on all candidates from Schumacher (2006).

To measure individual political interest and attitudes, we draw upon survey data form 1953; published by *Erich Reigrotzki (2015): Bundesstudie 1953. GESIS Datenarchiv, Köln. ZA0145 Datenfile Version*

2.0.0, https://doi.org/10.4232/1.11992

Table A.1 defines and describes all variables used in our analysis and details its corresponding source. Descriptive statistics for the city- and county-level variables are provided in **Table B.1**, for individual-level outcomes from the *Bundesstudie 1953* in Table **B.2**.

Description of Variables Used

Table A.1: Variables and Data Sources

Variable	Years	Source
Panel A — Expellee Data		
County-Level Expellee Share	1950	Information on the county-level expellee share in 1950 are taken from the "Statistical Yearbook of the Expellees" (*Statistisches Taschenbuch über die Heimatvertriebenen in der Bundesrepublik Deutschland und in West-Berlin*), published by the Federal Statistical Office of West Germany in 1953.
City-Level Expellee Share	1952	Data on the inflow of expellees at the city level in 1952 were collected from the "Statistical Yearbook of German Municipalities" (Statistisches Jahrbuch Deutscher Gemeinden, Jahrgang 1953). Information are given for cities with more than 10,000 inhabitants.
Panel B — City-Level Outcomes		
Debt	1950-1964	Data on cities' debt levels are taken from the "Statistical Yearbooks of German Municipalities".
Federal & State Transfers	1951-1964	The amount of federal and state transfers for each city are taken from the "Statistical Yearbooks of German Municipalities".
Tax Rates	1938-1964	Information on city-level tax rates are taken from the "Statistical Yearbooks of German Municipalities". The agricultural land and residential property taxes (*Grundsteuer A / Grundsteuer B*) are levied on the value of (agricultural) land and structures. The value of the land (the tax base) is uniformly determined at the federal level. It is multiplied by a city-specific tax rate that comprises the uniform basic rate, which is set by the federal government, and the tax collection rate defined by each city on an annual basis. The same logic applies to the tax rate on firms' business profits and capital (*Gewerbesteuer*).
Spending	1936-1939, 1950-1959	Information on annual spending at the city level are taken from the "Statistical Yearbooks of German Municipalities". We focus on four types of local spending that comprise all local expenses: spending on (i) welfare, (ii) education and administration, (iii) public infrastructure, and (iv) health and housing. The definition of these groups follows the general presentation in the "Statistical Yearbooks of German Municipalities". As the information on spending items varies in the degree of detail over time, we harmonized spending groups accordingly. Data coverage before Word War II is limited to the largest 67 municipalities and cities.

continued

Table A.1 continued

Variable	Years	Source
Unemployment Rates	1946-1962	Information on local unemployment are taken from the "Statistical Yearbooks of German Municipalities". Information are available for all cities with more than 20,000 inhabitants in a given year.
Voting (federal level)	1953	City-level data on parties' vote shares in the 1953 federal elections are taken from the "Statistical Yearbooks of German Municipalities".
Voting (local level)	1946-1962	Data on parties' vote shares in local elections between 1946 and 1962 are taken from the "Statistical Yearbooks of German Municipalities". On average, each municipality held three elections during the sampling period. We create a variable indicating whether an expellee party (the GB/BHE or DP) received enough votes to make it into the local council.
Welfare Recipients	1946-1959	Data on the number of individuals receiving social welfare benefits (*Fürsorge*) are taken from the "Statistical Yearbooks of German Municipalities".
Panel C — City- and County-Level Controls		
Border Region Dummy		Following Redding and Sturm (2008), we create a dummy variable that assigns the value of one to all counties that were less than 75 kilometers away from the inner-German border.
Historical Economic & Political Differences	1925-1933	We account for historical economic and political differences by controlling for (i) the population share of Protestants in 1925, (ii) the mean election vote share for the National Socialist German Workers' Party (NSDAP) in the elections between 1924 to 1933, and (iii) the share of unemployed workers in the population, (iv) the share of manufacturing workers in the workforce in 1933, as well as (v) the local (log) income tax revenue. Variables (i)-(iv) are based on data taken from King et al. (2008). Variable (v) is based on data from the "Assessment of Income and Corporate Tax Revenues 1932/33" (*Einkommen- und Körperschaftsteuerveranlagung 1932/33*), published by the Statistical Office of the German Reich. The latter source also provides information on counties' business tax revenues, a variable used in the pre-war balancing test.
Housing Destruction		Information on the local extent of destroyed housing in the aftermath of World War II are taken from *Statistisches Bundesamt (1956). Gebäude- und Wohnungszählung in der Bundesrepublik Deutschland vom 13. September 1950. Statistik der Bundesrepublik Deutschland, Band 38.* We thank Sebastian Braun for sharing this data with us.
Kernel Distance (Instrument)		The logic of our instrument is described in Section 4.2. For its construction, we use county-level population data from the "Statistical Yearbook of the German Reich 1925", as well as data from the Czech and Polish censuses on the county-level number of ethnic Germans in 1930 and 1931, respectively (Ourednicek et al., 2015, Central Statistical Office of the Polish Republic, 1931). Distances between the ceded territories, pre-war Poland, as well as Bohemia and Moravia to West Germany are calculated using shapefiles provided by the Max Planck Institute for Demographic Research (MPIDR) and the Chair for Geodesy and Geoinformatics, University of Rostock (2011), Ourednicek et al. (2015) and the Central Statistical Office of the Polish Republic (1931).

