

# Forced Migration, Social Cohesion and Conflict

## The 2015 Refugee Inflow in Germany

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## Abstract

In 2015, Germany welcomed close to one million asylum seekers and refugees from Syria, Afghanistan, the Western Balkans and elsewhere. Although the country was often praised for its welcome culture, the inflow has spurred a debate about identity, social cohesion and the limits of multiculturalism. This paper analyzes the effect of this inflow on various dimensions of social cohesion. To separate causation from correlation, it exploits the fact that asylum seekers in Germany are allocated to local areas based on an area's tax revenues and population several years prior. Therefore,

the allocation is unrelated to current economic, political or social conditions. Based on survey data as well as data scraped from newspapers, the paper documents two sets of results. First, it finds no effect on self-reported indicators of trust and perceived fairness, and a small negative effect on attitudes towards immigrants. In contrast, it finds that the refugee inflow led to an increased incidence of anti-immigrant violence that lasted for about two years. This increase is larger in areas with higher unemployment and greater support for right-wing parties.

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# Forced Migration, Social Cohesion and Conflict: The 2015 Refugee Inflow in Germany\*

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# 1 Introduction

In the first half of 2020, the UNHCR reported over 80 million people as forcibly displaced, and expects this trend to continue in the near future (UNHCR, 2020). Although the constitutions of many countries guarantee protection for people fleeing from conflicts and wars, hosting refugees remains a divisive policy issue. On the one hand, governments view hosting refugees as a moral obligation. If countries of origin cannot guarantee the safety of their citizens, other countries have the humanitarian duty to provide protection, and State parties that signed the Refugee Convention of 1951 also have a legal obligation to do so. However, hosting and integrating refugees comes with economic and social challenges. Common economic and social concerns about the effects of immigration also apply to refugee inflows: natives may worry about the effect on the labor market, the welfare state, or crime. Moreover, natives may perceive refugees as outsiders, which may spur xenophobia and undermine the social fabric of the country.

In this paper, we investigate whether hosting refugees affects social cohesion in a major receiving country. We study the case of Germany, which recently welcomed over one million asylum seekers and refugees from Syria, Afghanistan and the Western Balkans. Although the inflow initially received broad support in the German population, attitudes towards refugees in parts of society drastically changed after a series of events on New Year's Eve 2015/16. The most salient incident occurred in Cologne, where around 600 women were sexually assaulted, with some of the perpetrators being recently arrived asylum seekers. This event, along with the growing general discontent about the country's immigration policy is often seen as an accelerator for the growth of the far-right movement in Germany (Gedmin, 2019).

To study the impact of the refugee inflow in 2015/16 on social cohesion, we use data from a large-scale panel survey as well as regional data on incidents of anti-immigrant violence. We measure social cohesion along several dimensions, namely generalized trust, perceived fairness, attitudes towards foreigners, and anti-immigrant violence. To separate causality from correlation, we exploit the fact that asylum seekers in Germany are assigned across federal states based on a formula that takes into account the state's population and tax revenues several years prior. This means that, for reasons unrelated to the current economic and social climate, some regions receive more asylum seekers than others. Moreover, the panel data allow us to track individuals' attitudes over time, and compare *changes* in attitudes between people residing in high- versus low-inflow areas. This addresses many potential concerns about causality, for example that people who are more welcoming to foreigners are more likely to live in areas that also attract many foreigners.

We document two sets of results. First, in individual-level survey data we find limited evidence that the refugee inflow affected self-reported measures of social cohesion. Neither descriptive graphs nor a difference-in-difference analysis show significant differences in attitudes and values between people living in areas with high versus low inflows of refugees. The only significant effect we find is a deterioration in attitudes towards immigrants. Second, we find that the local presence of refugees increases the incidence of anti-immigrant violence. While the incidence evolved similarly in high and low-inflow counties before the inflow, it increased disproportionately in high-inflow counties. This increase was mainly driven by attacks on refugee accommodation, and is concentrated among the top 10% of municipalities with the largest inflows of refugees. Moreover, the effect is stronger in

areas with high unemployment as well as a higher share of right-wing voters.

These results hold several important lessons for policy. First, the German case shows that a large and sudden increase in the number of asylum seekers had only small effects on many dimensions of social cohesion – at least in the short run. Our results counter an often-expressed fear – and common argument against hosting refugees – that immigration undermines the foundations of societies in the host countries. This insight, in turn, holds lessons for the design of refugee policies. A fairer distribution of refugees across countries would require rich countries to host more refugees. Our results suggests that this can be done without major impacts on social cohesion.

A second lesson is about the differential regional impact of refugee inflows. In some regions – predominantly those with a strong regional economy and voters that are open to the idea of hosting refugees – the effect on anti-immigrant violence is non-existent. In other areas – often those with high unemployment and a large share of right-wing votes – we see a strong effect on anti-immigrant violence. This information can be useful for the design of assignment and integration policies. It is imperative to adopt policies that foster inclusiveness and empathy with immigrants, and to target areas that are prone to anti-immigrant violence.

A third lesson is about defining and measuring social cohesion. Social cohesion is an important characteristic of a thriving society, but it is neither straightforward to measure nor to define. Our results highlight the importance of considering multiple data sources as well as multiple dimensions of social cohesion in order to get a nuanced picture of the consequences of refugee inflows. If we only relied on survey data, we would conclude that the local presence had no effect on social cohesion. However, when we look at anti-immigrant violence – an extreme expression of undermined social cohesion – we see effects that should be a concern for policymakers.

## **2 Migration to Germany: Historical Context**

Our goal is to document the social effects of the immigration wave in 2015/16, when approximately one million refugees and asylum seekers from countries such as Syria, Afghanistan, Iraq and several countries in the West Balkans arrived in Germany. Although this immigration wave posed significant challenges to the country, its scale was not unprecedented. Since World War II, Germany has been the destination of millions of immigrants. The first – and to date largest – migration wave was the arrival of 12 million Germans between 1944 and 1948, who were expelled from German territories that were ceded to Poland and the Soviet Union (Pomerania, Silesia, East Prussia) as well as from countries in Central and Eastern European such as Czechoslovakia, Romania or Serbia (e.g. Kossert, 2009). Another 4.5 million ethnic Germans moved to Germany from Eastern Europe between 1988 and 1998 (Worbs et al., 2013).

Between the division of Germany in 1949 and the fall of the Berlin Wall in 1989, both parts of Germany had separate migration regimes and, consequently, Germans who grew up in either part had different experiences with migration. East Germany severely restricted the emigration of its own citizens. After the building of the Berlin Wall in 1961, it was nearly impossible to legally leave the country; until 1988 around 600,000 people moved from East to West Germany, most of them illegally (Bade and Oltmer, 2004). In the 1950s and 1960s, both parts of Germany introduced guest worker

programs to meet the severe labor shortages during a period of high economic growth. Between 1955 and 1973, West Germany recruited over 14 million workers from Southern Europe and North Africa, who could move along with their families and obtained a temporary work contract. While many guest workers returned to their countries of origin after the end of their contract, a considerable number stayed permanently in Germany (Oltmer et al., 2012). East Germany started recruiting guest workers in the 1960s, mainly to fill the shortage caused by emigration to West Germany before the building of the Berlin Wall. Unlike in West Germany, temporary work permits in the East were strictly enforced, and migrants had to leave after their permit expired. The largest share of guest workers came from Vietnam, followed by Poland, Mozambique, the Soviet Union and Hungary. In terms of numbers, the guest worker program in the West was considerably larger than the one in the East. On average, between 1.2 and 2 million guest workers lived in West Germany at any point in time between 1960 and 1973. In East Germany, the highest number was reached in 1989, with 190,000 foreign workers (Bade and Oltmer, 2004).

**Asylum in Germany and the Refugee Inflow 2015** Both parts of Germany have had asylum laws since their foundation. However, only West Germany saw significant numbers of asylum seekers, mostly in the 1980s. Up until the late 1980s, asylum was mainly granted to dissidents who fled from persecution in communist countries as well as Iran and Turkey. As shown in Figure 1(a), the yearly inflow of asylum seekers remained low until the early 1990s, with a first peak after the Iranian Revolution and the coup d'état in Turkey in 1979/1980. The GDR also welcomed asylum seekers – from Greece and Spain in the 1950s, and from Chile in the 1970s – although their total number is in the low thousands. The first significant wave of asylum seekers to reunified Germany came from former Yugoslavia during the Balkan Wars in the early 1990s. The large number of asylum seekers at the time prompted political debates on asylum policies, which led to significant changes in asylum laws, including the constitutional right to asylum. This legal change is one reason why numbers dropped sharply from 1993 onwards.

The inflow in 2015/16 dwarfed all inflows of refugees and asylum seekers since 1950. As shown in Figure 1(a), the number of asylum seekers peaked in 2015 with over 700,000 arrivals. In total, over one million refugees and asylum seekers came to Germany between 2014 and 2016, leading to a doubling of the number of asylum seekers in the country. The majority of these migrants fled from conflicts in Syria, Afghanistan and Iraq, although significant numbers also moved from Kosovo and Albania. In 2016, 266,000 asylum seekers came from Syria (36.9% of the total), 127,000 from Afghanistan (17.6%), and 96,000 from Iraq (13.3%) (BAMF, 2017). Most migrants reached Germany via the *Balkan Route*, passing through Turkey, Greece, North Macedonia, Serbia, Hungary and Austria.

Immigration to Germany accelerated in mid-2015, when the German government decided not to apply the Dublin Regulation for Syrians. According to the Dublin Regulation, asylum seekers must apply for asylum in the country in which they entered the zone covered by the Dublin Regulation. Most refugees entered the EU via Greece, which, according to the Dublin Regulation, would have been the country in which to seek asylum. However, most refugees who entered via Greece were first registered in Hungary. In mid-2015, the Hungarian government stated that it was overburdened by the large number of refugees and started building a fence along the border to Serbia to prevent

migrants from entering. With more and more migrants gathering at the border and a deterioration of the humanitarian situation in refugee camps along the Balkan Route, the German government decided in August 2015 allow refugees from Syria to seek asylum in Germany without applying the Dublin Regulation (Deutsche Welle, 2017). What followed was the large migration wave that is displayed by the shaded area in Figure 1(a). Following the migration wave, in 2016 Germany became the country hosting the largest number of refugees in Europe. Within Europe, Germany hosted the majority of Syrians (in 2020 around 59%), followed by Sweden (11%). The large number of Syrians going to Germany was mainly due to the country's open door policy vis-a-vis Syrians (UNHCR, 2021). However, there are seven countries in the Middle East, Central Asia and Africa that have been hosting much larger numbers. The number of refugees hosted in Turkey stood at over 2.5 million, and the numbers in Pakistan and Lebanon exceeded one million (UNHCR, 2016).

As shown in Figure 1(b), in late-2016 the number of asylum seekers dropped to its pre-2014 levels. The reasons for this drop were the closing of several borders along the Balkan Route and, most importantly, an agreement between the EU and Turkey in 2016, in which Turkey agreed to prevent migrants from moving to the EU in exchange for a payment of six billion Euro and an agreement that the EU would re-settle one Syrian refugee from Turkey in exchange for every non-Syrian migrant who is turned away by the EU. (Kirişci, 2021).<sup>1</sup>

Despite the many challenges of integrating refugees in the labor market, the situation five years later paints a rather optimistic picture. The government invested heavily in language training, which allowed many refugees to acquire language skills that are critical for the integration in the labor market. Survey data shows that in 2018 around 50% of all refugees were in employment, and another 20 percent in education (Brücker et al., 2020).

**Assignment of Asylum Seekers in 2015** The assignment of asylum seekers in Germany is organized through a centralized system, although certain responsibilities are delegated to states, counties and municipalities. Asylum seekers who arrive in Germany have to report to the border authorities, the police or a regional office of the Federal Office for Migration and Refugees and apply for asylum. Upon doing so, they are registered on an asylum seeker database called EASY and received a certificate (*Büma*) that confirms their status as asylum seeker and entitles them to social benefits (BAMF, 2019b).

The assignment of asylum seekers is carried out in multiple steps. In a first step, they are assigned to reception centers that are run by the 16 federal states. The assignment of asylum seekers across states is governed by a quota system called *Königsteiner Schlüssel*, whereby quotas are set annually based on states' tax revenues (weight 2/3) and population (weight 1/3) two years prior. Federal law requires asylum seekers to stay in the initial reception centers for six months, after which they are assigned onward by the state administration to local reception centers run by counties or municipalities. Asylum seekers have no say in their assignment procedure; the assignment is done by the state administration according to the law, but also taking into account the availability of suitable accommodation. Asylum seekers have to stay in these centers until a decision is reached

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<sup>1</sup>The actual number of asylum seekers coming to Germany dropped almost immediately after the inflow. One reason why the number of asylum applications increased until early 2017 was the time lag in processing asylum applications by the BAMF (BAMF, 2019a, p. 15)

on their refugee status (AIDA, 2015). The assignment procedure from the state to the local level as well as the requirement to stay in a given accommodation differ between states. In most states, the assignment of asylum seekers to municipalities is proportional to the population. After a person has been recognized as a refugee, they have to stay for another three years in the state they were initially assigned to. Several states apply stricter residence rules, requiring asylum seekers to stay in the local area (county or municipality) to which they have been initially assigned (BBSR, 2017).

The German asylum system was largely unprepared for and overwhelmed by the mass inflow of asylum seekers in 2015. In terms of available spaces in reception centers, staffing and IT systems, the system was set up for an annual inflow of 50,000 asylum seekers. The sudden arrival of close to 700,000 asylum seekers forced the Federal Office and the state administrations to apply the rules more flexibly. In particular, this concerned the assignment of asylum seekers to reception centers and onwards to accommodation in the municipalities. The states had to build temporary welcome centers or repurpose buildings suitable for accommodating asylum seekers. Within municipalities, asylum seekers were often housed in gymnasiums, army barracks, hotels, or other large buildings that were owned or rented by local councils. The availability of suitable accommodation also influenced the local assignment of asylum seekers. More asylum seekers were assigned to municipalities with available accommodation (AIDA, 2015).

**Perception of Immigrants in the German Public** The migration flows of the last 75 years have shaped German society along many dimensions. According to current estimates, around 21 percent of the German population are either first-generation immigrants or have at least one immigrant parent (Feld et al., 2017). However, despite the large number of immigrants who now call the country their home, German society has struggled with its identity as an immigration country. Following the idea of an ethnically homogeneous nation state, German politicians have long been reluctant to call the country an “immigration country” (Kurthen, 1995, Thränhardt, 1995). For example, the agreement of the governing coalition in 1982 – under the leadership of Helmut Kohl, in power until 1998 – explicitly stated that “Germany is not an immigration country.” Statements like this reflect the stance of large parts of German society on immigration policy at the time. A shift occurred in the late 1990s, when the center-left government introduced a new citizenship law that moved away from *ius sanguinis* – whereby citizenship is only given to people of German descent – and added *ius soli* component – whereby anyone born in Germany is entitled to citizenship (Anil, 2006). The government also set up a bipartisan commission to identify gaps in the country’s integration policy, and to propose a profound reform of Germany’s immigration policy. The government subsequently introduced several laws with the aim of fostering the integration of immigrants into German societies and creating more pathways to citizenship. Despite these developments, the country’s identity as an immigration country remains a contested issue. This can be seen from commonly used expressions such as “guest worker”, “passport German”, or “bio-German”, which emphasize the otherness of migrants and implicitly divide the society into insiders and outsiders (Bennhold and Vancon, 2019). It can also be seen from recurring debates about whether “Islam belongs to Germany” or about whether there should be a German *Leitkultur* – a leading culture that immigrants are expected to

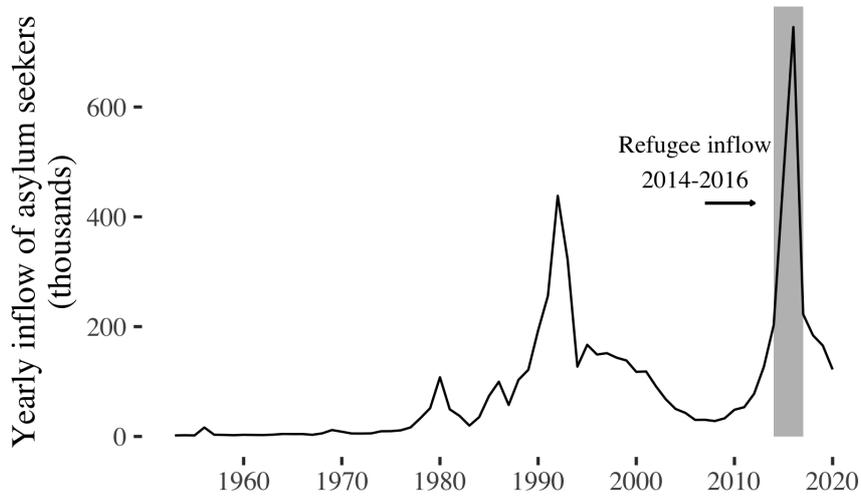
adopt (Pautz, 2005).<sup>2</sup>

Against this backdrop, it is hardly surprising that the refugee inflow 2015 was a controversial issue. At the initial stage, the government's decision to welcome refugees and asylum seekers for humanitarian reasons received broad support in the German public. The public perception of the time is perhaps best summarized by German Chancellor Angela Merkel's pledge from August 2015, "*Wir schaffen das!*" (*We can do it!*). In international media, the country was praised for its *Welcome Culture*, with outlets showing footage of the local population cheering on the arriving refugees at Munich train station, or pictures of Angela Merkel posing for selfies with refugees (e.g. Deutsche Welle, 2020a). Nonetheless, the economic and social integration of asylum seekers posed a significant challenge for the country. From a practical perspective, it was challenging to host over one million people and gradually integrate them in the labor market. Data show that the asylum seekers were considerably less qualified than most Germans, and initially lacked the necessary language skills to gain easy access to the labor market or the education system (Brücker et al., 2016).