continued

Table A.1 continued

Variable	Years	Source
Local Labor Markets	1933, 1961	A composite measure of the economic performance of local labor markets in 1933 and 1961 was obtained from *Astrid Ziegler (1992): Regionale Strukturpolitik: Zonenrandförderung - ein Wegweiser?*. The measure comprises of information on labor markets' GDP per capita, wage bill per employee in manufacturing, and unemployment share in 1933 and 1961, respectively. We take the 1961-1933 difference in this measure of economic performance as a proxy for the impact of the Iron Curtain on local labor markets' economic performance.
Occupation Zone Dummies		We assign each county to the respective occupation zone administrated by the U.S., British or French forces, respectively.
Pre-War Log Population	1939	Information on pre-war population in West German counties are taken from the "Statistical Yearbook of the German Reich (1939)".
State Fixed Effects		In our most comprehensive specification, we control for differences across federal states in a non-parametric way.
Panel D — Data on Direct Candidates in Federal Elections		
Expellee Candidates	1949-1961	The information on district candidates for the federal parliament (Bundestag) were collected from the German Statistical Office's publications of all candidates running for parliament in the 1949, 1953, 1957 and 1961 elections (*Die Wahlbewerber zum Deutschen Bundestag*) by parties and electoral districts. The number of districts was 242 in 1949/1953 and increased to 247 in 1957/1961 (due to the reunification with the Saarland). The candidate publications provide information on how the electoral districts were composed with respect to administrative county borders. This allows us to assign counties to electoral districts and compute the population-weighted expellee share by electoral district based on the county population share of expellees in 1950 (Statistisches Bundesamt, 1953). Around 90% of counties are nested in electoral districts. In the remaining cases where a county is split across more than one electoral district the population weights are adjusted accordingly. The 1950 expellee share by electoral district is then merged with biographical information on candidates running for West German parliaments after World War II, provided in Schumacher (2006), which documents short biographies of candidates and – in most cases – includes the place of birth. We were able to assign the place of birth to 4,273 out of 6,646 candidacies (about 64%), including individuals who ran in multiple elections over this period. Overall, 627 candidate birth places (14.7%) were assigned to expellees' regions of origin.
Panel E — Survey Data on Expellees		
Political Preferences/Interest	1953	To investigate differences in political preferences and participation between expellees and natives, we draw on survey data from the *Bundesstudie 1953*. In this survey, West Germans were, among others, asked about their general lifestyle, employment and political participation/interest. Importantly, the survey also provides information on respondents' place of residence before World War II, which allows us to distinguish expellees from native West Germans in the survey. The data set is accessible via GESIS - The Leibniz Institute for Social Sciences: *Reigrotzki, Erich (2015): Bundesstudie 1953. GESIS Datenarchiv, Köln. ZA0145 Datenfile Version 2.0.0, https://doi.org/10.4232/1.11992*.

B Descriptive Statistics and Figures

Table B.1: Descriptive Statistics for City-Level Outcomes and Controls

	Mean	Std Deviation	Minimum	Maximum	Observations
A. Expellee Inflow (in %)					
County-Level Expellee Share (1950)	15.14	8.43	1.80	44.10	271
City-Level Expellee Share (1952)	13.86	7.88	1.79	44.75	267
B. Revenues and Spending (in 1,000 DM)					
Mean Annual Total Spending (1950-59)	10,949.44	20,852.49	761.32	141,021.16	271
Mean Annual Total Debt (1949-64)	23,730.17	49,859.15	1,306.20	461,090.56	256
Mean Annual Total Transfers (1949-64)	4,656.94	9,152.62	39.67	65,143.33	271
Mean Annual Total Tax Revenues (1950-59)	9,757.32	18,326.83	671.00	130,191.41	271
C. Spending Shares (in %)					
Mean Annual Spending Share on Welfare (1950-59)	0.11	0.04	0.01	0.24	271
Mean Annual Spending Share on Public Infrastructure (1950-59)	0.50	0.06	0.25	0.67	271
Mean Annual Spending Share on Education/Admin (1950-59)	0.29	0.06	0.16	0.51	271
Mean Annual Spending Share on Health/Housing (1950-59)	0.10	0.05	0.01	0.29	271
D. Local Tax Rates (in %)					
Mean Agricultural Land Tax (1950-59)	1.56	0.43	0.93	3.00	271
Mean Property Tax (1950-59)	2.23	0.42	0.99	3.60	271
Mean Business Tax (1950-59)	0.54	0.06	0.44	0.71	271
Mean Tax Index (1950-59)	0.00	1.00	-1.85	2.73	271
E. 1953 Federal Election Vote Shares (in %)					
Vote Share CDU/CSU	43.83	9.59	21.00	66.70	221
Vote Share SPD	31.29	7.94	12.30	55.70	221
Vote Share Expellee Parties (GB/BHE + DP)	6.82	5.06	0.90	27.80	221
Vote Share Liberal Parties (FDP + DVP)	10.25	5.69	1.90	28.30	221
Vote Share Other Parties	7.79	4.62	2.00	34.90	221
F. Local Elections Results (1949-1961)					
1(GB/BHE or DP in Local Parliament)	0.57	0.50	0.00	1.00	221
G. Controls					
Share Destroyed Housing (in %)	29.34	21.92	0.20	82.20	271
Share Unemployed (1933, in %)	17.29	7.88	3.11	38.06	271
Vote Share NSDA (1924-33, in %)	24.82	8.85	6.84	52.20	271
Share Manufacturing Workers (1933, in %)	42.05	24.01	14.88	385.41	271
Share Protestants (1925, in %)	49.45	32.80	1.22	98.22	271
	11.81	0.75	9.61	13.64	271
Log Pre-War Income-Tax Revenue	2.16	0.11	1.87	2.48	271
US Occupation Zone	57.93	49.46	0.00	100.00	271
UK Occupation Zone	31.73	46.63	0.00	100.00	271
French Occupation Zone	10.33	30.49	0.00	100.00	271
Log Minimum Distance to Iron Curtain	5.00	0.66	2.12	5.94	271
H. Instrument					
Pop.-Weighted Kernel Distance of Sending Regions to West GER cities	0.25	0.03	0.19	0.32	271