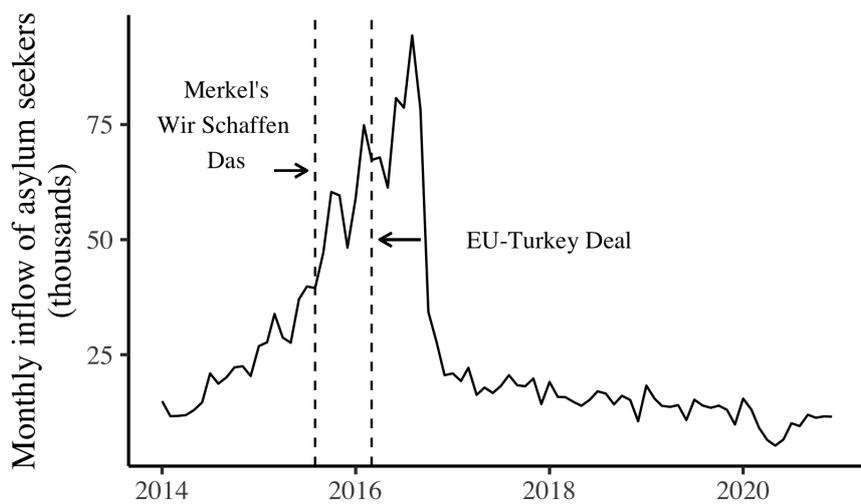
A second challenge was both political and cultural. Although large parts of German society initially supported the government's decision, there was growing concern that one million people, many from a different cultural background and little knowledge about German society and values, would not be able to integrate into German society. These concerns were initially expressed by a small minority, but were shared by a larger number of people after a series of assaults against women on the New Year's Eve 2015/16. Many of the perpetrators were immigrants, among them recently arrived asylum seekers. The most severe incident occurred in Cologne, where over 600 women were reportedly sexually assaulted. These events fundamentally changed the public's perception of asylum seekers. It sparked anti-immigrant violence (Frey, 2020), fuelled right-wing movements like *Pegida*, and led to the rise of the AfD, a right-wing party that first entered the German parliament in 2017 (Gedmin, 2019, Deutsche Welle, 2020b).

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<sup>2</sup>For an example about the debate about islam, see Reuters (2018).



(a) Annual Inflows of Asylum Seekers, 1953-2020



(b) Monthly Number of Asylum Applications, 2014-2020

Figure 1: Refugee Inflows in Germany

Notes: This figure shows the number of asylum applications into West Germany (until 1990) and reunified Germany (from 1990). In Figure (a), the period of the mass inflow in 2015/16 is shown shaded in gray. Figure (b) reports the monthly number of asylum applications between 2014 and 2020.

Source: Das Bundesamt in Zahlen 2016, BAMF, and Federal Statistical Office of Germany.

### 3 Theoretical Motivation and Literature Review

#### 3.1 Defining and Measuring Social Cohesion

Social cohesion is among the most commonly studied topics in the social sciences. However, despite a voluminous literature on the topic, there exists no coherent definition of social cohesion. One of the first definitions was given by Durkheim (1897), who defined social cohesion as the absence of social conflict – be it about wealth, gender, race, or ethnicity – as well as the presence of strong social bonds between members of society. In subsequent works, scholars have emphasized various characteristics that define social cohesion, such as cooperation between members of society (Cooley, 1909), the identification of one individual with others that share the same characteristics (Freud, 1921), the common desire of individuals to maintain an affiliation with the group (Festinger et al., 1950), or an overlap in the friendship networks of different members of society (Granovetter, 1973).

A contemporary definition is given by Van der Meer and Tolsma (2014, p. 460):

Social cohesion may be regarded as the degree of interconnectedness between individuals that is both a result and cause of public and civic life. It encompasses feelings of commitment, trust, and norms of reciprocity and is demonstrated by participation in networks and civic organizations [...].

Another definition, targeted towards the analysis of social cohesion in developing countries, is given in a recent Mercy Corps toolkit (Kim et al., 2020):

[Social cohesion is] a sense of shared purpose and trust among members of a given group or locality and the willingness of those group members to engage and cooperate with each other to survive and prosper [...].

According to a review by Jenson (2010), social cohesion describes the characteristic of a whole society; it is a state that is often the goal of social policy. Empirical studies that aim to measure the determinants of social cohesion apply two definitions for their measurement. The broader definition includes, but is not limited to, equality of opportunity, equality of incomes, access to welfare, a strong provision of public goods, and low poverty. These are characteristics of a society as a whole that are often measured based through macro variables. An example for such a study is Easterly et al. (2006), who define social cohesion as the nature and extent of social and economic divisions within society. The fewer divisions along lines such as race, ethnicity, wealth, income, political party or world views, the higher is the level of social cohesion. In their empirical study they measure social cohesion through macro variables reflecting these cleavages, such as the Gini coefficient of income or ethnic fractionalization.

The Mercy Corps toolkit emphasizes that for the analysis of social cohesion in developing countries, the relevant unit of observation is the locality (town, village, neighborhood, etc), or the social group (Kim et al., 2020). This is of particular importance if the goal is to improve social cohesion – or dimensions thereof, such as trust, collective action norms, shared purpose or civic engagement – through community-based interventions. It is almost impossible to design interventions targeting an

entire country; but it is possible to improve social cohesion through interventions at the local level (e.g. King et al., 2010, Avdeenko and Gilligan, 2015, Molina et al., 2017).

Other studies apply a more narrow definition of social cohesion, focusing on individual attitudes and behaviors that can be measured in surveys. These include self-reported trust, positive reciprocity, willingness to cooperate, or attitudes towards immigrants. Examples for such studies are provided in the following section.

### 3.2 Theory and Evidence: Immigration, Diversity and Social Cohesion

The literature in the social sciences is mainly focused on the effect of *ethnic diversity* on social cohesion. Ethnic diversity describes the ethnic composition of a population within a geographic boundary. It is a broader concept than immigration, although both are inextricably linked. A society composed of one ethnic group is considered homogeneous, whereas a society composed of many ethnic groups is considered ethnically diverse. Immigration is often at the root of ethnic diversity, because the ethnic diversity today is often the result of past immigrant inflows. By the same token, immigration today increases ethnic diversity in the future, especially when the immigrants are from a different ethnic group.

The literature on diversity and social cohesion is based on two dominant theories, namely *Conflict Theory* (Putnam, 2007) and the *Contact Hypothesis* (Allport, 1954, Pettigrew and Tropp, 2006). Both hold fundamentally different predictions. Conflict theory predicts that the presence of diverse ethnic groups undermines social cohesion. At the core of this theory lies the idea that people identify with and favor members of their ethnic group. One's own group is seen as the *in-group*, whereas members of other ethnic groups are seen as the *out-group*. Van der Meer and Tolsma (2014) identify two major mechanisms explaining the negative effect of diversity on social cohesion. First, the out-group is perceived by the in-group as a threat in the competition over scarce resources – also known as *Group Threat Theory* (Blumer, 1958, Bobo and Hutchings, 1996) or *Ethnic Competition Theory* (Scheepers et al., 2002). An increase in ethnic diversity enhances the competition between groups, thereby eroding generalized trust and reducing people's commitment to society. Putnam (2007) termed this process *Hunkering Down*. Second, an increase in the size of the ethnic out-group may increase anxiety within the in-group about shared social norms and values, which may result in less contact and lower trust between groups. Both mechanisms are related to the concept of homophily, a common observation that people are more likely to interact with and trust others who share the same characteristics and values (e.g. McPherson et al., 2001). Conflict theory, while putting forward a powerful hypothesis, is not without criticism in the social sciences. Portes and Vickstrom (2011) argue that the hypothesis of *Hunkering Down* is based on the premise that societies mainly function based on mutual acquaintances. This, however, is not how modern societies work. Rather than relying on close-knit networks of friends and family, economic and social life is based on social norms that are understood and adhered to by every member of society. Even if immigration leads people to “hunker down” and show less commitment to society, this does not necessarily erode the social norms that make a society thrive.

A theory that stands in sharp contrast to Conflict Theory is the Contact Hypothesis. This theory predicts that a more diverse society intensifies the contact between members of different groups,

thereby increasing trust and social cohesion (Allport, 1954). However, the forces of conflict and contact theory may be at play at the same time or at different stages of the integration process. For example, an increase in the size of the ethnic group may lead to anxiety and distrust in one part of the population and to more intense interaction with another. Alternatively, new immigrants may initially be met with suspicion and seen as the out-group, but tensions may ease as they become more integrated in society.

Ethnic diversity and social cohesion is among the most frequently studied relationships in the social sciences. The literature has produced a wealth of findings based on a varying geographic focus – using national-, county-, or individual-level data – and different measurements of social cohesion. Many studies measure social cohesion through generalized trust or specialized trust of neighbors or other groups. The literature on diversity and trust finds mixed results. For example, a cross-country study by Delhey and Newton (2005) finds a negative relationship between ethnic diversity and trust, whereas Anderson and Paskeviciute (2006) finds positive effects on some and negative effects on other dimensions of social cohesion. Likewise, some within-country studies find a negative relationship between ethnic diversity trust across neighborhoods or counties (e.g. Putnam, 2007, Laurence and Bentley, 2016, Gereke et al., 2018), while other studies *in the same countries* find none or even positive effects (e.g. Gijssberts et al., 2012, Abascal and Baldassarri, 2015, Dinesen and Sønderskov, 2015). A major reason for the inconsistent results is the presence of omitted variables. Ethnic diversity and trust are often driven by the same factors, and it is often not possible to adjust for all confounding factors. For example, vibrant cities may attract immigrants from different cultures as well as natives with higher levels of trust. However, we cannot be sure whether the resulting positive correlation between diversity and trust is causal, or whether it merely reflects the vibrancy of cities. Another major reason for the difference in results is the measurement of ethnic diversity. Statistical models relating trust and diversity are often a black box. It is far from clear what dimension of ethnic diversity actually affects people, what the relevant geographic unit for measuring diversity is, and through what mechanisms the effect of diversity unfolds. Is it the number of foreigners that matters, or the cultural difference between natives and foreigners, or the number and relative size of different ethnic groups? Is what matters the ethnic diversity in the same neighborhood or that of the entire country? The empirical evidence offers some answers to these questions, especially regarding geography. The more localized the measure of ethnic diversity, the stronger is its relationship with social cohesion. For example, most studies find a negative link between ethnic diversity and trust when ethnic diversity is measured at the neighborhood level. This link appears to be much stronger in the U.S. than in Europe, Australia, New Zealand or Canada (Van der Meer and Tolsma, 2014).<sup>3</sup>

A related literature studies the relationship between ethnic diversity and preferences for redistribution. The underlying hypothesis is derived from conflict theory, namely that greater ethnic diversity reduces people's willingness to contribute to public goods and to redistribute income and wealth (e.g. Alesina et al., 1999, Alesina and Glaeser, 2004). Immigration plays a particular role in this process, as immigrants contribute to and benefit from the welfare state but have no voting rights (Razin et al., 2002). The empirical literature, summarized in reviews by Stichnoth and Van der Straeten (2013)

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<sup>3</sup>Additional reviews of the literature on diversity and trust are provided by Schaeffer (2014) and Dinesen and Sønderskov (2018).

and Elsner and Concannon (2021), finds support for this hypothesis within but not across countries. Within countries, people who live in areas with greater ethnic diversity are significantly less in favor of redistribution.

### 3.3 Consequences of the 2015/16 Refugee Inflow: Empirical Evidence

A growing literature evaluates the economic and social effects of the 2015/16 inflow of refugees and asylum seekers in Germany. Most studies exploit the quasi-random assignment of asylum seekers across municipalities and counties, which is plausibly independent of current economic and political conditions. Thus far, there is limited evidence of noticeable effects on the labor market. Gehrsitz and Ungerer (2017) find no effect on native wages and employment, which is unsurprising given that most asylum seekers only entered the labor market after several years. Other studies document important network effects among immigrants. Deole et al. (2020) find positive employment effects of the inflows on previous immigrants from the same countries of origin, which they attribute to an increase in the demand for ethnic goods. Stips and Kis-Katos (2020) show that co-ethnic networks play an important role in the labor market integration of asylum seekers. People who were assigned to places with a pre-existing community from the same country had a higher probability of finding employment, in particular when many co-nationals were in employment.<sup>4</sup>

Research on the housing market suggests that the presence of asylum seekers represents a negative amenity. Kürschner Rauck and Kvasnicka (2018) compare rents in counties with high vs. low inflows over a ten-year period. While rents in both types of cities followed a similar trajectory before the inflow, rents in high-inflow areas decreased disproportionately after the inflow. Complementary evidence is provided for refugee shelters in Berlin by Hennig (2021). He shows that the location of shelters is unrelated to neighborhood characteristics; after the shelters were established, rental prices in the vicinity of the shelters decreased. Kürschner Rauck (2020) finds similar effects for sale prices in the whole of Germany: house prices in the vicinity of refugee reception centers dropped relative to prices of comparable houses in areas without a center. These findings are consistent with results from a choice experiment by Liebe et al. (2018), who show that large parts of the sample oppose a reception center in their vicinity.

Of particular interest for policy is the effect of the refugee inflow on crime. Thus far, there is no evidence that the asylum seekers affected violent crimes in general, or any crimes that are directed towards natives (Huang and Kvasnicka, 2019), although there is evidence of an increase in non-violent property crime, petty crime, and drug offenses (Gehrsitz and Ungerer, 2017, Dehos, 2021).

Several studies document a shift in political preferences. Mader and Schoen (2019) use panel data to document a shift in voters' perceptions of different parties. In particular, conservative voters showed less support for the CDU after the government's decision to admit a large number of asylum seekers. The effects on voting outcomes are mixed. Whereas Schaub et al. (2021) find no effect of the local presence of asylum seekers on voting outcomes in the federal elections, Bredtmann (2020) documents small effects on right-wing voting in the state election in Rhineland-Palatinate, which are concentrated in municipalities with a reception center for refugees.

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<sup>4</sup>A related literature studies the effect of local conditions on the integration of asylum seekers in Germany, for example Marbach et al. (2018), Aksoy et al. (2020) or Fasani et al. (2021). For a review, see Brell et al. (2020).

Concurrent with the shift in political preferences was a shift in natives' perceptions of – and behavior towards – immigrants. Surveys show that people's attitudes depend on the characteristics of the asylum seekers as well as their own economic and social situation. Bansak et al. (2016) conduct a conjoint experiment in several European countries and find that people prefer admitting asylum seekers who come for humanitarian reasons as well as those who worked in a high-status occupation before migrating. Moreover, people are less willing to admit muslims, migrants who come for economic reasons, and those with poor language skills. With the exception of anti-muslim bias and the reluctance to accept economic migrants – which is less pronounced among left-leaning people – the attitudes do not differ significantly between people of different socio-economic status or political preferences. In an experiment in Germany, Hayo and Neumeier (2020) investigate the determinants of people's attitudes towards the right of asylum. The majority of respondents is for a tightening of the asylum laws in Germany. In addition, people's attitudes are affected by their beliefs about the costs of integration and the share of muslims among asylum seekers, which most people underestimate. Once presented with the correct information, they are more likely to support a tightening of the country's asylum policy.

A particular turning point for perceptions were the assaults on New Year's Eve in Cologne 2015/16. In a survey experiment, Czymara and Schmidt-Catran (2017) show that the change in Germans' perceptions of immigrants was subtle, and depended on the group of immigrants. Whereas natives' acceptance of asylum seekers, or muslims in general, remained unaffected, there was a significant drop in the acceptance of migrants from Arab and African countries. Frey (2020) finds strong negative effects on an extreme manifestation of negative attitudes against immigrants, namely anti-immigrant violence. After the Cologne events anti-immigrant violence increased dramatically, and especially so in areas that did not experience much violence before 2015. Similar results have been found by Jäckle and König (2018), who document an uptick in anti-immigrant violence after salient events such as the Cologne assaults, terrorist attacks or police raids. A study by Entorf and Lange (2019) uncovers some of the determinants of anti-immigrant violence. The authors find the largest increases in anti-immigrant violence in places that previously had low numbers of immigrants but experienced a rapid increase in immigrant numbers after 2014.

The economic effects of refugee inflows in Germany are small compared to those in Turkey, a country that received considerably more refugees around the same time. Studies have documented a plethora of effects of the inflow of close to four million refugees, suggesting that the inflow transformed parts of the Turkish economy. On the labor market, an important adjustment channel is work in the informal sector. Findings by Del Carpio and Wagner (2015) and Tumen (2016) suggest that refugees mainly found work in the informal sector, which pushed natives out of this sector and into the formal sector. On the firm side, the inflow affected entry as well as price setting. Altındağ et al. (2020) show that the inflow led to an increase in the number of firms. Most of the newly established firms were small, and operated in the hospitality and construction sector. Moreover, Balkan and Tumen (2016) document that the inflow led to a decrease in prices, which they attribute to a reduction in labor costs in the informal sector. Several studies also document effects in education: the inflow of refugees increased the likelihood that natives send their children to private school, increased high school enrolment rates among native children, and led to an improvement in their PISA test scores

(Tumen, 2018, 2019, 2021). A study by Altindag and Kaushal (2021) analyzes the effect of the refugee inflow on voting but finds no significant effects. With respect to social connections, there is only limited evidence so far. A qualitative study by Seyidov (2021) and a survey by WFP (2020) suggest that the command of the Turkish language is key to building social ties between refugees and natives. Overall, the effects of the refugee inflow on the Turkish economy appear larger than the effects on the German economy, although more research is needed to evaluate the long-run consequences of the inflow.