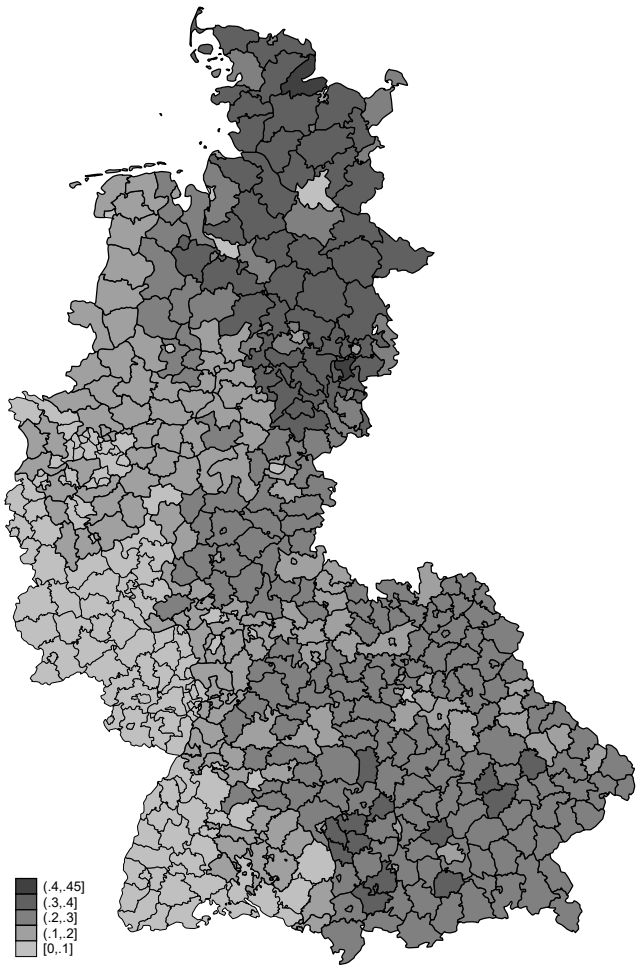
Notes: This table presents descriptive statistics for our outcome and control variables at the city and county level. All monetary variables are expressed in 1950 prices. See Appendix A for information on each variable.

Table B.2: Descriptive Statistics - Bundesstudie 1953

	Mean (1)	SD (2)	P25 (3)	P50 (4)	P75 (5)	Min (6)	Max (7)	N (8)
Panel A – Expellee Dummy								
Expellee	0.21	0.41	0.00	0.00	0.00	0.00	1.00	3,246
Panel B – Dependent Variables								
Political Interest	0.37	0.48	0.00	0.00	1.00	0.00	1.00	3,225
Political Participation	0.24	0.43	0.00	0.00	0.00	0.00	1.00	3,234
Intention to Vote	0.92	0.27	1.00	1.00	1.00	0.00	1.00	2,805
Stated Party Preference: CDU/CSU	0.31	0.46	0.00	0.00	1.00	0.00	1.00	3,244
Stated Party Preference: SPD	0.24	0.43	0.00	0.00	0.00	0.00	1.00	3,244
Stated Party Preference: GB/BHE & DP	0.07	0.25	0.00	0.00	0.00	0.00	1.00	3,244
Stated Party Preference: FDP & DVP	0.07	0.25	0.00	0.00	0.00	0.00	1.00	3,244
Panel C – Control Variables								
Male	0.42	0.49	0.00	0.00	1.00	0.00	1.00	3,246
Confession: Protestant	0.49	0.50	0.00	0.00	1.00	0.00	1.00	3,246
Confession: Catholic	0.47	0.50	0.00	0.00	1.00	0.00	1.00	3,246
Confession: Jewish	0.04	0.19	0.00	0.00	0.00	0.00	1.00	3,246
Age: 18-24	0.12	0.33	0.00	0.00	0.00	0.00	1.00	3,246
Age: 25-29	0.11	0.31	0.00	0.00	0.00	0.00	1.00	3,246
Age: 30-44	0.32	0.47	0.00	0.00	1.00	0.00	1.00	3,246
Age: 45-59	0.28	0.45	0.00	0.00	1.00	0.00	1.00	3,246
Age: 60+	0.17	0.37	0.00	0.00	0.00	0.00	1.00	3,246
State of Residence: Schleswig-Holstein	0.05	0.21	0.00	0.00	0.00	0.00	1.00	3,246
State of Residence: Hamburg	0.03	0.17	0.00	0.00	0.00	0.00	1.00	3,246
State of Residence: Lower Saxony	0.14	0.35	0.00	0.00	0.00	0.00	1.00	3,246
State of Residence: Bremen	0.01	0.08	0.00	0.00	0.00	0.00	1.00	3,246
State of Residence: North Rhine-Westphalia	0.29	0.45	0.00	0.00	1.00	0.00	1.00	3,246
State of Residence: Hesse	0.09	0.29	0.00	0.00	0.00	0.00	1.00	3,246
State of Residence: Rhineland-Palatinate	0.05	0.23	0.00	0.00	0.00	0.00	1.00	3,246
State of Residence: Baden-Wuerttemberg	0.15	0.35	0.00	0.00	0.00	0.00	1.00	3,246
State of Residence: Bavaria	0.19	0.40	0.00	0.00	0.00	0.00	1.00	3,246

Notes: This table presents descriptive statistics on individual outcome and control variables from the Bundesstudie 1953.

Figure B.1: County-Level Expellee Share in West Germany, 1950

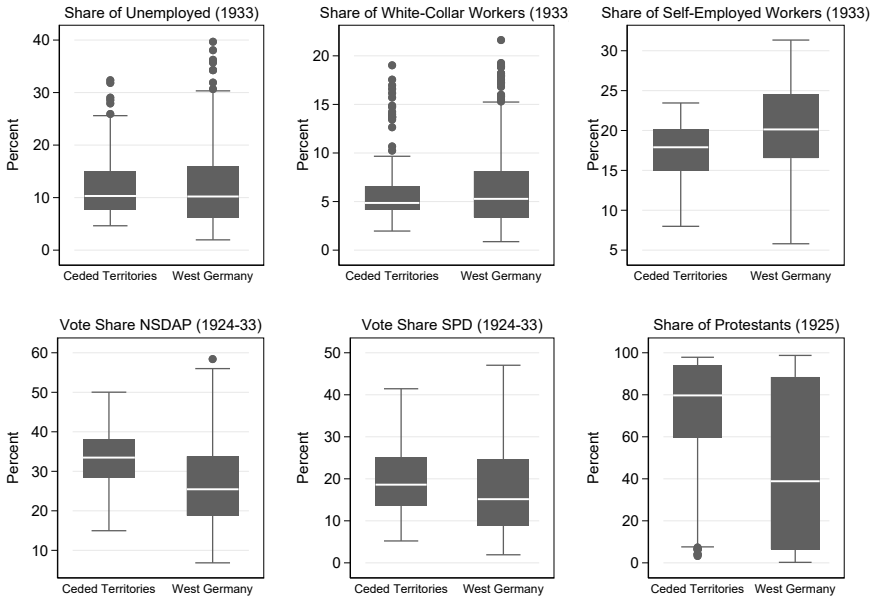


Notes: This map shows the county-level population share of expellees in West Germany as of September 1950. Data are taken from the "Statistical Yearbook of Expellees" (Statistisches Bundesamt, 1953). The city of West-Berlin and the Saarland are excluded. The figure is based on shapefiles provided by the Max Planck Institute for Demographic Research (MPIDR) and the Chair for Geodesy and Geoinformatics, University of Rostock (2011).

Figure B.2: Location of Cities in Estimation Sample

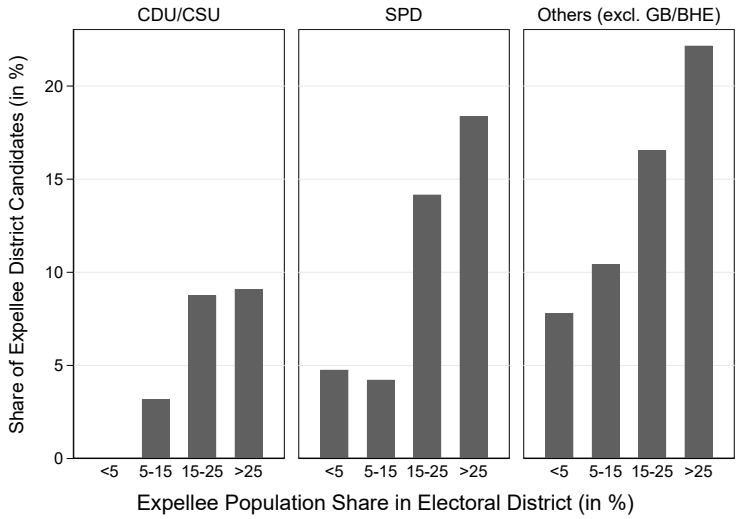
Notes: This map shows the location of the 271 cities covered in the baseline estimation sample. The county boundaries correspond to those shown in Figure B.1. The figure is based on shapefiles provided by the Max Planck Institute for Demographic Research (MPIDR) and the Chair for Geodesy and Geoinformatics, University of Rostock (2011).

Figure B.3: Differences Between Expellees and Natives — Pre-WWII Variables



Notes: This graph compares characteristics of expellees and natives *before* World War II using county-level data for the ceded Eastern Territories and the western part of Germany. Data are taken from King et al. (2008). See Appendix Tables A.1 and B.1 for further information.

Figure B.4: Expellee Candidates in Federal Elections 1949–1961



Notes: This graph shows the share of direct candidates who were expellees in the federal elections in 1949, 1953, 1957 and 1961 for the Christian Democrats (CDU/CSU), Social Democrats (SPD), and other all parties (excluding the GB/BHE and DP). The numbers at the bottom indicate the share of expellees in the corresponding electoral districts. See Appendix Table A.1 for further information.

C Additional Results and Robustness Checks

Table C.1: The Effect of Local Tax Rates and Tax Revenues

	OLS		Instrumental Variables					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Tax Index (Unweighted)								
Expellee Share	0.059***	-0.030***	0.123***	0.124***	0.170***	0.126**	0.089**	0.084*
	(0.011)	(0.010)	(0.024)	(0.034)	(0.051)	(0.053)	(0.042)	(0.045)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
B. Tax Index (Weighted by 1950 Tax Revenues)								
Expellee Share	0.003	0.019	0.047*	0.116***	0.189***	0.202***	0.057	0.093*
	(0.013)	(0.016)	(0.027)	(0.038)	(0.062)	(0.067)	(0.039)	(0.052)
Number of Observations	219	219	219	219	219	219	219	219
Kleibergen-Paap *F*-Statistic			72.20	43.67	25.03	17.73	19.13	19.03
C. Agricultural Land Tax Rate								
Expellee Share	0.030***	-0.010**	0.053***	0.050***	0.069***	0.052**	0.020	0.024
	(0.004)	(0.005)	(0.010)	(0.013)	(0.020)	(0.023)	(0.016)	(0.018)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
D. Property Tax Rate								
Expellee Share	0.011***	-0.018***	0.053***	0.061***	0.047**	0.030*	0.036*	0.037*
	(0.004)	(0.004)	(0.011)	(0.015)	(0.019)	(0.018)	(0.019)	(0.022)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
E. Business Tax Rate								
Expellee Share	0.002***	-0.001	0.004***	0.004**	0.008**	0.006*	0.006**	0.005
	(0.001)	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
Destroyed Housing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Zone FE	Yes		Yes	Yes	Yes	Yes		
Pre-WWII Controls		Yes		Yes	Yes	Yes	Yes	Yes
Log Distance		Yes			Yes			Yes
100km Distance Bins						Yes		
Federal State FE		Yes					Yes	Yes

Notes: This table displays the OLS and 2SLS estimates of the effect of the expellee inflow on the two local tax indices as well as each individual tax rate, adjusting for the controls listed at the bottom. The regressor—the share of expellees in the population in 1950—is measured in percentage points (0-100). All outcomes refer to the average over the period from 1950-1959. Outcomes in Panels A and B are standardized to mean zero and standard deviation one, outcomes in Panels C–E given in percentage points. Standard errors, clustered at the county level, are displayed in parentheses. The number of clusters amounts to 219. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C.2: The Effect of the Expellee Inflow on Per Capita Spending