### 3.4 Main Hypotheses and Contribution

Guided by the theoretical literature on immigration, diversity and social cohesion, we test whether the inflow of refugees and asylum seekers in Germany negatively affected social cohesion. Moreover, we test whether the effect is stronger in areas with lower base levels of social cohesion as well as lower economic performance.

We make two contributions to the existing empirical literature. First, we document the effect of a large inflow of refugees and asylum seekers on social cohesion. Although there is plenty of literature on diversity and social cohesion, the evidence for the inflow of refugees or other forced migrants is limited. Providing such evidence is important because refugees are a major immigrant group whose motivations, characteristics and needs differ greatly from those of other migrants, and whose effect on a host country is likely different from the effect of economic migrants (Becker and Ferrara, 2019).

Second, the sudden and unexpected inflow of over a million people allows us to quantify the *causal* effect of the inflow of forced migrants on social cohesion. In many studies, it is difficult to separate correlation from causation because diversity and social cohesion may be determined by the same social processes. In our case, the inflow occurred within a few months and led to an unprecedented increase in the number of asylum seekers. By exploiting pre-determined rules in the allocation of asylum seekers, we are able to estimate the causal effect of the local presence of asylum seekers on several dimensions of social cohesion.

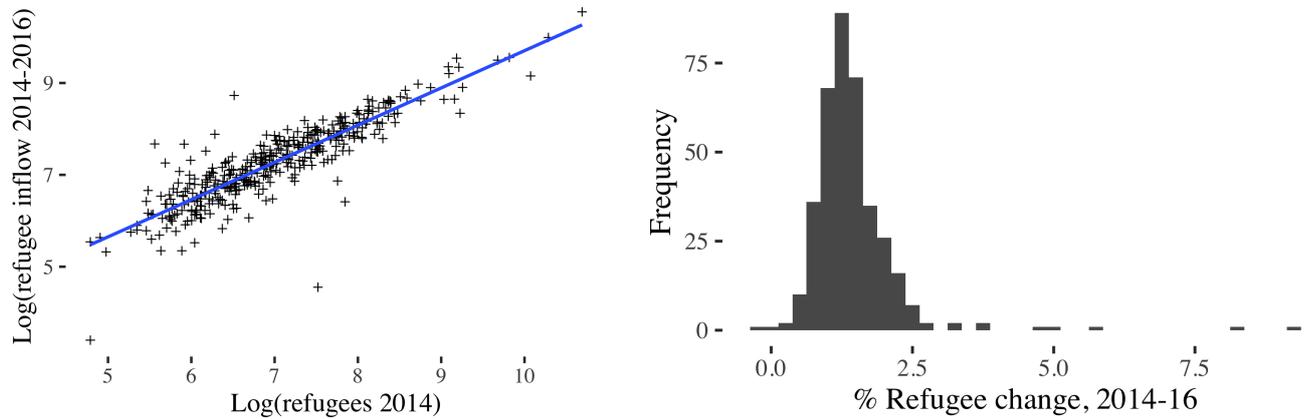
## 4 Data and Research Design

### 4.1 Data Sources, Key Variables and Descriptive Statistics

To quantify the effect of the inflow of refugees and asylum seekers on various aspects of social cohesion, we combine regional data on asylum seeker inflows with survey data as well as data on anti-immigrant violence scraped from newspaper articles.

**Data on Asylum Seeker Inflows** The data on the presence of refugees and asylum seekers in Germany comes from the German Federal Statistical Office (Destatis). We observe the number of asylum seeker residing in a county in each year between 2007 and 2019, as well as the number of asylum seekers by gender, citizenship and category of protection status. In our analysis, we include all counties for which we have data on asylum seeker inflows for the entire period 2007-2019. This leaves us with 373 out of 401 counties, representing 91% of the German population in 2014.

Between 2014 and 2016, the number of asylum seekers in Germany doubled, from one million to two million. Figure 2a relates the county-level change in the number of asylum seekers between 2014 and 2016 to the stock of asylum seekers in January 2014, before the inflow. The largest inflows are observed in counties that already hosted the largest number of asylum seekers before 2014. The slope of the regression line is 0.8, which means that an 1% higher number of asylum seekers in 2014 is associated with a 0.8% higher inflow between 2014 and 2016. The stock of asylum seekers in 2014 explains more than 90% of the variation in asylum seeker inflows by county. This relation suggests that the assignment of asylum seekers to counties follows the assignment rule, and the assignment is stable over time. Moreover, the fact that current and past asylum seekers reside in the same counties suggests that there was little internal migration of asylum seekers after their initial assignment.



(a) Asylum seeker inflows 2014-16 vs initial numbers (b) Increase in the number of asylum seekers 2014-2016, relative to 2014

Figure 2: Statistics: Assignment of Asylum Seekers across Counties

Notes: (a) This scatter plot relates the size of the inflow of asylum seekers between 2014 and 2016 to the number of asylum seekers in the same county in January 2014. The slope of the regression line is 0.8. (b) This graph shows the distribution of the increase in the number of asylum seekers in a county between 2014 and 2016 relative to 2014. A value of one means that the number of asylum seekers doubled. A value of two means that the number increased by 200%, i.e. the number of asylum seekers trebled. Source: Destatis.

In the analysis to follow, our regressor of interest is the increase in the number of asylum seekers in a county relative to the stock of asylum seekers in 2014,<sup>5</sup>

$$\text{refugee inflow}_c^{14-16} = \frac{\text{refugees}_c^{16} - \text{refugees}_c^{14}}{\text{refugees}_c^{14}}. \quad (1)$$

A value of one means that in a given county the number of asylum seekers doubled between 2014 and 2016. Figure 2b shows that the size of the increase in the number of asylum seekers varied considerably across counties. While the majority of counties lie in a range between 20% and 250%, there were virtually no counties with an increase of zero, and few counties with increases larger than 250%. Figure 3 displays the geographic distribution of the increase in the number of asylum seekers relative to 2014 across Germany. Given our sample restrictions, we have missing observations in

<sup>5</sup>In the mathematical notation we use the term *refugee*, which is shorter than *asylum seeker*. Readers should note, however, that the numbers used refer to the numbers of asylum seekers.

Mecklenburg-Vorpommern and Saxony. There is no clear geographic pattern in the size of the inflow. The increase was lower in the Western states of Rhineland-Palatinate and Northrhine-Westphalia, but otherwise the size of the inflow varies considerably across counties. In Figure A.1, we also show that the relative size of the inflow was uncorrelated with the prior unemployment rate, and had a weak positive correlation with prior GDP.

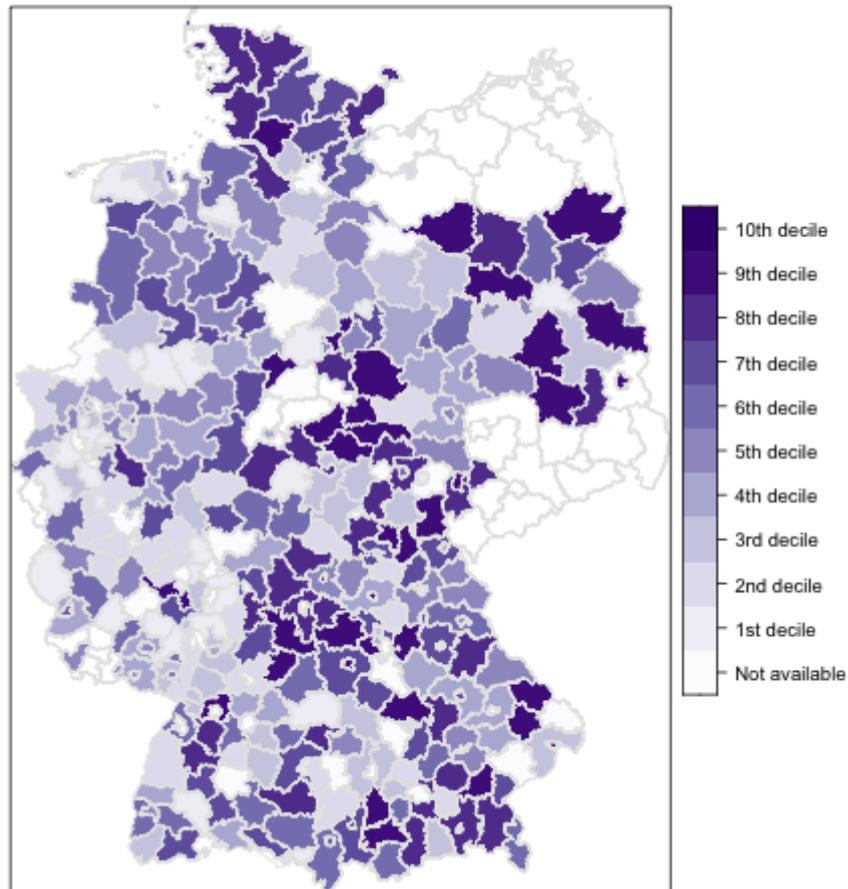


Figure 3: Geographic distribution of the inflow 2014-2016, relative to 2014.

*Notes:* This map shows the geographic distribution of our treatment, i.e. the increase in the number of refugees between 2014 and 2016, relative to 2014, by county. *Source:* Destatis.

**Survey Data: The Socio-Economic Panel (SOEP)** To measure various aspects of social cohesion based on individual-level information, we use data from the SOEP (Goebel et al., 2019). The SOEP is a longstanding annual panel survey that is representative of the German population and includes rich information on people’s attitudes and perceptions. Importantly for our study, it asks respondents several questions about social attitudes and values in five-year intervals since 2003. The last two waves were 2013 and 2018, which means that we observe the attitudes of the same people before and after the inflow.

We use seven survey questions on various aspects of social cohesion that have been previously

used in the literature (see Section 3.1). Three questions indicate a person's general views on other members of society, namely questions on (i) whether people can be trusted, (ii) people are helpful or act in their own interest, or (iii) whether people are fair or exploit you. These questions refer to other members in society in general, not specifically immigrants or natives. As a proxy for a person's view about immigrants, we use a question on whether one should exert caution towards foreigners. To capture concerns about safety – a central argument of conflict theory – we use a question on whether a person frequently worries about crime. Finally, we consider a question on whether a person has donated money to charity in the previous year, which proxies for a person's commitment to a common cause.

With each question, respondents are presented with mutually exclusive answer options that differ between questions. For example, for the question whether "people can generally be trusted", respondents could choose between four options, ranging from "disagree completely" to "agree completely", whereas questions about concerns about crime and job security offer three choices – "not concerned at all", "somewhat concerned" or "very concerned." To facilitate the analysis, we convert all responses into binary indicators. For all questions except the one on perceptions on crime, a value of one represents an answer that is consistent with a higher level of social cohesion. For example, for the question about trust, we assign a value of one when a person agrees or completely agrees that people can be trusted, and zero otherwise. For the question "Do you believe that most people i) exploit you or ii) are fair" we assign a value of one if a respondent states that people are fair and zero otherwise. For the variables that expresses a person's concern with crime, we assign a value of one if the person is very concerned about crime, and zero if they are somewhat concerned or not concerned at all. The precise wording of the questions along with the answer scales and the definition of the binary indicators can be found in Appendix A.1.

In choosing how to code survey responses, researchers face a trade-off. Having binary outcomes facilitates the comparison of the effect sizes across different outcomes, and allows one to use simple methods such as linear probability models or probit or logit. The downside is that binary indicators may not capture subtle changes in a person's perceptions. For example, if a person's self-reported trust changes from "agree completely [that people can generally be trusted]" to "agree", our binary indicator would not capture this change. The alternative would be to have several mutually exclusive indicators for the different answer options, and to use appropriate methods such as multinomial logit. In our judgment, it is more useful to have results that are comparable across outcomes and to use simpler yet more transparent methods, which is why we choose to construct binary indicators.

The SOEP includes geo-identifiers for a person's county of residence. We link the survey data to the asylum seeker inflow data based on a person's county of residence in 2014, the year before the inflow.

**SOEP – Descriptive Evidence** Figure 4 displays the means of the outcome variables in the survey waves before and after the inflow (2013 and 2018). Each panel reports the share of people whose outcome takes value one, split by people residing in counties with above- and below-median increases in the number of asylum seekers. For five out of seven questions, there is a difference in responses before the inflow. Before the inflow, people in low-inflow areas are more likely to agree that other

people can be trusted and that people are helpful, but less likely to agree that people are fair. They are also less worried about crime. These differences, however, are small, and they are almost zero with respect to caution towards foreigners and donations. In Appendix A.3, we report the descriptive statistics for the estimation sample.

The goal of the econometric analysis is to see whether the *change* in attitudes after the inflow versus before was different among people in high-inflow vs. low-inflow areas. The descriptive analysis in Figure 4 suggests that this was not the case: for most outcomes, the gap between people’s attitudes in high- and low-inflow areas is similar before and after the inflow.

**Data on Anti-Immigrant Violence** To investigate whether the inflows of refugees and asylum seekers affect natives’ behavior towards foreigners — and not only their attitudes — we use information on anti-immigrant violence in Germany. We use a geo-referenced event dataset reporting all instances of anti-refugee violent actions that have been documented by the project *Mut gegen rechte Gewalt* by the Antonio Amadeu Foundation. The foundation collected information on anti-immigrant incidents such as assaults, attacks against refugee housing and arson, as well as anti-immigrant demonstrations. For each incident, the database records information on the time, location, number of victims and perpetrators as well as a description of the incident and a link to the original source. The information was mostly taken from newspaper articles, press releases by the German police, parliamentary interpellations, as well as publicly accessible reports by local and regional organizations offering advice to victims of right-wing violence. For our analysis, we use a dataset provided by Benček and Strasheim (2016), who scraped the database from the Foundation from 2013 to 2018. Based on their code, we additionally scraped all entries up until 2020.

Figure 5 shows the overall number of anti-immigrant incidents in Germany between 2014 and 2017 as well as the number of asylum applications per month. The number of incidents was low until mid-2015 and increased in the second half of 2015, when most asylum seekers arrived in Germany. The number of incidents increased sharply in early 2016 and gradually declined to its pre-2015 level in 2017. A recent study by Frey (2020) suggests that this sharp increase was caused by the events in Cologne on New Year’s Eve 2015/16. In Appendix B, we present additional descriptive statistics on the number of incidents in different categories as well as the frequency of events per year and county. By far the largest number of incidents were attacks on refugee housing. Other incidents such as arson or assaults play a minor role in explaining the pattern in Figure 5. Regarding the frequency of anti-immigrant violence, the median county experiences 5.6 incidents per 100,000 inhabitants per year, although there is considerable variation in the number of incidents. There are few counties with zero incidents, whereas the majority ranges between one and 20 incidents per 100,000 inhabitants per year.

## 4.2 Identification Strategy

Our goal is to quantify the effect of the local presence of asylum seekers on social attitudes and anti-immigrant violence. In general, identifying the causal effect of immigration is challenging because the same factors that attract migrants may also affect the outcomes of interest. For example, migrants may be attracted to cities that offer high wages. The resulting correlation between immigration and

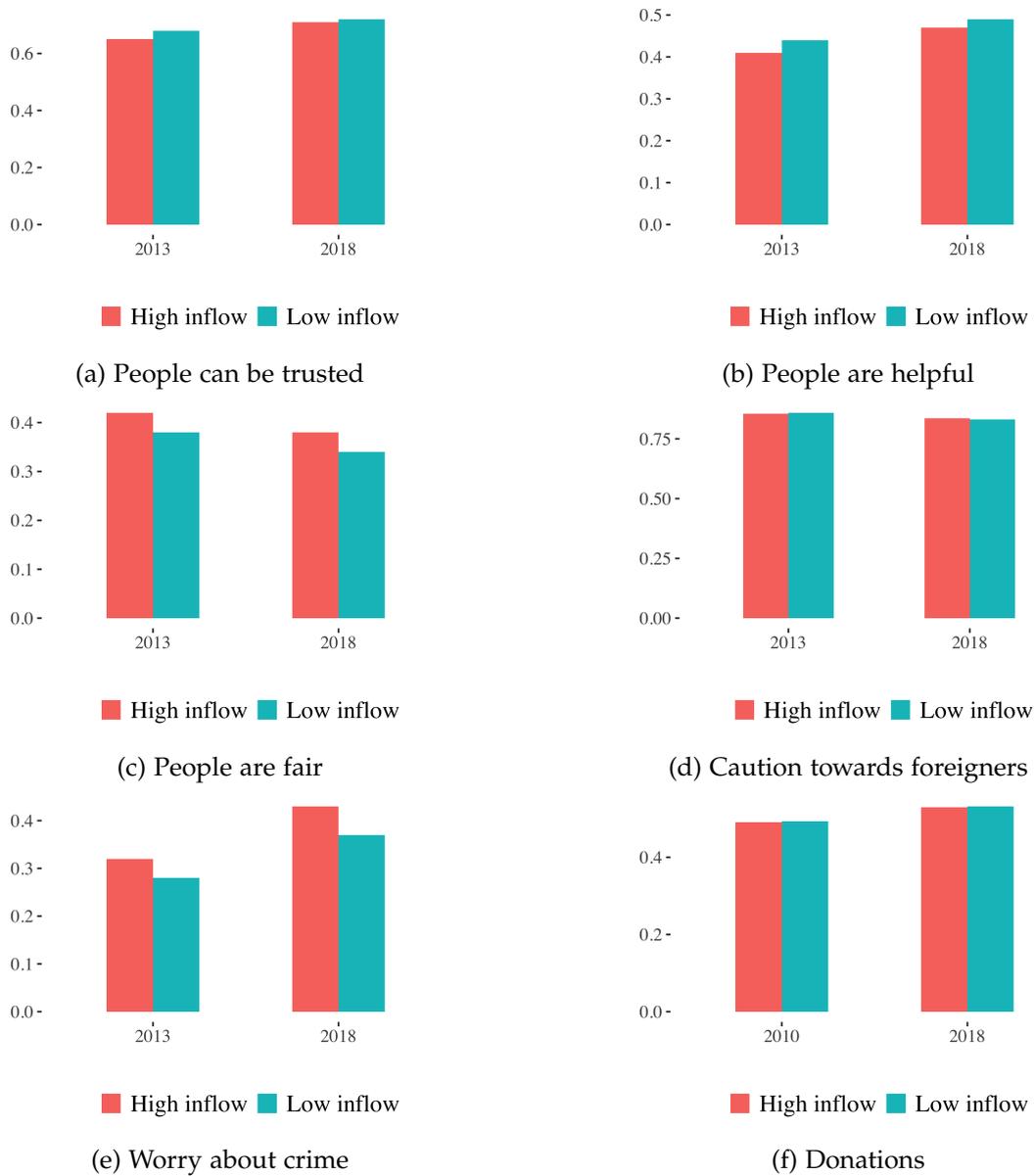


Figure 4: Average Responses to Social Attitudes Questions

Notes: This graph displays the average responses to survey questions in the SOEP. Each variable is a binary indicator. The classification of survey answers can be found in Appendix A.1. *High inflow* and *Low inflow* refer to above- and below-median increases in the number of asylum seekers in a respondent's county of residence in 2014.

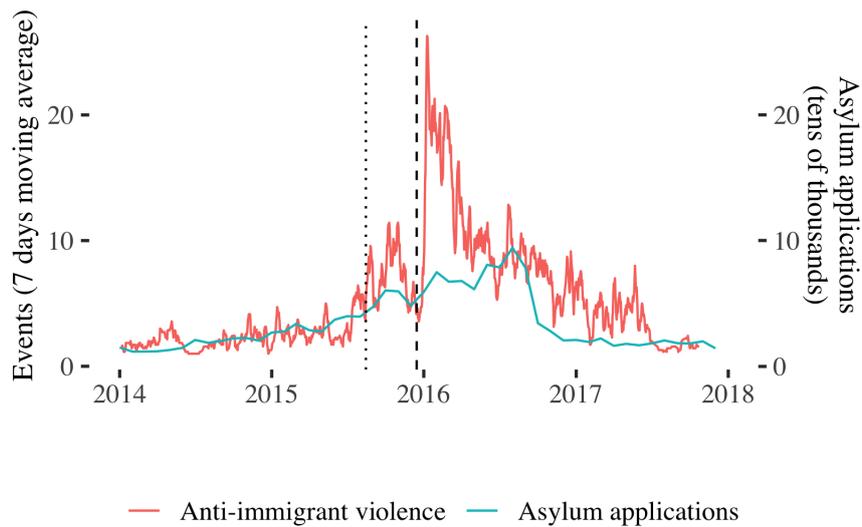


Figure 5: Anti-immigrant violence, 2014-2017

*Notes:* The graph displays the daily number of anti-immigrant incidents in all of Germany (left scale) and the number of asylum applications per month (right scale). Violence data have been smoothed with a 7-day moving average. The vertical lines indicate the Merkel's announcement that Germany suspends the Dublin Regulation, and the New Year's Eve 2015/16, during which a series of sexual assaults occurred in several German cities. *Source:* Benček and Strasheim (2016) based on data provided by the Antonio Amadeu Foundation. The dotted line indicates August 2015, when Germany announced that it would have accepted all Syrian asylum seekers arriving in the country. The dashed lined represents instead the events of New Year's Eve 2015-2016.

wages is positive, but it reflects the sorting of migrants into certain areas rather than the causal effect of immigration. Causal identification requires for that the assignment of migrants across areas be as good as random and, thus, independent of local conditions that could influence the migrants' location choices.

To identify a causal effect, we exploit allocation rules that govern the assignment of incoming asylum seekers to local areas as well as the massive surge in the number of asylum seekers shown in Figure 1b). As explained in Section 2, the allocation rules have two features that are helpful for causal identification, namely that incoming asylum seekers cannot choose their initial place of residence, and that the number of asylum seekers assigned to an area is not based on current economic or political conditions. Furthermore, we use panel data that allow us to track the same people and counties before and after the inflow. We employ a difference-in-difference design that compares the *changes* in various measures for social cohesion in counties that received few versus many asylum seekers. The underlying thought experiment is that we compare two people with the same attitudes in 2013 and see whether their attitudes diverge after the inflow of asylum seekers.

#### 4.2.1 Difference-in-Differences: Social attitudes

We use the SOEP to estimate the effect of the inflow of asylum seekers in 2015/16 on self-reported social attitudes and values. We exploit the panel structure of the data and estimate a difference-in-difference regression of the form

$$y_{ict} = \beta(\text{refugee inflow}_c^{14-16} \times \text{post}_t^{2014}) + \alpha_i + \alpha_t + \epsilon_{ict}, \quad (2)$$

whereby  $y_{ict}$  is the outcome of person  $i$  who resided in county  $c$  in 2015, and whose outcomes we see in year  $t$ . To isolate the variation within person over time, we condition on a set of individual and year fixed effects,  $\alpha_i$  and  $\alpha_t$ , which absorb time-invariant individual characteristics as well as changes in the outcome that are common to all individuals. The county fixed effects also control for the pre-2014 number of asylum seekers in a county, which remained stable until the mass inflow 2015. The regressor of interest is the interaction between the inflow of asylum seekers and a *post* dummy that equals unity in all years after 2015 and zero in years until 2014. Given the implicit control for the base level of asylum seekers, the coefficient  $\beta$  is identified from variation across counties in the change in the number of asylum relative to the number before 2014. In other words, by including fixed effects, we estimate our coefficient of interest by comparing counties with a similar number of asylum seekers before 2014 but different increases in the number of asylum seekers in 2015/16.

The error term  $\epsilon_{ict}$  captures all the determinants of the outcome that are not captured by the fixed effects. To account for serial as well as spatial correlation in the error terms of people living in the same county, we cluster the standard errors at the county level.

Our coefficient of interest is  $\beta$ , which captures the effect of a 100% increase in the number of asylum seekers in a county on the probability that our outcome takes value one after 2015 relative to that person's outcome before 2015. For instance, when the outcome is trust, an estimate  $\beta$  of 0.01 means that doubling the number of asylum seekers in a person's county of residence increases the likelihood that the person agrees that people can be trusted by one percentage point.

The coefficient  $\beta$  can only be interpreted as causal under the so-called parallel trends assumption. It requires that, in absence of the refugee inflows, perceptions would have evolved the same way in high- and low-inflow areas. In other words, if we saw a gap in perceptions opening up after 2015, the assumption is that this gap is only due to the refugee inflows. This is an important advantage of a difference-in-difference design compared to cross-sectional analyses: the difference-in-difference design does require the assumption that the inflow of immigrants be as good as random.

Although the parallel trends assumption is not testable, we argue that it plausibly holds in the German context. For everyone involved, a sudden inflow of one million asylum seekers was completely unexpected. Within a few weeks, German states were forced to find accommodation, which is why many states deviated from their policy to assign asylum seekers to municipalities based on population size and often assigned them based on the availability of suitable buildings. This procedure often led to assignments that were independent of local conditions. Moreover, asylum seekers cannot choose their initial place of residence, which excludes a typical identification challenge of studies on immigration, namely that migrants deliberately choose to settle in a particular place.

#### 4.2.2 Anti-immigrant violence

To estimate the effect of the inflow of refugees and asylum seekers on violent behaviours against immigrants, we use data from the Antonio Amadeu Foundation. Our dataset allows us to follow the monthly evolution of anti-immigrant violence in Germany between 2014 and the end of 2017.

Our goal is to determine whether the monthly number of violent anti-immigrant events grows more substantially in counties that received many vs few refugees during the 2014-2016 period. To do so, we estimate the same difference-in-difference regression as in Equation (2), although the unit of observation is now a county rather than an individual. We also estimate a flexible difference model

$$y_{ct} = \sum_{t \neq \text{Dec 2014}} \beta_t \text{refugee inflow}_c \times D_t + \alpha_c + \alpha_t + \epsilon_{ct}, \quad (3)$$

whereby  $y_{ct}$  is the number of violent anti-immigrant events per capita in county  $c$  and month  $t$ . Our treatment variable is the percentage change in the number of asylum seekers by county, which we interact with a set of month dummies. We set December 2014, the month before the migration wave started, as the base category. In this model, the coefficients  $\beta_t$  indicate the change in the number of anti-immigrant incidents between December 2014 and month  $t$  in areas where the number of asylum seekers doubled versus the change in areas where the number of asylum seekers remained constant.

The estimates of  $\beta_t$  in periods before January 2015 can be used as a diagnostics check in support of the parallel trends assumption. If they hover around zero, this is evidence – but no proof – that the parallel trends assumption holds. In contrast, if some of the coefficients are different from zero, this may indicate that areas with high and low inflows of asylum seekers had different trends in violence before the inflow and, thus, may not be comparable.

## 5 Results

### 5.1 Effects on Individual Attitudes

Figure 6 displays the estimation results for the effect of the inflow of refugees and asylum seekers on social attitudes. Each row displays the point estimate and 95% confidence interval for the coefficient  $\beta$  in Equation (2) for different outcomes. Each point estimate indicates the estimated effect of a doubling of the number of asylum seekers in a respondent's county on the likelihood that they agree to the statement on the left. To benchmark these effects, the graph also reports the share of the sample that agree to the statement. The corresponding estimation results are also provided in Appendix D.3.

Overall, the results do not indicate large effects of the inflow of refugees and asylum seekers on social attitudes. The point estimates for trust and the question whether people are helpful are zero, and the estimated effect on perceived fairness is small and statistically insignificant, as are the effects on concerns about crime, and donations. The only effect that is statistically significant is the one on caution towards foreigners. A doubling in the number of asylum seekers in a county increases the likelihood that a person believes that one has to exert caution towards foreigners by one percentage point. However, relative to a mean of 85%, this is a small effect.

Figure D.4 in the appendix shows the estimates of a flexible difference-in-differences analysis of social attitudes, which provide evidence on our identification assumption. In most cases, trends in social attitudes in countries exhibiting different treatment intensities did not diverge in the previous survey rounds (2003 and 2008) relative to the base period 2013, which supports the validity of our identification strategy. While we do find a few significant estimates before the actual treatment for two of our outcomes, notably the survey questions whether "People are helpful" and "People are

fair”, we argue that the general picture shows that German counties showed similar trends in social attitudes up to 2014.

We also investigate whether the results are sensitive to our choice of treatment. Column (5) of Appendix Table D.3 shows the coefficients of our main regression using the change in refugees per capita by county between 2014 and 2016 to measure treatment intensity. The estimates confirm that larger inflows of refugees are not associated with significant changes in social attitudes at the county level.

In Appendix D, we report heterogeneous effects for counties that had high vs. low employment rates and high vs. low vote shares for the extreme right before the inflow. While most effects do not vary along these dimensions, we find differences for caution towards foreigners and concerns about job security. In both cases, the effects are stronger in places with a higher prior vote share for the extreme right.

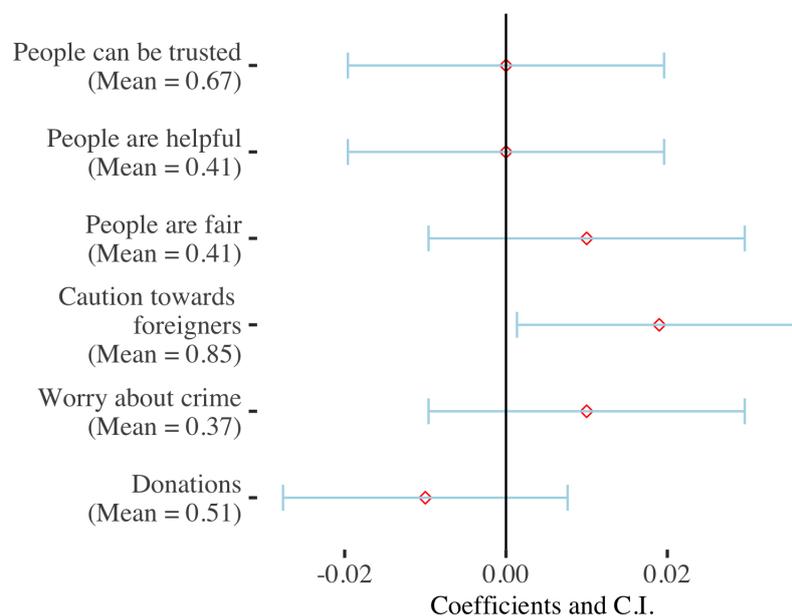


Figure 6: The Effect of the Inflow of Refugees and Asylum Seekers on Individual Attitudes

*Notes:* This graph displays the point estimates and 95% confidence intervals for the difference-in-difference effect  $\beta$  in Equation (2). Each outcome is a binary indicator that equals unity if a respondent agrees to a given statement. Each estimate is the result of a separate regression of the indicators listed on the left on the interaction of the refugee inflow in a respondent’s county of residence and an indicator for the post-2014 period. A coefficient of 0.01 means that a doubling of the number of asylum seekers in a county increases the likelihood that a respondent agrees to a statement by one percentage point. The sample means are displayed in parentheses. Standard errors are clustered at the county level.

## 5.2 Effects on Anti-Immigrant Violence

In a second step, we analyze whether the inflow of refugees and asylum seekers in Germany in 2015/16 affected anti-immigrant violence. Figure 7 displays the estimates of the flexible difference-in-difference model in Equation (3). The outcome is the number of violent anti-immigrant incidents per 100,000 inhabitants per month. We regress this outcome on the increase in the number of asylum

seekers in a county between 2014 and 2016, interacted with month dummies.

The coefficients before 2015 can be seen as placebo tests, as they reflect the effect of an increase in the number of asylum seekers on violence *before* the inflow actually happened. Reassuringly, all coefficients are close to zero and statistically insignificant, which suggests that counties with high vs. low inflows of asylum seekers had similar trends in anti-immigrant violence before the inflow. These tests corroborate the parallel trends assumption: given that the trends in violence were similar before the inflow, it appears reasonable that the trends would have continued in the same way had it not been for the inflow of asylum seekers.

The estimates after the inflow suggest that the inflow led to an increase in anti-immigrant violence. Throughout 2016 – and, thus, after the Cologne New Year’s Eve events – the point estimates are consistently above zero, and they revert back to zero in mid-2017. The effects in 2016 are around 0.1, which means that a doubling of the number of asylum seekers in 2015 leads to 0.1 more attack in a county per month per 100,000 inhabitants, or a bit more than one attack per year. This is a considerable effect, given that the median county experiences 5.6 incidents per 100,000 inhabitants per year.

Although the results in Figure 7 are compelling, a potential drawback of the underlying econometric model is its low statistical power. The underlying regression requires the estimation of close to 50 coefficients. To gain statistical power, and to estimate the average effect after the inflow, we estimate a more restrictive difference-in-difference model similar to the one in Equation (3). Panel A of Table D.4 reports the estimates for the coefficient of the interaction between the increase in the number of asylum seekers and a dummy for the period post-2014. Our estimates indicate that doubling the number of asylum seekers in a county leads to 0.05 violent anti-immigrant events per 100,000 inhabitants per month. Considering that the average monthly number of violent anti-immigrant events by county is 0.17 every 100,000 inhabitants, our estimated effect represents an increase by around 30% of the mean. The estimates are robust to the inclusion of county and date fixed effects, as well as of county-specific time trends.

A study by Jäckle and König (2017) documents significant geographic spillovers of anti-immigrant violence using the same data. In areas with a strong far-right voter base, they find a high degree of contagion of events. However, our estimates are not significantly affected by contagion. In Table D.4, we include a spatial lag term in the analysis. Although the coefficient of the spatial lag is significant, the direct effect of the inflow on anti-immigrant violence remains unchanged.

In Table D.5, we estimate separate effects in counties with different prior employment rates and vote shares for the far-right party AfD. A county is considered to have high employment if its employment rate in 2011 was above the median. Likewise, it is considered to have a high vote share for the AfD if the vote share in the 2013 federal election was above the median. The results show that the effect is considerably stronger in counties with low employment rates and strong support for the far-right.

We also test whether our results are sensitive to the choice of treatment measure. Figure D.7 shows the estimates from our flexible difference-in-differences equation using the change in refugees per capita to measure treatment intensity. While the change after 2015 is less evident, the graph still suggests a clear increase in anti-refugee violence – especially after January 2016.