	OLS		Instrumental Variables					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Total Per Capita Spending								
Expellee Share	-0.027***	-0.025**	-0.030	-0.055**	-0.050	-0.055	0.010	0.014
	(0.008)	(0.012)	(0.019)	(0.027)	(0.037)	(0.038)	(0.030)	(0.041)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
B. Per Capita Spending: Welfare								
Expellee Share	0.001	-0.036***	0.069***	0.078***	0.083**	0.065	0.065	0.082*
	(0.010)	(0.013)	(0.020)	(0.028)	(0.038)	(0.048)	(0.041)	(0.046)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
C. Per Capita Spending: Education/Administration								
Expellee Share	-0.025***	-0.019*	-0.017	-0.025	-0.026	-0.023	0.069*	0.071
	(0.009)	(0.011)	(0.018)	(0.023)	(0.037)	(0.047)	(0.036)	(0.048)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
D. Per Capita Spending: Infrastructure								
Expellee Share	-0.034***	-0.018	-0.070***	-0.100***	-0.097**	-0.107**	-0.030	-0.036
	(0.008)	(0.013)	(0.021)	(0.030)	(0.040)	(0.043)	(0.032)	(0.041)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
E. Per Capita Sepnding: Health/Housing								
Expellee Share	-0.012	-0.017	-0.018	-0.054	-0.044	-0.043	-0.052	-0.037
	(0.011)	(0.014)	(0.025)	(0.037)	(0.047)	(0.053)	(0.038)	(0.047)
Number of Observations	271	271	271	271	271	271	271	271
Kleibergen-Paap *F*-Statistic			75.25	49.40	22.94	15.28	19.07	17.12
Destroyed Housing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Zone FE	Yes		Yes	Yes	Yes	Yes		
Pre-WWII Controls		Yes		Yes	Yes	Yes	Yes	Yes
Log Distance		Yes			Yes			Yes
100km Distance Bins						Yes		
Federal State FE		Yes					Yes	Yes

Notes: This table displays the OLS and 2SLS estimates of the effect of the expellee inflow on per capita spending outcomes, adjusting for the controls listed at the bottom. The regressor—the share of expellees in the population in 1950–is measured in percentage points (0-100). All outcomes represent averages over the period 1950-1959 and are standardized. Standard errors, clustered at the county level, are displayed in parentheses. The number of clusters is 219. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C.3: Expelllee Inflow and Spending - Alternative Ways of Drawing Inference

	Total Spending	Spending Share on			
		Welfare	Education/Admin.	Infrastr.	Health/Housing
	(1)	(2)	(3)	(4)	(5)
Baseline Estimate	0.105	0.424	0.497	-0.654	-0.259
P-Value:					
Cluster at the County Level	[0.038]	[0.048]	[0.108]	[0.029]	[0.375]
Cluster at the Municipality Level	[0.025]	[0.038]	[0.102]	[0.029]	[0.362]
Spatial HAC (Distance Cutoff: 25km)	[0.031]	[0.033]	[0.126]	[0.040]	[0.356]
Spatial HAC (Distance Cutoff: 50km)	[0.069]	[0.076]	[0.124]	[0.061]	[0.325]
Randomization Inference	[0.034]	[0.046]	[0.046]	[0.042]	[0.180]

Notes: This table presents robustness checks on inference for our baseline IV estimates. First, we reproduce the baseline point estimates along with the corresponding p-values when clustering standard errors at the county level. In addition, we provide p-values when clustering standard errors at the city level. Next, we account for spatial autocorrelation in spirit of Conley (2008). We derive the corresponding p-values using Stata code provided by Foreman (2020) and choose three different cutoffs (25, 50 and 100km) limiting potential spatial autocorrelation. We further follow Fouka and Voth (forthcoming) and perform 500 random permutations of the respective dependent variable and re-estimate the model for each permutation. We combine these estimates of the coefficient of interest with the nonpermuted one to calculate empirical p-values.

Table C.4: Expelllee Inflow and Revenues - Alternative Ways of Drawing Inference

	Tax Index	Weighted Tax Index	Total Transfers (Log)	Total Debt (Log)
	(1)	(2)	(3)	(4)
Baseline Estimate	0.084	0.093	0.143	0.119
P-Value:				
Cluster at the County Level	[0.065]	[0.073]	[0.044]	[0.035]
Cluster at the Municipality Level	[0.060]	[0.053]	[0.033]	[0.023]
Spatial HAC (Distance Cutoff: 25km)	[0.080]	[0.068]	[0.040]	[0.033]
Spatial HAC (Distance Cutoff: 50km)	[0.146]	[0.090]	[0.071]	[0.055]
Randomization Inference	[0.050]	[0.110]	[0.028]	[0.020]

Notes: This table presents robustness checks on inference for our baseline IV estimates. First, we reproduce the baseline point estimates along with the corresponding p-values when clustering standard errors at the county level. In addition, we provide p-values when clustering standard errors at the city level. Next, we account for spatial autocorrelation in spirit of Conley (2008). We derive the corresponding p-values using Stata code provided by Foreman (2020) and choose two different cutoffs (25, 50 and 100km) limiting potential spatial autocorrelation. We further follow Fouka and Voth (forthcoming) and perform 500 random permutations of the respective dependent variable and re-estimate the model for each permutation. We combine these estimates of the coefficient of interest with the nonpermuted one to calculate empirical p-values.