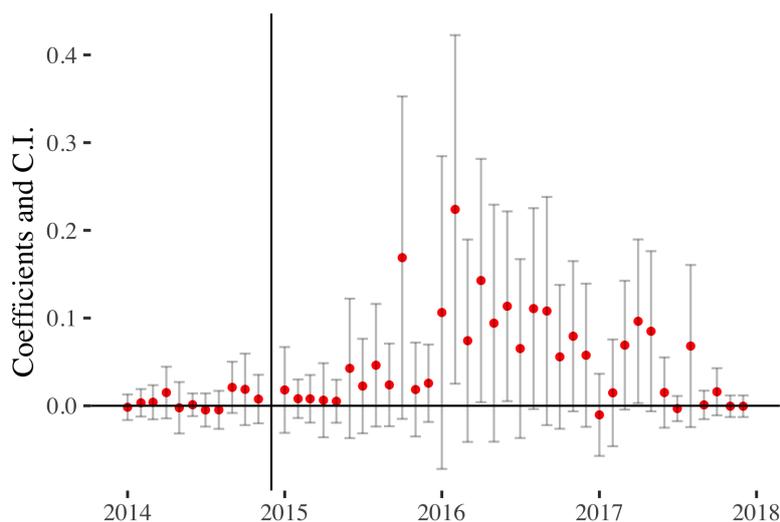


Figure 7: Flexible DD estimation: Anti-immigrant violence

*Notes:* This graph displays the point estimates and 95% confidence intervals based on the flexible difference-in-difference regression in Equation (3). The outcome is the number of violent anti-immigrant incidents per county per month per 100,000 inhabitants. The treatment is the increase in the number of asylum seekers between 2014 and 2016. The base period is December 2014. Standard errors are clustered at the county level.

At first glance, the result that an inflow of refugees leads to more anti-immigrant attacks may appear tautological: the more potential targets there are, the more anti-immigrant violence one would expect. However, there are several reasons why this effect is not mechanical. First, as shown in Figure 5 the growth in anti-immigrant violence was disproportionate compared to the growth in the number of asylum seekers. Monthly numbers of violent events reach their peak at the start of 2016, when they are 20 times more frequent than in January 2014. On the contrary, the number of monthly asylum applications never grows above 6 times its initial value. Moreover, the number of refugees increased to a similar extent in areas with high or low employment rates, or with high or low vote shares for the extreme right. If the effect was mechanical, we would expect the same effect regardless of the employment rate or political preferences. Finally, in Figure D.8 we carry out a non-linear difference-in-difference analysis, which reveals that the effect is concentrated in the 10% counties with the highest inflows in Germany, which is inconsistent with a mechanical effect.

### 5.3 Key findings

Our findings from Sections 5.1 and 5.2 can be summarized as follows. We find no evidence that the inflow of over one million refugees and asylum seekers affected social attitudes and perceptions such as trust, perceived fairness, attitudes towards foreigners, or economic concerns. We also find no evidence within relevant sub-groups: refugee inflows did not differentially change attitudes in areas with high or low employment, and in areas with a high or low vote shares of right-wing populist parties. However, we do find an effect on a more extreme expression of anti-immigrant sentiment, namely anti-immigrant violence. Among areas that had similar levels of anti-immigrant violence

before 2015, we see a disproportionate increase in violence after 2015 in places with many asylum seekers. This effect is stronger in places with low employment levels and a high share of right-wing voters.

The results on individual attitudes are consistent with the findings in previous studies on migration and social cohesion. The burgeoning literature on ethnic diversity and social attitudes – summarized in Section 3.2 – has produced mixed results; some studies find that greater ethnic diversity undermines social trust, whereas others find no effect. Similarly, the effects of forced migration on various economic outcomes in the host countries have been found to be small. Verme and Schuettler (2021) perform a meta-analysis of published papers on the economic effects of forced migration in the host countries. The majority of results regarding wages, employment and rents are insignificant. If anything, there is a small positive effect on rents and a small negative effect on household welfare. Against this backdrop, it is perhaps not surprising that we do not find significant effects on social attitudes.

Another reason for the small and insignificant effects is the salience of the local presence of asylum seekers. Although the inflow of asylum seekers dominated the national media in 2015/16, it is unclear whether a change in the *local* number of asylum seekers in a county was noticed by most people. In other contexts, where the local presence of asylum seekers is more salient, effects on individual attitudes are more likely. An example for such a context is given by Hangartner et al. (2019), who study the effect of exposure to refugee flows on Greek islands. On islands that are close to transit routes for refugees, they document a significant surge in anti-immigrant attitudes.

Our second key finding is that the local presence of asylum seekers led to an increase in anti-immigrant violence, in particular attacks on immigrant accommodation. This result suggests that the local presence of asylum seekers *does* trigger negative reactions. In particular, the effect is stronger in areas with lower employment rates and higher vote shares for right-wing populist parties. Overall, our findings suggest that, while the population at large does not react to the presence of asylum seekers, a small segment of the population shows extreme reactions. These findings are consistent with other studies on anti-immigrant violence, for example Entorf and Lange (2019) and Frey (2020), who show that the largest increases in anti-immigrant violence can be observed in places with a low initial number of asylum seekers and low levels of hate crime before the inflow.

Our results are related to those of Steinmayr (2021), who studies the effect of the same flow of migrants on right-wing voting in Upper Austria, a region bordering Germany. The study finds diverging effects of the refugee inflow depending on the intensity of interactions between refugees and locals. In areas from where most migrants moved on to Germany – and thus only had limited interaction with locals – the presence of refugees led to an increase in the right-wing vote share. In areas where refugees were hosted for longer periods – and thus, interactions were more frequent – the presence of refugees led to lower vote shares for the far right. This evidence supports the contact hypothesis, namely that interaction between different groups reduces adversity. Our results on individual attitudes point in the same direction as those in Steinmayr (2021). For most refugees of that wave, Germany was the final destination, which means that refugees often stayed in their area within Germany for several years. We do not find large effects of this inflow on social attitudes, which is in line with the absence of strong effects on far-right voting in Austria. At the same time,

our results differ from those in Austria when it comes to hate crimes. There we find significant effects of the refugee inflow. A potential factor driving the difference in results is the economic and social composition of Germany versus Upper Austria. The effects in Germany are concentrated in areas with high deprivation, mainly in East Germany, which do not compare economically and socially to Upper Austria.

#### **5.4 Relation to Other Recent Findings on Forced Displacement and Social Cohesion**

Our findings complement those of several recent studies on Forced Displacement and Social Cohesion. Aksoy and Ginn (2022) carry out an analysis that is similar to ours. Based on survey data from 14 countries, they find virtually no effect of the local presence of refugees on the attitudes of natives. This is consistent with our findings based on high-quality panel data in Germany. This study suggests that refugee inflows of the magnitude we have seen in recent years do not fundamentally change the social fabric of host countries. Complementary evidence is also provided for three East African countries in Betts et al. (2022). The authors show that the interaction between natives and refugees has no significant impact on attitudes towards refugees in the host population. However, there is a positive correlation between the ethnolinguistic proximity between the refugee and host population. This result highlights a gap in the literature: not only is the evidence on migration and social cohesion mixed, but we also lack knowledge of the underlying transmission mechanisms. Does immigration affect social cohesion through the local presence of migrants, through the media, or through other channels?

Our evidence on anti-immigrant violence suggests that the effect of refugee inflows on social cohesion is not uniformly zero in the population. It is rather the case that refugee inflows affect the behavior of certain groups. This evidence is consistent with the results for Sub-Saharan Africa in Coniglio et al. (2022). The authors show that the establishment of a refugee camp increases the likelihood of an armed conflict and the frequency of protests in an area. Similar to our findings on anti-immigrant violence in Germany, the authors show that the effect on conflict wanes after two years. This suggests that the effect of refugee inflows on violence or conflict is rather short-lived. Another study on East Africa by Zhou et al. (2022) paints a more optimistic picture. Using data from Uganda – one of the major host countries in Africa – the authors show that the inflow of refugees from South Sudan led to a significant improvement in local economic development and the provision of public goods such as schools and health clinics. However, these positive effects did not translate into more favorable attitudes towards immigrants.

Finally, our paper relates to work by Müller et al. (2022) on Switzerland and Murard (2022) on Greece. Both papers highlight the importance of taking a long-run perspective. While our study can only analyse short-run effects, it is important to re-evaluate the consequences of the 2015 inflow in Germany in years if not decades to come. The study on Switzerland exploits the random assignment of refugees to cantons and documents a variety of effects over a 20-year period. The most important ones are that a high unemployment rate at arrival slows down the labor market integration of refugees, whereas more hostile attitudes among the host country population accelerate the integration. It remains to be seen whether similar effects emerge among recently arrived asylum seekers in Germany. Murard (2022) provides an optimistic picture on the long-run effects of forced

displacement. The author studies the arrival of Greeks who were displaced from Turkey and moved to Greece in the 1920s. Linking data over generations, he shows that descendants of the displaced people have greater upward mobility than the descendants of the host population. Moreover, descendants of the displaced people show greater political and civic engagement. Although both inflows are not fully comparable – the forced migration of Greeks to Greece is different from the migration of people from Syria or Afghanistan to Germany – the Greek example offers hope for the success of future generations of forced migrants, and should motivate researchers to take an intergenerational perspective on forced migration.

## 6 Policy and Program Implications

In this paper, we studied how the sudden inflow of one million refugees and asylum seekers shaped social attitudes and anti-immigrant violence in Germany. Overall, our findings suggest that social cohesion – and in particular social trust – remained unaffected by the sudden arrival of such a large number of refugees, despite large ethnic and cultural differences between the asylum seekers and the German population. Although we observe a decrease in out-group trust, the effect seems negligible when compared to the size of the refugee inflow. However, the inflow of foreigners sparked a violent backlash from certain groups of the population. In particular, we observe a substantial growth in violent events directed at refugees that suggests that segments of the German population strongly intensified their xenophobic behavior.

These findings have several implications for policymakers. In light of the (non-)effects on trust and other social attitudes, the often-expressed fear that large inflows of refugees and asylum seekers undermine the foundations of the host societies appears unfounded – at least in the short term. This insight is important for the design of future refugee policies. According to the UNHCR (2018), the majority of refugees are currently hosted by low- and middle-income countries. A fairer distribution of refugees – one of the goals of the UNHCR's *Global Compact on Refugees* – inevitably requires high-income countries to host more refugees. The fact that the sudden doubling of the number of refugees only marginally affected social attitudes suggests that high-income countries can handle large refugee inflows without jeopardizing social cohesion.

However, large immigration inflows can have a negative effect on attitudes towards out-groups, as proxied by survey responses on the need to be cautious when interacting with foreigners. While our estimates suggest that such an effect is small, decision makers and civil society actors should focus on promoting policies that can foster inclusiveness and empathy with immigrants. For instance, Williamson et al. (2021), Adida et al. (2018) and Dinas et al. (2021) show that perspective-taking interventions – such as priming family immigration stories among natives – have been shown to increase support for refugees and inclusiveness in the United States and Europe. Audette et al. (2021) further show that narratives that highlight specific aspects of the experience of refugees in Kenya – such as the hardships faced and their shared opposition to terrorism – have positive effects on intergroup and policy attitudes.

At the same time, our results show that large refugee inflows can trigger violent reactions from parts of the host society. Violence against refugees in Germany grew five-fold in the period we

consider, which is considerably larger than the growth in the number of asylum seekers. Such rapid increase in violence was not uniform across the country. Violent events increased more than proportionally to the number of refugees assigned to each county, suggesting that larger assignments of refugees are particularly prone to causing explosive backlashes. Moreover, counties with previous low employment rates and high support for far-right parties exhibited much stronger reactions to the arrival of refugees. Finally, our estimates suggest that what triggered the surge in violence was the rapid growth in the *refugee population*, rather than in the number of refugees per capita.

Where refugees and asylum seekers are resettled has substantial consequences. While the current assignment rules – mostly proportional to the local population – may be perceived as fair, they are likely not welfare maximizing. Our results add to a growing literature suggesting that data-driven policies based on the characteristics of assignment locations could vastly increase social welfare gains, foster integration and reduce risks for migrants. Based on our estimates, assigning proportionally more refugees to counties with strong labor markets and low support for far-right parties, while avoiding the most extreme county-level inflows<sup>6</sup> observed in Germany between 2014 and 2016, would have substantially decreased hate crimes. Similarly, Bansak et al. (2018) study resettlements in the United States and Switzerland and conclude that data-driven matching between refugee and resettlement location characteristics could lead to substantial improvements in refugees' employment outcomes. Moreover, Ziller and Goodman (2020) consider the same context analyzed here and conclude that the assignment of refugees to communities where local government efficiency is high was less likely to lead to violent reactions. International organizations and NGOs, in particular, could play a fundamental role supporting governments in the design of such data-driven policies through data collection and context-based expertise.

However, designing optimal assignment and resettlement policies for asylum seekers and refugees is certainly not enough. A successful strategy to combat xenophobia and foster migrant integration needs targeted policies and community-based interventions, specifically designed considering local contexts and the stakeholders' perspectives. UNHCR's experience in South Africa shows that programs to fight xenophobia need the participation of and coordination among different actors – national and local authorities, international organisations, civil society, independent analysts – as well as evidence-based strategies (Misago et al., 2015). The International Organization for Migration (IOM), on the other hand, analyses responses to xenophobia in the context of the COVID-19 pandemic and finds that local policies based on the idea of "social mixing" – often relying on non-traditional actors<sup>7</sup> – can have positive effects on individuals with little or no previous association with migrants.<sup>8</sup> As part of broader media campaigns against xenophobia, place-based interventions such as community radio programming can also be useful to promote grassroots narratives that favour inclusiveness and migrant integration, as shown by Muswede (2015). More generally, interventions aiming at increasing migrants' outcomes in the labour market, as well as economic independence, have been proven to be a valuable element of broader strategies to protect social cohesion and foster inclusiveness<sup>9</sup>.

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<sup>6</sup>Our analysis shows that counties where the refugee population grew by more than 1.8 times during the period exhibited more-than-proportional increases in violence.

<sup>7</sup>Such actors include sports associations, public libraries, foundations and members of the private sector, among others.

<sup>8</sup>*Countering xenophobia and stigma to foster social cohesion in the COVID-19 response and recovery*, IOM, 14 July 2020.

<sup>9</sup>See, for instance, some of the projects carried out by UNDP, UNHCR and IOM in Turkey: <https://globalcompactrefugees.org/article/resilience-building-syrian-refugees-turkey> and

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<https://www.iom.int/news/new-social-cohesion-initiative-promote-inclusive-migration-management-turkey>.

## References

- Abascal, M. and Baldassarri, D. (2015). Love Thy Neighbor? Ethnoracial Diversity and Trust Reexamined. *AJS; American journal of sociology* 121: 722–782, doi:10.1086/683144.
- Adida, C. L., Lo, A. and Platas, M. R. (2018). Perspective taking can promote short-term inclusionary behavior toward Syrian refugees. *Proceedings of the National Academy of Sciences* 115: 9521–9526, doi:10.1073/pnas.1804002115.
- AIDA (2015). Country Report: Germany. Tech. rep., Asylum Information Database (AIDA).
- Aksoy, C. G. and Ginn, T. (2022). How Does Arrival and Presence of Refugees Affect Host Community Attitudes towards Refugees and Refugee-Related Policy? Tech. rep., World Bank Group, Washington, DC.
- Aksoy, C. G., Poutvaara, P. and Schikora, F. (2020). First Time Around: Local Conditions and Multi-Dimensional Integration of Refugees. Tech. Rep. 2024, Centre for Research and Analysis of Migration (CReAM), Department of Economics, University College London.
- Alesina, A., Baqir, R. and Easterly, W. (1999). Public Goods and Ethnic Divisions. *The Quarterly Journal of Economics* 114: 1243–1284, doi:10.1162/003355399556269.
- Alesina, A. and Glaeser, E. (2004). *Fighting Poverty in the US and Europe: A World of Difference*. Oxford University Press.
- Allport, G. W. (1954). *The Nature of Prejudice*. Garden City: NY: Anchor.
- Altındağ, O., Bakış, O. and Rozo, S. V. (2020). Blessing or burden? Impacts of refugees on businesses and the informal economy. *Journal of Development Economics* 146: 102490, doi:10.1016/j.jdeveco.2020.102490.
- Altindag, O. and Kaushal, N. (2021). Do refugees impact voting behavior in the host country? Evidence from Syrian refugee inflows to Turkey. *Public Choice* 186: 149–178.
- Anderson, C. J. and Paskeviciute, A. (2006). How Ethnic and Linguistic Heterogeneity Influence the Prospects for Civil Society: A Comparative Study of Citizenship Behavior. *Journal of Politics* 68: 783–802, doi:10.1111/j.1468-2508.2006.00470.x.
- Anil, M. (2006). The New German Citizenship Law and Its Impact on German Demographics: Research Notes. *Population Research and Policy Review* 25: 443–463.
- Audette, N., Horowitz, J. and Michelitch, K. (2021). Personal Narratives Reduce Negative Attitudes toward Refugees and Immigrant Outgroups: Evidence from Kenya. *Dartmouth College mimeo*.
- Avdeenko, A. and Gilligan, M. J. (2015). International Interventions to Build Social Capital: Evidence from a Field Experiment in Sudan. *American Political Science Review* 109: 427–449, doi:10.1017/S0003055415000210.
- Bade, K. J. and Oltmer, J. (2004). Migration, Ausländerbeschäftigung und Asylpolitik in der DDR. In *Normalfall Migration, ZeitBilder*. Bundeszentrale für politische Bildung, 15, 90–96.
- Balkan, B. and Tumen, S. (2016). Immigration and prices: Quasi-experimental evidence from Syrian refugees in Turkey. *Journal of Population Economics* 29: 657–686, doi:10.1007/s00148-016-0583-2.
- BAMF (2017). Bundesamt in Zahlen 2016: Asyl, Migration Und Integration. Tech. rep., Bundesamt für Migration und Flüchtlinge.

- BAMF (2019a). Migrationsbericht Der Bundesregierung 2016/17. Tech. rep., Bundesamt für Migration und Flüchtlinge; Bundesministerium des Innern.
- BAMF (2019b). The Stages of the Asylum Procedure. <https://www.BAMF.de/EN/Themen/AsylFluechtlingsschutz/node.html>.
- Bansak, K., Ferwerda, J., Hainmueller, J., Dillon, A., Hangartner, D., Lawrence, D. and Weinstein, J. (2018). Improving refugee integration through data-driven algorithmic assignment. *Science* 359: 325–329, doi:10.1126/science.aao4408.
- Bansak, K., Hainmueller, J. and Hangartner, D. (2016). How economic, humanitarian, and religious concerns shape European attitudes toward asylum seekers. *Science* 354: 217–222, doi:10.1126/science.aag2147.
- BBSR (2017). Integration von Flüchtlingen in Den Regulären Wohnungsmarkt. Tech. rep., Bundesinstitut für Bau-, Stadt- und Raumforschung.
- Becker, S. O. and Ferrara, A. (2019). Consequences of forced migration: A survey of recent findings. *Labour Economics* 59: 1–16, doi:10.1016/j.labeco.2019.02.007.
- Benček, D. and Strasheim, J. (2016). Refugees welcome? A dataset on anti-refugee violence in Germany. *Research & Politics* doi:10.1177/2053168016679590.
- Bennhold, K. and Vancon, L. (2019). Germany Has Been Unified for 30 Years. Its Identity Still Is Not. *The New York Times* .
- Betts, A., Stierna, M. F., Omata, N. and Sterck, O. (2022). How Does Intergroup Interaction between Refugees and Hosts Affect Host Community Attitudes towards Refugees? Tech. rep., World Bank Group, Washington, DC.
- Blumer, H. (1958). Race Prejudice as a Sense of Group Position. *The Pacific Sociological Review* 1: 3–7, doi:10.2307/1388607.
- Bobo, L. and Hutchings, V. L. (1996). Perceptions of Racial Group Competition: Extending Blumer’s Theory of Group Position to a Multiracial Social Context. *American Sociological Review* 61: 951–972, doi:10.2307/2096302.
- Bredtmann, J. (2020). Immigration and Electoral Outcomes: Evidence from the 2015 Refugee Inflow to Germany. Working Paper 886, Ruhr Economic Papers, doi:10.4419/96973025.
- Brell, C., Dustmann, C. and Preston, I. (2020). The Labor Market Integration of Refugee Migrants in High-Income Countries. *Journal of Economic Perspectives* 34: 94–121, doi:10.1257/jep.34.1.94.
- Brücker, H., Kosyakova, Y. and Schuss, E. (2020). Integration in Arbeitsmarkt und Bildungssystem macht weitere Fortschritte. *IAB Kurzbericht* 4/2020.
- Brücker, H., Rother, N., Schupp, J., Babka von Gostomski, C., Böhm, A., Fendel, T., Friedrich, M., Giesselmann, M., Kosyakova, Y., Kroh, M., Kühne, S., Liebau, E., Richter, D., Romiti, A., Schacht, D., Scheible, J. A., Schmelzer, P., Siegert, M., Sirries, S., Trübswetter, P. and Vallizadeh, E. (2016). *IAB-BAMF-SOEP-Befragung von Geflüchteten: Flucht, Ankunft in Deutschland und erste Schritte der Integration*, BAMF-Kurzanalyse 5-2016. Nürnberg: Bundesamt für Migration und Flüchtlinge (BAMF) Forschungszentrum Migration, Integration und Asyl (FZ).
- Coniglio, N. D., Peragine, V. and Vurchio, D. (2022). What Explains the Heterogeneous Location Patterns of Hosting Camps across Countries and the Economic Settings in Which Refugee Camps Are Situated? How Does Refugee Camps’ Locations and Characteristics Affect Social Conflicts? Tech. rep., World Bank Group, Washington, DC.

- Cooley, C. H. (1909). *Social Organization: A Study of the Larger Mind*. New York: Charles Scribner's Sons.
- Czymara, C. S. and Schmidt-Catran, A. W. (2017). Refugees Unwelcome? Changes in the Public Acceptance of Immigrants and Refugees in Germany in the Course of Europe's 'Immigration Crisis'. *European Sociological Review* 33: 735–751, doi:10.1093/esr/jcx071.
- Dehos, F. T. (2021). The refugee wave to Germany and its impact on crime. *Regional Science and Urban Economics* 88: 103640, doi:10.1016/j.regsciurbeco.2020.103640.
- Del Carpio, X. V. and Wagner, M. C. (2015). The Impact of Syrian Refugees on the Turkish Labor Market. SSRN Scholarly Paper ID 2650218, Social Science Research Network, Rochester, NY.
- Delhey, J. and Newton, K. (2005). Predicting Cross-National Levels of Social Trust: Global Pattern or Nordic Exceptionalism? *European Sociological Review* 21: 311–327, doi:10.1093/esr/jci022.
- Deole, S. S., Huang, Y. and Sauer, R. M. (2020). How do new immigration flows affect existing immigrants? Evidence from the refugee crisis in Germany. In *Encyclopedia of Global Migration*. World Scientific.
- Deutsche Welle (2017). Two years since Germany opened its borders to refugees: A chronology — DW — 04.09.2017. <https://www.dw.com/en/two-years-since-germany-opened-its-borders-to-refugees-a-chronology/a-40327634>.
- Deutsche Welle (2020a). Five years on: How Germany's refugee policy has fared — DW — 25.08.2020. <https://www.dw.com/en/five-years-on-how-germanys-refugee-policy-has-fared/a-54660166>.
- Deutsche Welle (2020b). New Year's Eve in Cologne: 5 years after the mass assaults. <https://www.dw.com/en/new-years-eve-in-cologne-5-years-after-the-mass-assaults/a-56073007>.
- Dinas, E., Fouka, V. and Schläpfer, A. (2021). Family History and Attitudes toward Out-Groups: Evidence from the European Refugee Crisis. *The Journal of Politics* 83: 647–661, doi:10.1086/710016.
- Dinesen, P. T. and Sønderskov, K. M. (2015). Ethnic Diversity and Social Trust: Evidence from the Micro-Context. *American Sociological Review* 80: 550–573, doi:10.1177/0003122415577989.
- Dinesen, P. T. and Sønderskov, K. M. (2018). Ethnic Diversity and Social Trust: A Critical Review of the Literature and Suggestions for a New Research Agenda. In Uslaner, E. M. (ed.), *Oxford Handbook of Social and Political Trust*. Oxford University Press, 175–204.
- Durkheim, E. (1897). *Le Suicide: Etude de Sociologie*. New York: F. Alcan.
- Easterly, W., Ritzen, J. and Woolcock, M. (2006). Social Cohesion, Institutions, and Growth. *Economics & Politics* 18: 103–120, doi:10.1111/j.1468-0343.2006.00165.x.
- Elsner, B. and Concannon, J. (2021). Immigration and Redistribution. In Sauer, R. M. (ed.), *Encyclopedia of Global Migration*. World Scientific, 50.
- Entorf, H. and Lange, M. (2019). Refugees Welcome? Understanding the Regional Heterogeneity of Anti-Foreigner Hate Crimes in Germany. Tech. Rep. 12229, Institute of Labor Economics (IZA).
- Fasani, F., Frattini, T. and Minale, L. (2021). Lift the Ban? Initial Employment Restrictions and Refugee Labour Market Outcomes. *Journal of the European Economic Association* forthcoming.
- Feld, L., Doerr, A., Hirsch, P. and Sajons, C. (2017). Zuwanderung nach Deutschland von 1945 bis heute. In *Malteser Migrationsbericht*.

- Festinger, L., Schachter, S. and Back, K. (1950). *Social Pressures in Informal Groups; a Study of Human Factors in Housing*. Oxford, England: Harper.
- Freud, S. (1921). *Massenpsychologie Und Ich-Analyse*. Wien: Internationaler Psychoanalytischer Verlag.
- Frey, A. (2020). 'Cologne Changed Everything'—The Effect of Threatening Events on the Frequency and Distribution of Intergroup Conflict in Germany. *European Sociological Review* 36: 684–699, doi:10.1093/esr/jcaa007.
- Gedmin, J. (2019). Right-wing populism in Germany: Muslims and minorities after the 2015 refugee crisis.
- Gehrsitz, M. and Ungerer, M. (2017). Jobs, Crime, and Votes: A Short-Run Evaluation of the Refugee Crisis in Germany. Tech. Rep. 10494, Institute of Labor Economics (IZA).
- Gereke, J., Schaub, M. and Baldassarri, D. (2018). Ethnic diversity, poverty and social trust in Germany: Evidence from a behavioral measure of trust. *PLoS ONE* 13, doi:10.1371/journal.pone.0199834.
- Gijsberts, M., van der Meer, T. and Dagevos, J. (2012). 'Hunkering Down' in Multi-Ethnic Neighbourhoods? The Effects of Ethnic Diversity on Dimensions of Social Cohesion. *European Sociological Review* 28: 527–537, doi:10.1093/esr/jcr022.
- Goebel, J., Grabka, M. M., Liebig, S., Kroh, M., Richter, D., Schröder, C. and Schupp, J. (2019). The German Socio-Economic Panel (SOEP). *Jahrbücher für Nationalökonomie und Statistik* 239: 345–360, doi:10.1515/jbnst-2018-0022.
- Granovetter, M. S. (1973). The Strength of Weak Ties. *American Journal of Sociology* 78: 1360–1380.
- Hangartner, D., Dinas, E., Marbach, M., Matakos, K. and Xefteris, D. (2019). Does Exposure to the Refugee Crisis Make Natives More Hostile? *American Political Science Review* 113: 442–455, doi:10.1017/S0003055418000813.
- Hayo, B. and Neumeier, F. (2020). Between Fear Mongers and Samaritans: Does Information Provision Affect Attitudes Towards the Right of Asylum in Germany? SSRN Scholarly Paper ID 3644301, Social Science Research Network, Rochester, NY, doi:10.2139/ssrn.3644301.
- Hennig, J. (2021). Neighborhood quality and opposition to immigration: Evidence from German refugee shelters. *Journal of Development Economics* 150: 102604, doi:10.1016/j.jdeveco.2020.102604.
- Huang, Y. and Kvasnicka, M. (2019). Immigration and Crimes Against Natives: The 2015 Refugee Crisis in Germany. SSRN Scholarly Paper ID 3427607, Social Science Research Network, Rochester, NY.
- Jäckle, S. and König, P. D. (2017). The dark side of the German 'welcome culture': Investigating the causes behind attacks on refugees in 2015. *West European Politics* 40: 223–251, doi:10.1080/01402382.2016.1215614.
- Jäckle, S. and König, P. D. (2018). Threatening Events and Anti-Refugee Violence: An Empirical Analysis in the Wake of the Refugee Crisis during the Years 2015 and 2016 in Germany. *European Sociological Review* 34: 728–743, doi:10.1093/esr/jcy038.
- Jenson, J. (2010). *Defining and Measuring Social Cohesion*. Commonwealth Secretariat.
- Kim, J., Sheely, R. and Schmidt, C. (2020). Social Capital and Social Cohesion Measurement Toolkit for Community-Driven Development Operations. Tech. rep., Mercy Corps.

- King, E., Samii, C. and Snilstveit, B. (2010). Interventions to promote social cohesion in sub-Saharan Africa. *Journal of Development Effectiveness* 2: 336–370, doi:10.1080/17449057.2010.504552.
- Kirişci, K. (2021). As EU-Turkey Migration Agreement Reaches the Five-year mark, add a Job Creation Element. <https://www.brookings.edu/blog/order-from-chaos/2021/03/17/as-eu-turkey-migration-agreement-reaches-the-five-year-mark-add-a-job-creation-element/>.
- Kossert, A. (2009). *Kalte Heimat*. Penguin Random House.
- Kürschner Rauck, K. (2020). "Not in My Backyard!" The 2015 Refugee Crisis in Germany by Kathleen Kürschner Rauck :: SSRN. SSRN Scholarly Paper ID 3697189, Social Science Research Network, Rochester, NY, doi:10.2139/ssrn.3697189.
- Kürschner Rauck, K. and Kvasnicka, M. (2018). The 2015 European Refugee Crisis and Residential Housing Rents in Germany. Tech. Rep. 12047, Institute of Labor Economics (IZA).
- Kurthen, H. (1995). Germany at the Crossroads: National Identity and the Challenges of Immigration. *The International Migration Review* 29: 914–938, doi:10.2307/2547732.
- Laurence, J. and Bentley, L. (2016). Does Ethnic Diversity Have a Negative Effect on Attitudes towards the Community? A Longitudinal Analysis of the Causal Claims within the Ethnic Diversity and Social Cohesion Debate. *European Sociological Review* 32: 54–67, doi:10.1093/esr/jcv081.
- Liebe, U., Meyerhoff, J., Kroesen, M., Chorus, C. and Glenk, K. (2018). From welcome culture to welcome limits? Uncovering preference changes over time for sheltering refugees in Germany. *PLOS ONE* 13: e0199923, doi:10.1371/journal.pone.0199923.
- Mader, M. and Schoen, H. (2019). The European refugee crisis, party competition, and voters' responses in Germany. *West European Politics* 42: 67–90, doi:10.1080/01402382.2018.1490484.
- Marbach, M., Hainmueller, J. and Hangartner, D. (2018). The long-term impact of employment bans on the economic integration of refugees. *Science Advances* 4.
- McPherson, M., Smith-Lovin, L. and Cook, J. M. (2001). Birds of a Feather: Homophily in Social Networks. *Annual Review of Sociology* 27: 415–444, doi:10.1146/annurev.soc.27.1.415.
- Misago, J.-P., Freemantle, I. and Landau, L. (2015). Protection from Xenophobia: An Evaluation of UNHCR's Regional Office for Southern Africa's Xenophobia Related Programmes. Tech. rep., UNHCR.
- Molina, E., Carella, L., Pacheco, A., Cruces, G. and Gasparini, L. (2017). Community monitoring interventions to curb corruption and increase access and quality in service delivery: A systematic review. *Journal of Development Effectiveness* 9: 462–499, doi:10.1080/19439342.2017.1378243.
- Müller, T., Pannatier, P. and Viarengo, M. (2022). How Does Forced Displacement Affect the Equality of Opportunities and Inequalities in Labor-Market Outcomes for Displaced People and Their Hosts? How Does It Vary by Gender, Socio-Demographic Characteristics and Displaced People's Country of Origin? Tech. rep., World Bank Group, Washington, DC.
- Murard, E. (2022). What Are the Long-Term Effects of the 1923 Mass Refugee Inflow on Today's Social Cohesion in Greece? Tech. rep., World Bank Group, Washington, DC.
- Muswede, T. (2015). Approaches to "Xenophobia" Interventions in Africa: Common Narratives through Community Radio in South Africa 11: 220–231.

- Oltmer, J., Kreienbrink, A. and Sanz Díaz, C. (eds) (2012). *Das "Gastarbeiter"-System: Arbeitsmigration und ihre Folgen in der Bundesrepublik Deutschland*. Oldenbourg Wissenschaftsverlag.
- Pautz, H. (2005). The politics of identity in Germany: The Leitkultur debate - Hartwig Pautz, 2005. *Race & Class* 46.
- Pettigrew, T. F. and Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology* 90: 751–783, doi:10.1037/0022-3514.90.5.751.
- Portes, A. and Vickstrom, E. (2011). Diversity, Social Capital, and Cohesion. *Annual Review of Sociology* 37: 461–479, doi:10.1146/annurev-soc-081309-150022.
- Putnam, R. D. (2007). E Pluribus Unum: Diversity and Community in the Twenty-first Century The 2006 Johan Skytte Prize Lecture. *Scandinavian Political Studies* 30: 137–174, doi:10.1111/j.1467-9477.2007.00176.x.
- Razin, A., Sadka, E. and Swagel, P. (2002). Tax burden and migration: A political economy theory and evidence. *Journal of Public Economics* 85: 167–190.
- Reuters (2018). Merkel ally defiant in row over Islam's place in Germany. *Reuters* .
- Schaeffer, M. (2014). Ethnic Diversity and Social Cohesion: Immigration, Ethnic Fractionalization and Potentials for Civic Action. <https://www.routledge.com/Ethnic-Diversity-and-Social-Cohesion-Immigration-Ethnic-Fractionalization/Schaeffer/p/book/9780367601027>.
- Schaub, M., Gereke, J. and Baldassarri, D. (2021). Strangers in Hostile Lands: Exposure to Refugees and Right-Wing Support in Germany's Eastern Regions. *Comparative Political Studies* 54: 686–717, doi:10.1177/0010414020957675.
- Scheepers, P., Gijsberts, M. and Coenders, M. (2002). Ethnic Exclusionism in European Countries. Public Opposition to Civil Rights for Legal Migrants as a Response to Perceived Ethnic Threat. *European Sociological Review* 18: 17–34, doi:10.1093/esr/18.1.17.
- Seyidov, I. (2021). Understanding Social Cohesion from the Perspective of the Host Community: Turkey Example. *Journal of Economy, Culture and Society* 0: 111–125, doi:10.26650/JECS2020-0061.
- Steinmayr, A. (2021). Contact versus Exposure: Refugee Presence and Voting for the Far-Right. *The Review of Economics and Statistics* : 310–327doi:10.1162/rest.a\_00922.
- Stichnoth, H. and Van der Straeten, K. (2013). Ethnic Diversity, Public Spending, and Individual Support for the Welfare State: A Review of the Empirical Literature. SSRN Scholarly Paper ID 2229648, Social Science Research Network, Rochester, NY, doi:10.1111/j.1467-6419.2011.00711.x.
- Stips, F. and Kis-Katos, K. (2020). The impact of co-national networks on asylum seekers' employment: Quasi-experimental evidence from Germany. *PLOS ONE* 15: e0236996, doi:10.1371/journal.pone.0236996.
- Thränhardt, D. (1995). Germany: An undeclared immigration country. *Journal of Ethnic and Migration Studies* 21: 19–35, doi:10.1080/1369183X.1995.9976470.
- Tumen, S. (2016). The Economic Impact of Syrian Refugees on Host Countries: Quasi-experimental Evidence from Turkey. *American Economic Review, Papers & Proceedings* 106: 456–460, doi:10.1257/aer.p20161065.
- Tumen, S. (2018). The Impact of Low-Skill Refugees on Youth Education. Working Paper 11869, IZA Discussion Papers.