Table C.5: The Effect of the Expellee Inflow on Spending – Robustness Checks

	Baseline Results		1952 City-Level Expellee Share		Post-War Loss in Market Access		Counties with one Observed City	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Total Spending (Log)								
County-Level Expellee Share (1950)	0.060**	0.105**			0.060**	0.117**	0.020	0.050
	(0.027)	(0.050)			(0.027)	(0.054)	(0.023)	(0.033)
City-Level Expellee Share (1952)			0.068**	0.154**				
			(0.028)	(0.076)				
Number of Observations	271	271	267	267	271	271	196	196
Kleibergen-Paap *F*-Statistic	49.40	17.12	43.27	7.19	49.97	16.69	42.34	18.51
B. Spending Share: Welfare								
County-Level Expellee Share (1950)	0.548***	0.424**			0.548***	0.445**	0.436***	0.370**
	(0.133)	(0.214)			(0.132)	(0.225)	(0.135)	(0.187)
City-Level Expellee Share (1952)			0.617***	0.596*				
			(0.142)	(0.355)				
Number of Observations	271	271	267	267	271	271	196	196
Kleibergen-Paap *F*-Statistic	49.40	17.12	43.27	7.19	49.97	16.69	42.34	18.51
C. Spending Share: Education/Administration								
County-Level Expellee Share (1950)	0.376*	0.497			0.376*	0.504	0.274	0.404
	(0.200)	(0.308)			(0.201)	(0.313)	(0.186)	(0.310)
City-Level Expellee Share (1952)			0.407*	0.694				
			(0.228)	(0.524)				
Number of Observations	271	271	267	267	271	271	196	196
Kleibergen-Paap *F*-Statistic	49.40	17.12	43.27	7.19	49.97	16.69	42.34	18.51
D. Spending Share: Infrastructure								
County-Level Expellee Share (1950)	-0.761***	-0.654**			-0.761***	-0.612**	-0.662***	-0.638**
	(0.172)	(0.297)			(0.173)	(0.305)	(0.200)	(0.287)
City-Level Expellee Share (1952)			-0.835***	-0.867*				
			(0.202)	(0.509)				
Number of Observations	271	271	267	267	271	271	196	196
Kleibergen-Paap *F*-Statistic	49.40	17.12	43.27	7.19	49.97	16.69	42.34	18.51
E. Spending Share: Health/Housing								
County-Level Expellee Share (1950)	-0.155	-0.259			-0.157	-0.328	-0.040	-0.127
	(0.172)	(0.291)			(0.172)	(0.297)	(0.140)	(0.301)
City-Level Expellee Share (1952)			-0.182	-0.410				
			(0.181)	(0.461)				
Number of Observations	271	271	267	267	271	271	196	196
Kleibergen-Paap *F*-Statistic	49.40	17.12	43.27	7.19	49.97	16.69	42.34	18.51
Destroyed Housing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Zone FE	Yes		Yes		Yes		Yes	
Pre-WWII Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Distance		Yes		Yes		Yes		Yes
Federal State FE		Yes		Yes		Yes		Yes
Loss in Market Access					Yes	Yes		

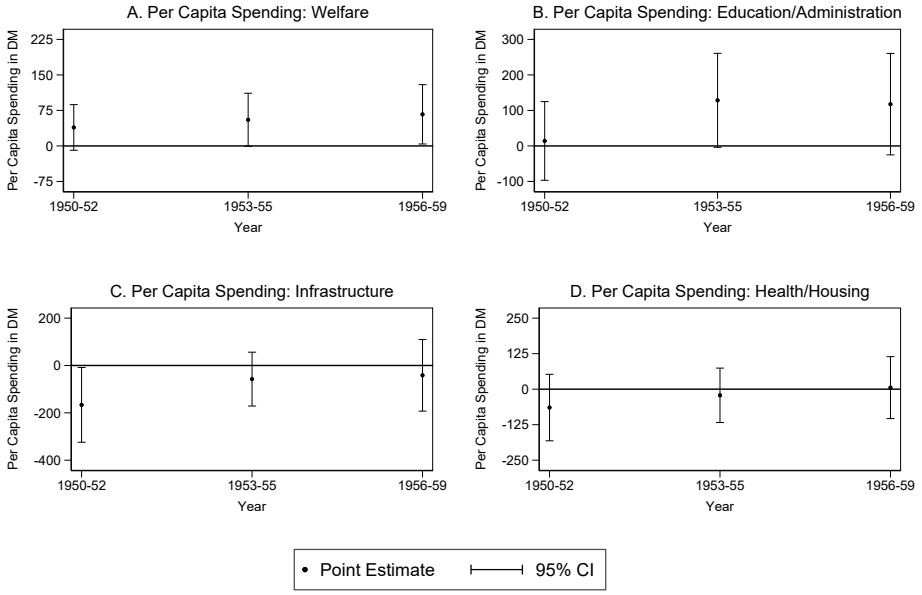
Notes: This table displays the 2SLS estimates of the effect of the expellee inflow on spending outcomes. Columns (1) and (2) reproduce the baseline results from Table 3. In Columns (3) and (4), the regressor of interest is the city-level population share of expellees in 1952. Columns (5) and (6) explictly account for labor market regions' respective loss in market access arising from Germany's division after World War II. In columns (7) and (8), the sample is restricted to counties with just one sampled city. Standard errors, clustered at the county level, are displayed in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C.6: The Effect of the Expellee Inflow on Taxes, Transfers and Debt – Robustness Checks

	Baseline Results		1952 City-Level Expellee Share		Post-War Loss in Market Access		Counties with only Observed City	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Tax Index								
County-Level Expellee Share (1950)	0.124***	0.084*			0.124***	0.077	0.115***	0.078*
	(0.034)	(0.045)			(0.034)	(0.047)	(0.032)	(0.043)
City-Level Expellee Share (1952)			0.142***	0.125				
			(0.038)	(0.077)				
Number of Observations	271	271	267	267	271	271	196	196
Kleibergen-Paap *F*-Statistic	49.40	17.12	43.27	7.19	49.97	16.69	42.34	18.51
B. Weighted Tax Index								
County-Level Expellee Share (1950)	0.116***	0.093*			0.116***	0.103*	0.073*	0.037
	(0.038)	(0.052)			(0.038)	(0.053)	(0.040)	(0.042)
City-Level Expellee Share (1952)			0.127***	0.109*				
			(0.039)	(0.056)				
Number of Observations	219	219	216	216	219	219	168	168
Kleibergen-Paap *F*-Statistic	43.67	19.03	42.42	16.03	44.00	19.43	37.06	18.00
C. Total Debt (Log)								
County-Level Expellee Share (1950)	0.101***	0.119**			0.101***	0.120**	0.056**	0.066*
	(0.028)	(0.056)			(0.028)	(0.058)	(0.024)	(0.036)
City-Level Expellee Share (1952)			0.113***	0.165**				
			(0.029)	(0.082)				
Number of Observations	256	256	252	252	256	256	181	181
Kleibergen-Paap *F*-Statistic	45.04	18.61	41.40	8.30	45.46	18.36	37.86	21.09
D. Total Transfers (Log)								
County-Level Expellee Share (1950)	0.128***	0.143**			0.128***	0.159**	0.077**	0.081
	(0.041)	(0.071)			(0.040)	(0.076)	(0.039)	(0.053)
City-Level Expellee Share (1952)			0.142***	0.198*				
			(0.042)	(0.102)				
Number of Observations	271	271	267	267	271	271	196	196
Kleibergen-Paap *F*-Statistic	49.40	17.12	43.27	7.19	49.97	16.69	42.34	18.51
Destroyed Housing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Zone FE	Yes		Yes		Yes		Yes	
Pre-WWII Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Distance		Yes		Yes		Yes		Yes
Federal State FE		Yes		Yes		Yes		Yes
Loss in Market Access					Yes	Yes		