- Tumen, S. (2019). Refugees and 'native flight' from public to private schools. *Economics Letters* 181: 154–159, doi:10.1016/j.econlet.2019.05.030.
- Tumen, S. (2021). The effect of refugees on native adolescents' test scores: Quasi-experimental evidence from PISA. *Journal of Development Economics* 150: 102633, doi:10.1016/j.jdeveco.2021.102633.
- UNHCR (2016). Global Trends - Forced Displacement in 2016. Tech. rep.
- UNHCR (2018). Global Compact on Refugees. Tech. rep., Office of the United Nations High Commissioner for Refugees (UNHCR).
- UNHCR (2020). Forced displacement passes 80 million by mid-2020 as COVID-19 tests refugee protection globally.
- UNHCR (2021). Syria Refugee Crisis – Globally, in Europe and in Cyprus.
- Van der Meer, T. and Tolsma, J. (2014). Ethnic Diversity and Its Effects on Social Cohesion. *Annual Review of Sociology* 40: 459–478, doi:10.1146/annurev-soc-071913-043309.
- Verme, P. and Schuettler, K. (2021). The impact of forced displacement on host communities: A review of the empirical literature in economics. *Journal of Development Economics* 150: 102606, doi:10.1016/j.jdeveco.2020.102606.
- WFP (2020). Social Cohesion in Turkey: Refugees and the Host Community. Tech. rep., World Food Programme Turkey Country Office.
- Williamson, S., Adida, C. L., Lo, A., Platas, M. R., Prather, L. and Werfel, S. H. (2021). Family Matters: How Immigrant Histories Can Promote Inclusion. *American Political Science Review* 115: 686–693, doi:10.1017/S0003055420001057.
- Worbs, S., Bund, E., Kohls, M. and Babka von Gostomski, C. (2013). (Spät-)Aussiedler in Deutschland: Eine Analyse Aktueller Daten Und Forschungsergebnisse. Tech. Rep. 20, Bundesamt für Migration und Flüchtlinge.
- Zhou, Y.-Y., Grossman, G. and Ge, S. (2022). Does Proximity to Refugee Communities Increase Access to Aid and Improve Public Service Delivery? If so, Does This Also Affect Voting Behavior and Electoral Outcomes in Host Communities? Tech. rep., World Bank Group, Washington, DC.
- Ziller, C. and Goodman, S. W. (2020). Local Government Efficiency and Anti-immigrant Violence. *The Journal of Politics* 82: 895–907, doi:10.1086/707399.

# Appendix

## A Data Appendix

### A.1 Survey Questions in the SOEP

Table A.1 summarizes the construction of the outcome variables based on the survey questions from the SOEP. In each of the years in Column (4), respondents are asked the survey question in Column (2) and presented the mutually exclusive answer options in Column (3). We use the answer options to create binary indicators, whereby for all questions except 5)), a value of one indicates an answer consistent with greater social cohesion. With the question about concerns 5), a value of one indicates that people are very concerned about crime. The classification of the binary indicators is shown in parentheses in Column (3).

Table A.1: Construction of Outcome Variabels in the SOEP

Variable Name (1)	Survey Question (2)	Answers (3)	Years (4)
1) People can be trusted	People can generally be trusted.	Disagree completely (0), Disagree (0), Agree slightly (1), Agree completely (1)	2003, 2005, 2013, 2018
2) People are helpful	Would you say that people usually...	People act in their own interest (0), People are helpful (1)	2003, 2005, 2013, 2018
3) People are fair	Do you believe that most people....	People exploit you (0), People are fair (1).	2003, 2005, 2013, 2018
4) Caution towards foreigners	When dealing with foreigners, it's better to be careful before trusting them.	Disagree completely (0), Disagree (0), Agree slightly (0), Agree completely (1)	2003, 2005, 2013, 2018
5) Worry about crime	How concerned are you about crime in Germany?	Not concerned at all (0), Somewhat concerned (0), Very concerned (1)	1994-2018
6) Donations	Did you donate money last year?	No (0), Yes (1)	2010, 2015, 2018

*Notes:* The table summarizes the construction of the outcome variables based on the SOEP survey questions. Column (3) reports the answer options that were given to the respondents. The numbers in parentheses indicate our classification of these answer options into a binary indicator. Column (4) reports the years in which each question was included in the survey.

## A.2 SOEP: Descriptive Statistics

Table A.2 displays the descriptive statistics for the estimation sample. For each outcome, the sample includes respondents who we observe in all four survey rounds (2003, 2008, 2013, 2018).<sup>10</sup> Each observation is a respondent-year combination for around 4,500 respondents over four survey rounds.

In the estimation sample, the number of asylum seekers in a respondent's county increased by a factor of 1.26, i.e. it more than doubled. All outcomes are binary indicators, as discussed in Appendix A.1. The shares of respondents agreeing to a statement vary across outcomes. The means of the outcomes are relevant as benchmarks for the estimated effects.

We also list the respondents' individual characteristics, although we do not use these variables in the estimation. In general, the SOEP is representative of the German population. However, the share of foreigners appears low, which is due to the fact that we only observe a person's nationality rather than their place of birth. If foreigners were counted as everyone who was born outside Germany to non-German parents, the share of foreigners would likely be higher.

Table A.2: SOEP - Descriptive Statistics

	Mean	SD	Min.	Max.	N
<i>Treatment:</i>					
Refugee inflow 2014-16, relative to 2014	1.26	.004	-.29	8.26	18,752
<i>Outcomes:</i>					
People can be trusted	.67	.47	0	1	18,704
People are helpful	.41	.49	0	1	18,492
People are fair	.41	.49	0	1	18,450
Caution towards foreigners	.85	.34	0	1	18,700
Worry about crime	.37	.38	0	1	18,705
Donations	.51	.49	0	1	24,191
<i>Individual characteristics:</i>					
Male	.46	.49	0	1	18,752
Age	54	14.8	17	101	18,752
Foreigner	.04	.20	0	1	18,752
Single	.14	.34	0	1	18,692
Gross labour income	2949	2998	0	10,000	18,752
Not in employment	.39	.48	0	1	18,752
Years in education	12.6	2.7	7	18	18,752

*Notes:* This Table provides summary statistics on the SOEP dataset. We only include data from 2003, 2008, 2013 and 2018, and exclude individuals who do not appear in all four years. The only exception is for the variable *Donations*, for which we use observations from 2010, 2015 and 2018. Gross labor income is measured in Euro per month. The variable *Foreigner* equals unity if a person was born outside Germany to non-German parents.

## A.3 Correlation Assignment vs. Economic Variables

Figure A.1 displays the correlation between the percentage increase in the number of asylum seekers between 2014 and 2016 and the local unemployment rate in 2014 as well as the county-level gdp per capita.

<sup>10</sup>The exception is *Donations*, for which the relevant survey years are 2010, 2015 and 2018.

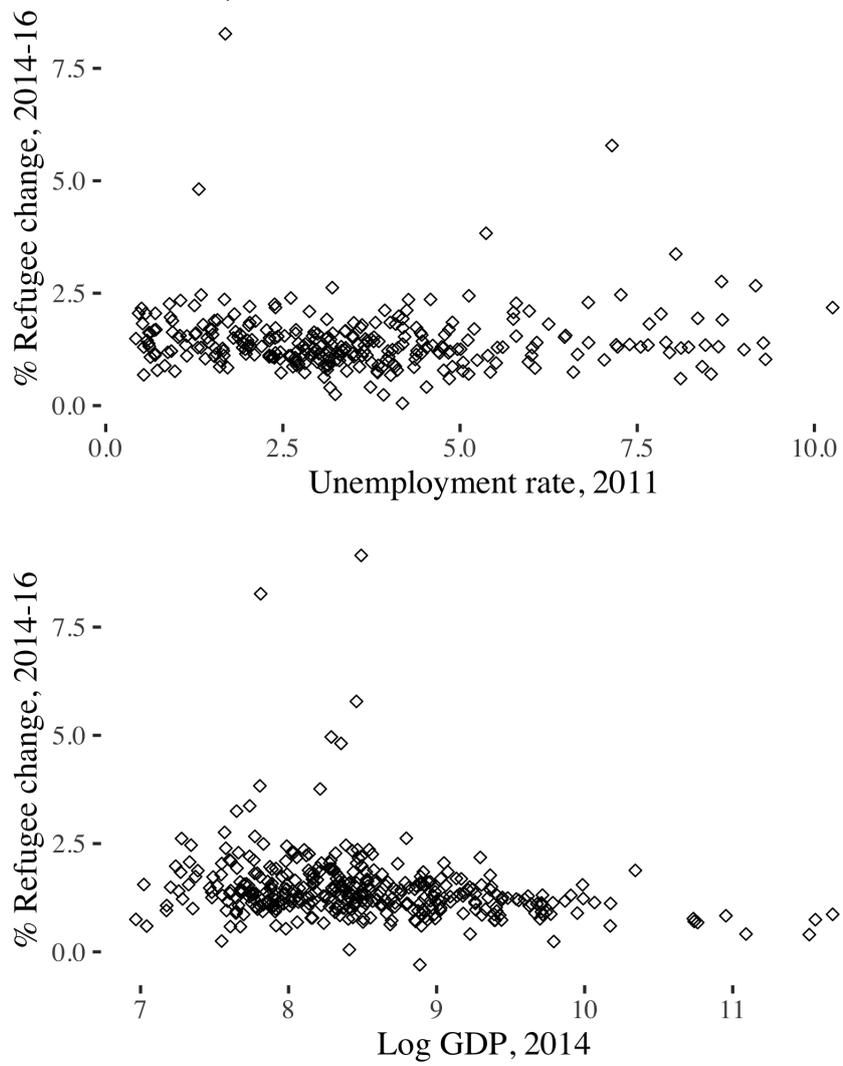


Figure A.1: Correlation between Inflows of Asylum Seekers and County Characteristics

*Notes:* The figure shows the correlation between the percentage change in the number of asylum seekers between 2014 and 2016, unemployment rates in 2011 and GDP in 2014, by county.

## B More Descriptive Statistics on Anti-Immigrant Violence

Figures B.2 and B.3 present additional descriptive statistics about the frequency of anti-immigrant incidents over time and across counties. Figure B.2 displays the number of daily incidents in all of Germany for different categories. The majority of incidents are attacks against immigrant accommodation. Arson, assaults and anti-immigrant demonstrations only play a minor role.

Figure B.3 shows the distribution of the average number of anti-immigrant incidents per 100,000 inhabitants per county. The distribution is right-skewed, with a median of 5.6 incidents, meaning that a handful of counties experience a large number of anti-immigrant incidents per year. Most counties experience *some* anti-immigrant violence; there are very few counties with zero incidents over the entire sample period.

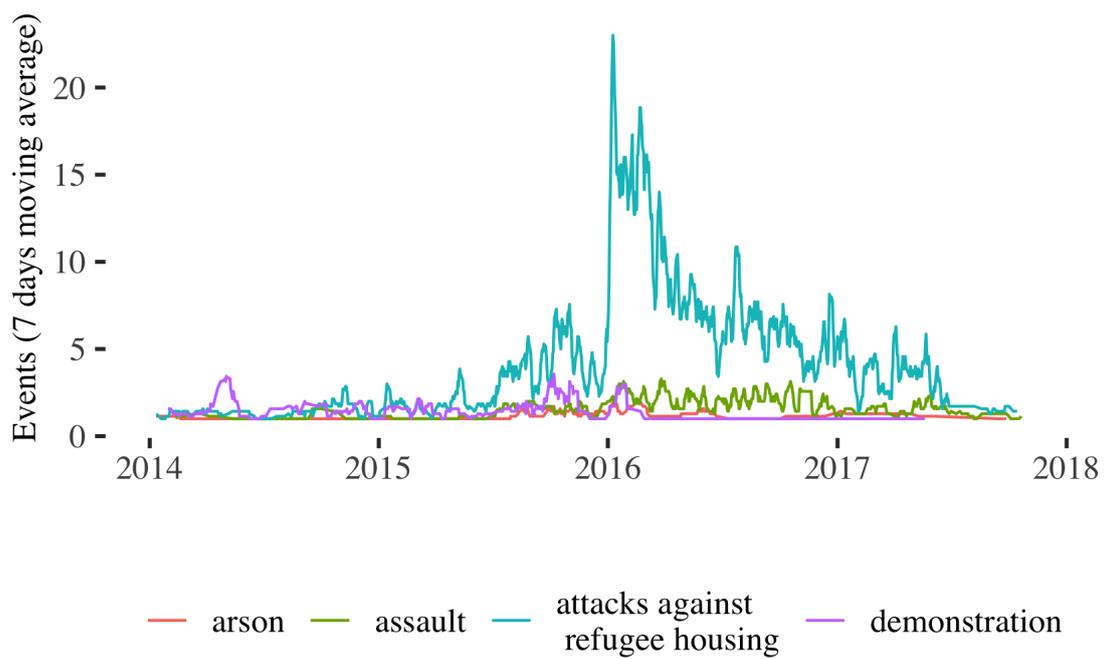


Figure B.2: Anti-immigrant violence by category, 2014-2017

Notes: This graph displays the daily number of anti-immigrant incidents for different types of incidents. Data are smoothed to a 7-day moving average. Source: Antonio Amadeu Foundation.

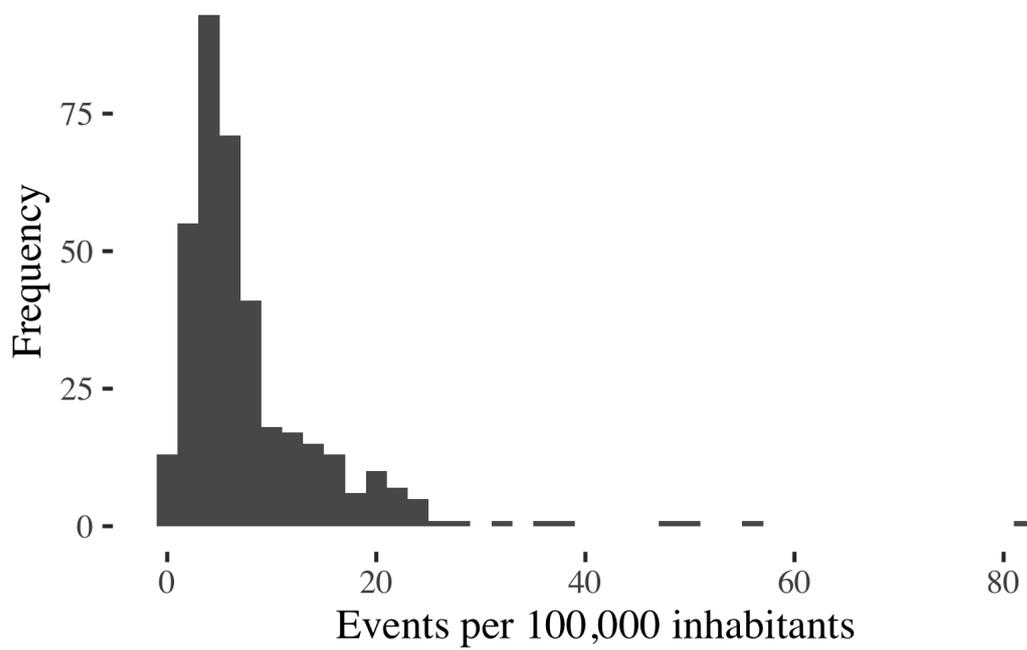


Figure B.3: Annual number of anti-immigrant incidents per 100,000 inhabitants, by county

*Notes:* The graph displays the distribution of the average number of anti-immigrant incidents per 100,000 across counties.  
*Source:* Antonio Amadeu Foundation.

## C Accounting for Spillovers of Anti-Immigrant Violence

When estimating the effect of the inflow on anti-immigrant violence, in some specifications we include terms to control for potential spatial spillovers of anti-refugee violence. As Jäckle and König (2017) show, both temporal and geographical closeness to xenophobic attacks can increase the chance of observing further violence in a given county. If counties that received higher inflows of refugees between 2014 and 2016 are clustered together, such spatial spillovers could confound our estimates. To assess whether that is the case, we estimate:

$$y_{ct} = \beta(\text{refugee inflow}_c \times \text{post}_t^{2014}) + \rho W \mathbf{y}_t + \alpha_c + \alpha_t + \epsilon_{ct}, \quad (\text{C.1})$$

where  $W$  is a  $C \times C$  matrix of spatial weights and  $\mathbf{y}_t$  is a  $C \times 1$  vector of anti-refugee violent events observed in all counties in period  $t$ . Our spatial weights are a function of the distance  $d$  between two counties  $i, j$ , namely  $w_{i,j} = \frac{1}{\exp(d_{i,j})}$ . A positive value of  $\rho$  indicates the existence of spatial spillovers: as counties close to county  $c$  exhibit anti-refugee violence, the number of violent observed in county  $c$  increases.

## D Results: Tables and Graphs

This appendix reports additional estimation results for the effect of the inflow of asylum seekers on individual attitudes. Table D.3 reports the estimation results underlying Figure 6 along with heterogeneous effects in counties with high vs. low prior employment rates and high vs. low vote shares for the far-right party AfD. Figures D.5 and D.5 display the estimates for the heterogeneous effects graphically. Table D.5 displays heterogeneous effects for anti-immigrant violence.

Table D.3: Social attitudes and values

	<i>Treatment = Percentage <math>\Delta</math> in refugees</i>					<i>Treatment = Per capita <math>\Delta</math> in refugees</i>
	Full sample	Low empl.	High empl.	Low AFD	High AFD	Full sample
	(1)	(2)	(3)	(4)	(5)	(6)
People can be trusted	.00 (.01)	-.02 (.02)	.01 (.01)	-.00 (.01)	.01 (.01)	.65 (1.29)
People are helpful	.00 (.01)	.01 (.02)	.00 (.01)	-.00 (.02)	.01 (.01)	.41 (1.44)
People are fair	.01 (.01)	-.01 (.02)	.02* (.01)	.02 (.02)	.00 (.01)	-2.2 (1.5)
Caution towards foreigners	.019** (.00)	.03** (.01)	.01 (.01)	-.00 (.01)	.03*** (.01)	-.79 (1.21)
Worry about crime	.01 (.01)	.02 (.02)	-.00 (.01)	.02 (.01)	-.00 (.01)	.03 (1.5)
Donations	-.01 (.00)	-.01 (.01)	-.00 (.01)	-.00 (.01)	-.02 (.01)	-.34 (1.27)

*Notes:* The table shows the coefficients and standard errors from a series of regressions in which the outcomes are different measures of social attitudes and values. For Columns (1) to (4), the regressor is the interaction of the percentage change in the number of refugees by county between 2014 and 2016 and a dummy for years from 2014 onwards. Column (1) reports the results based on the entire sample. In Column (2), we only include non-german individuals. In Column (3) and (4) we keep individuals living in counties whose employment rates in 2011 and percentage of AFD votes at the 2013 general elections are below and above the median, respectively. In Column (5), we include the full sample of counties and use the per capita change in refugees by county between 2014 and 2016. The standard errors are clustered by county.

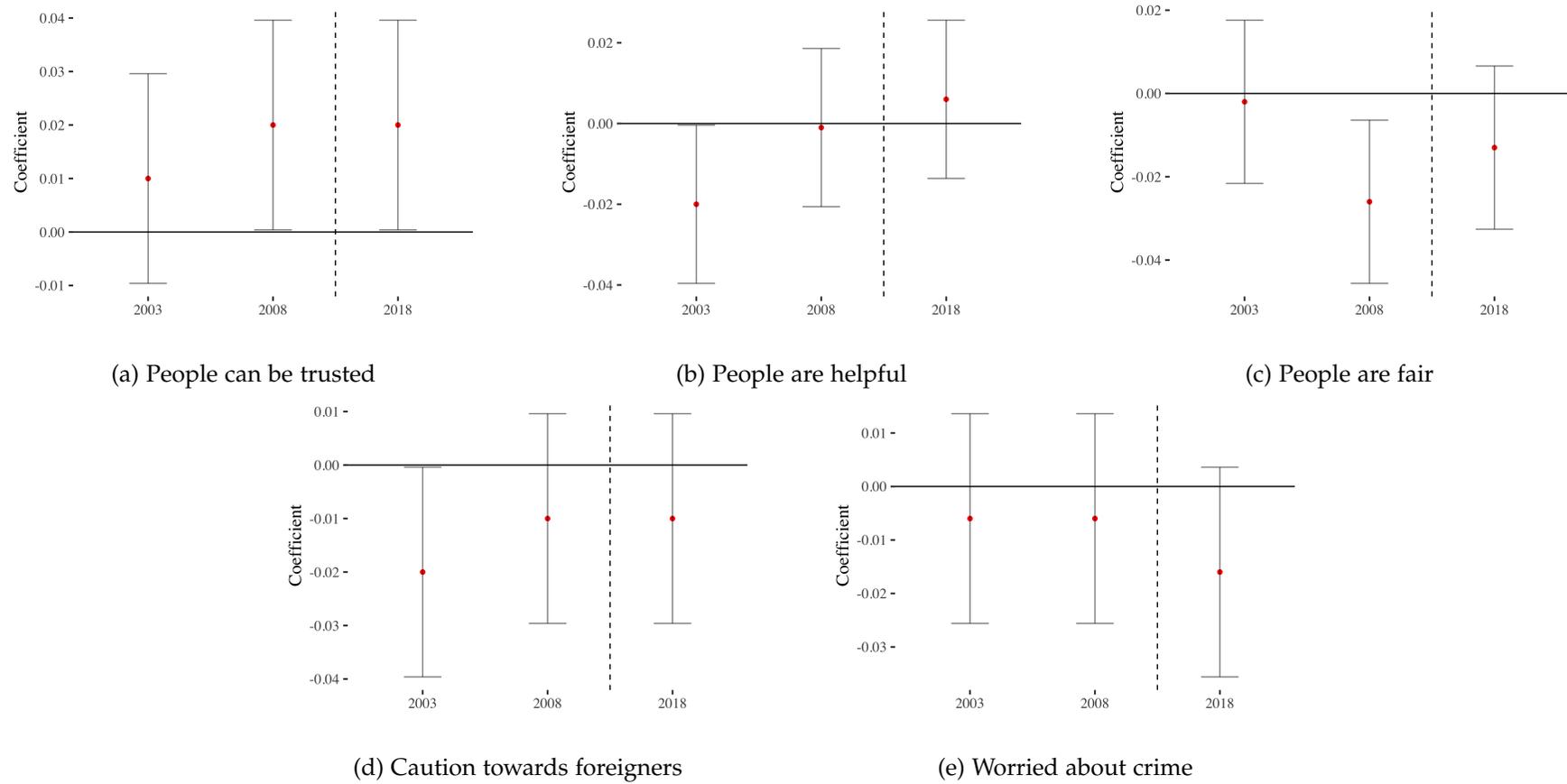


Figure D.4: Social attitudes and values: Flexible Difference-in-differences

Notes: The figure shows the results of a series of flexible difference-in-differences regressions where the outcome are the SOEP social attitude measures. Our treatment is the county percentage change in refugees between 2014 and 2016, which we interact with year dummies. The reference year is 2013.

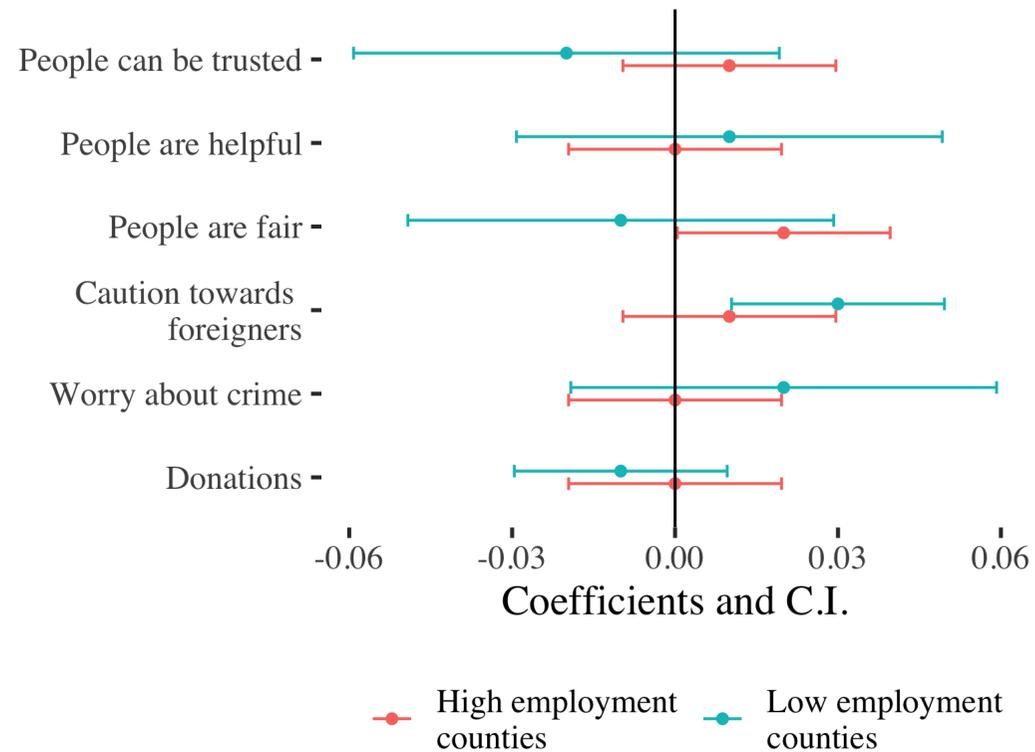


Figure D.5: SOEP: Low and High employment counties.

*Notes:* The figure plots the coefficients and confidence intervals from a series of regressions in which the outcomes are different measures of social attitudes and values. For each outcome, we run separate regressions for individuals living in counties whose employment rate in 2011 was below and above the median.

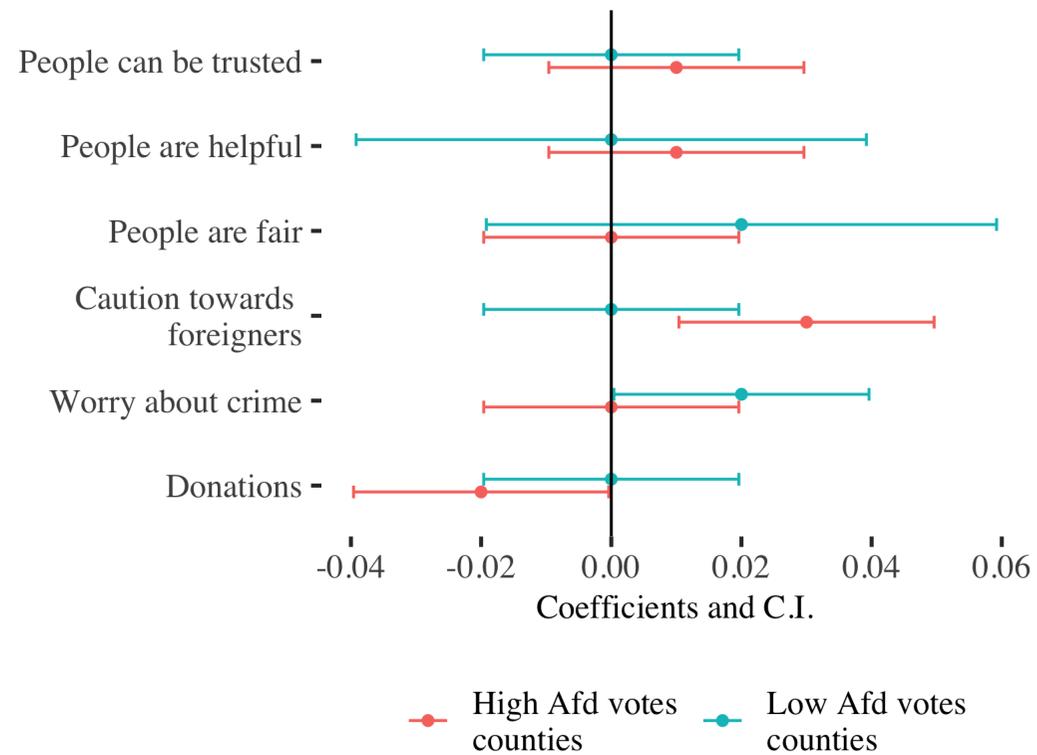


Figure D.6: SOEP: Low and High AFD votes counties.

*Notes:* The figure plots the coefficients and confidence intervals from a series of regressions in which the outcomes are different measures of social attitudes and values. For each outcome, we run separate regressions for individuals living in counties whose share of votes going to AfD during the 2013 general elections was below and above the median.

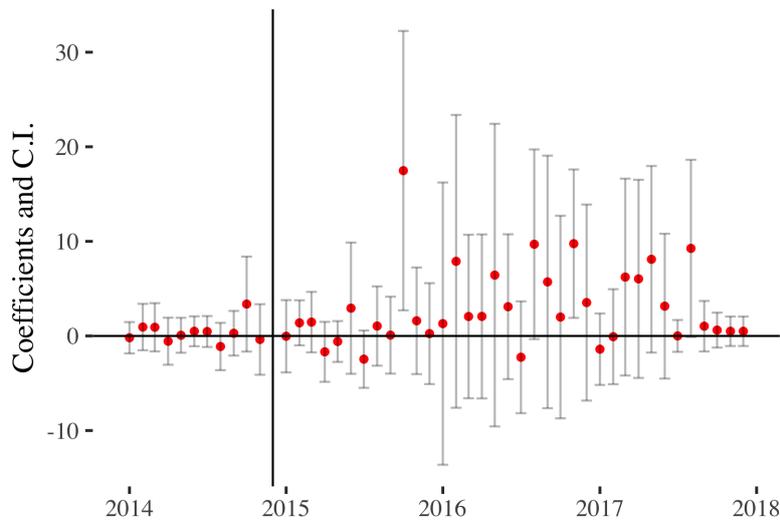


Figure D.7: Flexible DD estimation: Anti-immigrant violence, change in refugees per capita.

Notes: This graph displays the point estimates and 95% confidence intervals based on the flexible difference-in-difference regression in Equation (3). The outcome is the number of violent anti-immigrant incidents per county per month per 100,000 inhabitants. The treatment is the change in the number of refugees per capita between 2014 and 2016. The base period is December 2014. Standard errors are clustered at the county level.

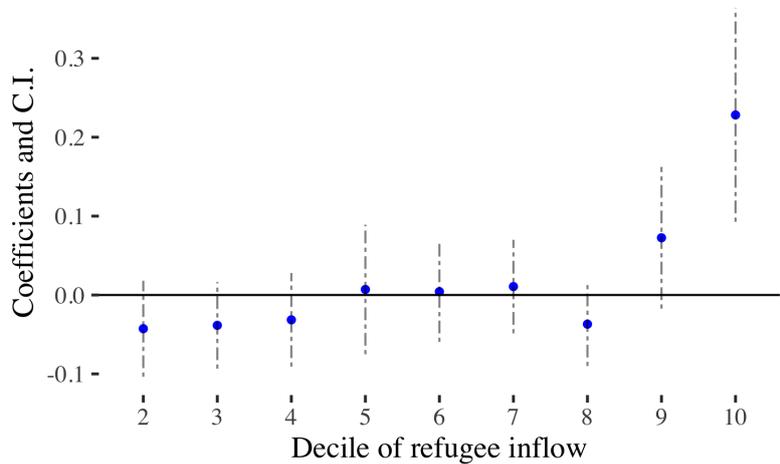


Figure D.8: Anti-immigrant violence: Non-linear difference-in-differences.

Notes: This graph displays the point estimates and 95% confidence intervals based on a non-linear difference-in-differences estimation where we interact a county's treatment decile with a dummy for months after January 2015. The treatment is the change in the number of refugees per capita between 2014 and 2016, relative to 2014. Standard errors are clustered at the county level.

Table D.4: Monthly anti-immigrant violence events per capita.

	<i>All counties</i>			
	(1)	(2)	(3)	(4)
% $\Delta$ refugees 14-16 x Post	0.050*** (0.018)	0.050*** (0.018)	0.050*** (0.018)	0.057** (0.028)
County FE		Yes	Yes	Yes
Date FE			Yes	Yes
County time trends				Yes
Observations	17,904	17,904	17,904	17,904
Adjusted R <sup>2</sup>	0.026	0.105	0.203	0.205

*Notes:* The table shows the outcomes of difference-in-differences regressions in which the outcome is the monthly number of anti-immigrant violence events per 100,000 inhabitants. The regressor of interest is the interaction between the percentage change in the number of asylum seekers between 2014 and 2016 and a dummy for the post-2014 period. Standard errors are clustered by county. Date fixed effects refer to the interaction of year and month. *Significance levels:* \* = 0.1; \*\* = 0.05; \*\*\* = 0.01.

Table D.5: Monthly violent anti-immigrant events per capita: Heterogeneity analysis.

	<i>Low empl. rate</i>	<i>High empl. rate</i>	<i>Low AFD share</i>	<i>High AFD share</i>
	(1)	(2)	(3)	(4)
% $\Delta$ refugees 14-16 x Post	0.074** (0.036)	0.027* (0.016)	0.030** (0.012)	0.080* (0.047)
County FE	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes
Observations	8,400	9,504	9,456	8,352
Adjusted R <sup>2</sup>	0.225	0.177	0.182	0.212

*Notes:* The table shows the outcomes of difference-in-differences regressions in which the outcome is the monthly number of violent anti-immigrant events per 100,000 inhabitants. The regressor of interest is the interaction between the percentage change in the number of asylum seekers between 2014 and 2016 and a dummy for the post-2014 period. Standard errors are clustered by county. Date fixed effects refer to the interaction of year and month. In Column (1) and (2), we split the sample in counties below and above the median employment rate in 2011, respectively. Similarly, Column (3) and (4) show the results for counties below and above the median share of AFD votes in the general election of 2013. *Significance levels:* \* = 0.1; \*\* = 0.05; \*\*\* = 0.01.