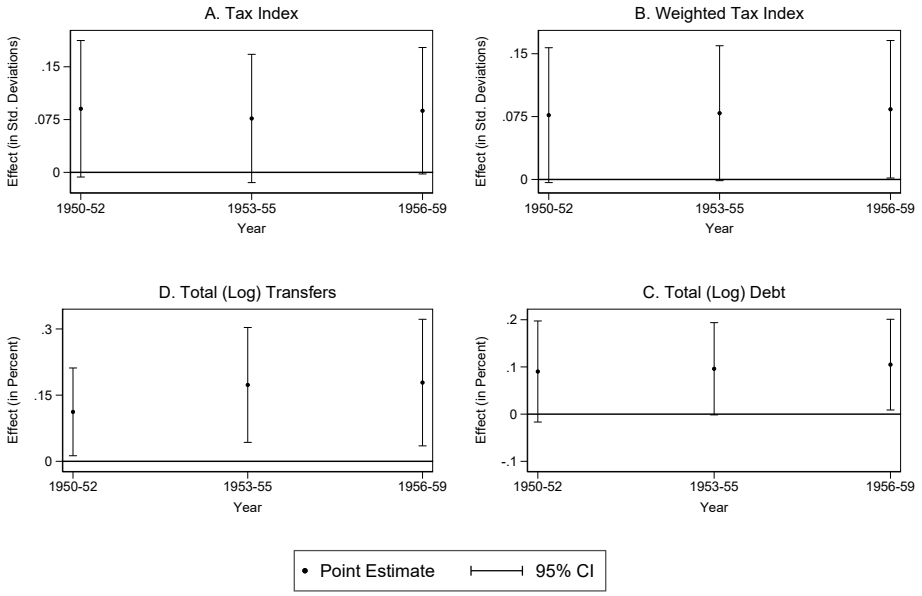
Notes: This table displays the 2SLS estimates of the effect of the expellee inflow on local tax rates, state transfers and debt. Columns (1) and (2) reproduce the baseline results from Table 4. In Columns (3) and (4), the regressor of interest is the city-level population share of expellees in 1952. Columns (5) and (6) explictly account for labor market regions' respective loss in market access arising from Germany's division after World War II. In columns (7) and (8), the sample is restricted to counties with just one sampled city. Standard errors, clustered at the county level, are displayed in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Figure C.1: The Effect of the Expellee Inflow on Per Capita Spending over Time



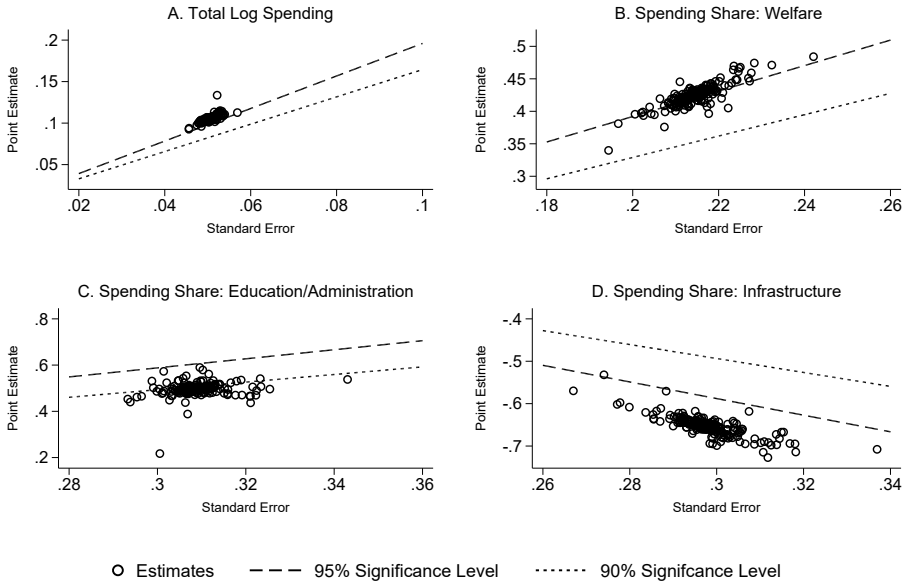
Notes: This graph shows the estimated 2SLS effect (and corresponding 95% confidence interval) of the expellee inflow on per capita spending for various expense items over time (1950–52, 1953–55, 1956–59). All estimates are based on the most comprehensive IV specification as displayed in column (8) of Table 3. The regressor—the share of expellees in the population in 1950—is measured in percentage points (0-100). The outcomes are measured in Deutsch Mark per capita. Standard errors are clustered at the county level.

Figure C.2: The Effect of the Expellee Inflow on Taxes, Transfers and Debt over Time



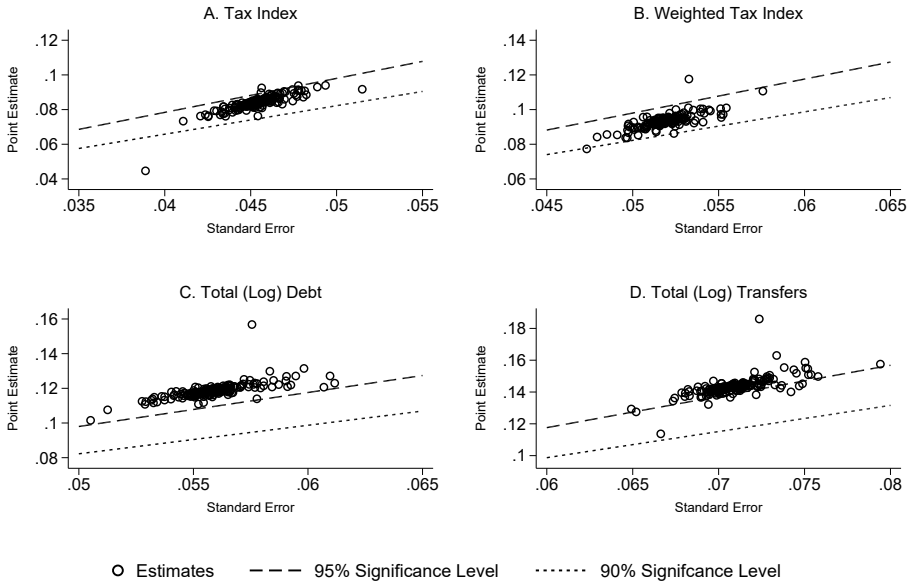
Notes: This graph shows the estimated 2SLS effect (and corresponding 95% confidence interval) of the expellee inflow on the local (weighted) tax index, received transfers, and total incurred debt over time (1950–52, 1953–55, 1956–59). All estimates are based on the most comprehensive IV specification as displayed in column (8) of Table 4. The regressor—the share of expellees in the population in 1950—is measured in percentage points (0-100). The tax indices are standardized to mean zero and standard deviation one. Transfers and debt are measured in logs. Standard errors are clustered at the county level.

Figure C.3: Results of Jackknife Test for Selected Spending Outcomes



Notes: This graph plots the results of a jackknife estimation procedure for selected spending outcomes. Each panel bases on N separate regressions of our most comprehensive IV specification in which one observation is systematically left out. The dots in each panel indicate the corresponding point estimates, the dotted and dashed lines the corresponding 90% and 95% confidence intervals.

Figure C.4: Results of Jackknife Test for Tax Indices, Transfers and Debt

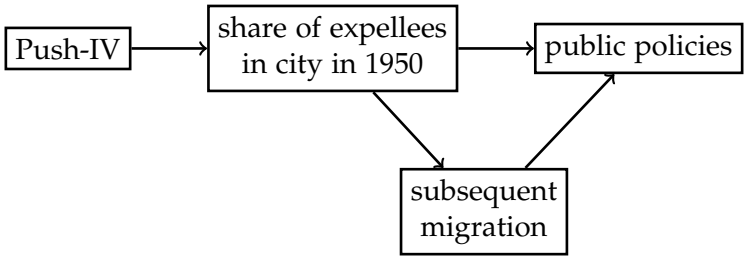


Notes: This graph plots the results of a jackknife estimation procedure for selected spending outcomes. Each panel bases on N separate regressions of our most comprehensive IV specification in which one observation is systematically left out. The dots in each panel indicate the corresponding point estimates, the dotted and dashed lines the corresponding 90% and 95% confidence intervals.

C.1 Internal Mobility – Mediator vs. Confounder

The mobility of expellees and non-expellees after 1950 can be both a mediator and a confounder. The directed acyclic graph (DAG) in Figure C.5 illustrates subsequent migration as a mediator. The instrumental variable "pushes" the expellees to settle more in certain cities than in others. In this model, the inflow affects public policy setting through a direct effect — for example because the expellees could vote and influence policies — and an indirect effect via the settlement of subsequent migrants in the same cities. The indirect effect could be due to agglomeration effects; the inflow of expellees led to strong economic growth in high-inflow cities, which attracted subsequent migrants to settle in these cities and contributed to the observed shifts in public policies. If this DAG is the correct model, internal migration will not lead to inconsistent 2SLS estimates. Instead, internal migration is one of many mechanisms that explains why we see an effect of the initial inflow of expellees on public policy setting.

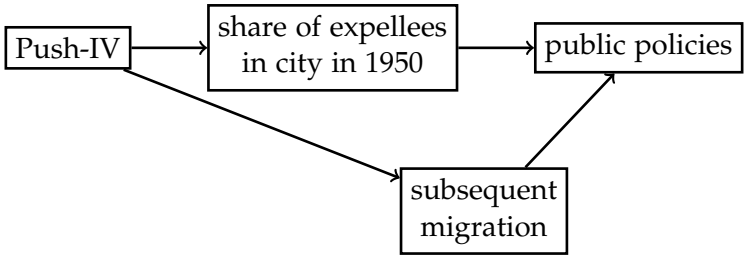
Figure C.5: Internal Mobility as a Mediator



Notes: This DAG represents a model where subsequent migration to German cities is a mediator. The subsequent migration lies on the causal path from the initial share of expellees to public policy setting.

The underlying model could also be one where subsequent migration is a confounder, as illustrated in Figure C.6. Here subsequent migration is driven by the same forces that drive the initial inflow of expellees. In consequence, the exclusion restriction is violated and the instrumental variable estimator yields inconsistent estimates. This is the case because it is no longer clear whether the reduced-form effect of the instrument on public policy setting operates through the initial inflow of expellees or the subsequent flow of internal migrants. It is also possible that internal migration is a confounder and mediator at the same time. In that case, the implications are the same as in the case where it is just a confounder: the exclusion restriction is violated and the 2SLS estimator is inconsistent.

Figure C.6: Internal Mobility as a Confounder



Notes: This DAG represents a model where subsequent migration to German cities is a confounder. Because the variable is on the causal path from the instrument to the outcome, it leads to a violation of the exclusion restriction.

In practice, it is difficult to disprove that internal migration is a confounder. In Section 5.3, we show that we find effects in years when internal migration from East to West Germany was very low, which indicates that the confounding influence of East-West migration is small. We also argue that the internal migration of expellees and non-expellees within West Germany is likely a mediator and not a confounder. Altogether, this exercise suggests that the confounding influence of internal

migration, if anything, is limited.

C.2 Election Posters GB/BHE

Figure C.7 displays election posters of the GB/BHE from the 1950s. All four posters illustrate the party's social program, which catered for the expellees. The poster in Panel A) states that the goal of the party is "Property for many." The poster in Panel B) shows that a goal is lower food prices. The posters in C) and D) illustrate that the party combined a strong national conservative profile with redistributive policies. In Panel C) the party calls itself "social-national." The poster in Panel D) asks "What about the social miracle", alluding to the economic growth miracle of the 1950s.

Figure C.7: Election Posters of the GB/BHE

Notes: This figure provides four examples of election posters of the GB/BHE in the 1950s. A) *Besitz für Viele* (Property for Many), B) *Preise senken, Freude schenken* (Reduce prices, give joy), C) *Sozial-National* (Social national), D) *Wo bleibt das Sozialwunder?* (What about the social miracle?). *Sources:* A), C) and D): Landesarchiv Baden-Württemberg; B): Historisches Lexikon Bayerns.