

DISCUSSION PAPER SERIES

IZA DP No. 11781

**The Impact of Xenophobic Violence
on the Integration of Immigrants**

Max Friedrich Steinhardt

AUGUST 2018

DISCUSSION PAPER SERIES

IZA DP No. 11781

The Impact of Xenophobic Violence on the Integration of Immigrants

Max Friedrich Steinhardt

Helmut Schmidt University, IZA, LdA and CELSI

AUGUST 2018

Any opinions expressed in this paper are those of the author(s) and not those of IZA. Research published in this series may include views on policy, but IZA takes no institutional policy positions. The IZA research network is committed to the IZA Guiding Principles of Research Integrity.

The IZA Institute of Labor Economics is an independent economic research institute that conducts research in labor economics and offers evidence-based policy advice on labor market issues. Supported by the Deutsche Post Foundation, IZA runs the world's largest network of economists, whose research aims to provide answers to the global labor market challenges of our time. Our key objective is to build bridges between academic research, policymakers and society.

IZA Discussion Papers often represent preliminary work and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be available directly from the author.

ABSTRACT

The Impact of Xenophobic Violence on the Integration of Immigrants*

Integration of immigrants is a two-way process involving immigrants and the host country society. An underexplored question is how events of xenophobic violence in the host country affect the integration of immigrants. For this purpose, I exploit a unique series of anti-immigrant attacks in the early 1990s in West Germany. Using a difference-in-differences matching strategy, I find that macro exposure to xenophobic violence has an impact on several dimensions of socio-economic integration of immigrants. In particular, it reduces subjective well-being and increases return intentions, while it reduces investment in German language skills among those staying in Germany. From a policy perspective, this paper shows that anti-immigrant violence can have indirect costs by impairing the integration of those immigrants who belong to the target group of xenophobic attacks.

JEL Classification: A14, J15, J61

Keywords: immigration, integration, xenophobia, hate crimes

Corresponding author:

Max Friedrich Steinhardt
Helmut Schmidt University
Holstenhofweg 85
22043 Hamburg
Germany

E-mail: steinhardt@hsu-hh.de

* I would like to thank Silke Anger, Sascha Becker, Adrian Chadi, Andrew Clark, Felix FitzRoy, Marc-André Luik, Robert Gold, Alkis Otto, Panu Poutvaara, Dragos Radu, Christoph Sajons, Simone Schüller, Elena Stancanelli as well as seminar and conference participants at the University of Freiburg, University of Ghent, University of Jena, ifo Munich, ifw Kiel, University of Nottingham, University of Trier, the 2016 ESPE conference in Berlin, the 2016 EALE conference in Ghent, the 2018 SOEP user conference in Berlin, and the 2018 congress of the EEA-ESEM in Cologne for useful comments. Moreover, I am grateful to Alan Krueger and Jörn-Steffen Pischke for sharing their data on right-wing extremist crimes in Germany during the 1990s. The usual disclaimer applies.

1 Introduction

The recent refugee crisis in Europe has illustrated that migration is an immanent feature of a globalized world. This is also reflected by the fact that most OECD countries are experiencing growing inflows of permanent immigrants, with Germany being the largest receiver of inflows after the United States (OECD, 2018). This development has reinforced and revitalized debates on the necessity to improve the integration of immigrants. Parallel to this, many OECD countries such as the United States, Sweden, Denmark, and Germany are experiencing growing support for right-wing politicians who agitate against immigration (The Economist, 2015). In addition, a number of countries, including Germany, have to deal with increasing incidents of violence against refugees and immigrants (Nwabuzo and Schaeder, 2017).

This paper addresses these developments and provides evidence on the causal impact of xenophobic violence on integration outcomes of immigrants. For this purpose, I exploit a series of anti-immigrant attacks in the early 1990s in West Germany, which culminated in two horrific fire attacks on houses of Turkish families. I apply a difference-in-differences matching estimator and compare immigrants with and without exposure to anti-immigrant violence before and after the increase in xenophobic attacks. Moreover, I distinguish between macro- and micro-level exposure. Macro-level exposure refers to a situation in which xenophobic violence acts as a nationwide shock to the entire Turkish community in Germany through media reports and social networks. Micro-level exposure instead refers to cases where immigrants are geographically confronted with xenophobic violence. The micro data comes from the German Socio-Economic Panel (SOEP), while the regional crime

data is provided by Krueger and Pischke (1997). This paper is the first to study the impact of xenophobic violence in the host country on immigrants' integration outcomes using individual panel data.

My estimates demonstrate that macro exposure to xenophobic violence has a negative impact on several dimensions of social and economic integration. It not only reduces subjective well-being of immigrants, but also strengthens intentions to return to their country of origin. This has been shown to have important implications for immigrant behavior, such as decisions on investment in their host country-specific human capital (Dustmann and Mestres, 2010). In line with this, I find a negative effect on German language skills which are crucial for economic and social integration (e.g. Chiswick, 1991; Bleakley and Chin, 2010). My results are robust to changes in the sample, the period considered, and the estimation approach. Regressions exploiting the regional variation in crime speak in favor of the existence of a strong macro exposure effect, although an impact of micro exposure cannot be rejected with the data given. My findings have important policy implications, as they point out that xenophobic violence not only has direct costs, but also has indirect costs by impairing the integration of those immigrants belonging to the target group of hate crimes.

So far, there is scarce evidence about the impact of xenophobia on immigrant integration. Previous research has mainly focused on the determinants of natives' opinions and behavior toward migration and migrants. For example, there is extensive and growing literature about the determinants of individual attitudes toward immigration (e.g. Facchini and Mayda, 2009). The same holds true for the drivers of anti-immigrant violence (e.g. Krueger and Pischke, 1997) and the electoral suc-

cess of anti-immigrant parties (e.g. Otto and Steinhardt, 2014). One of the few papers that dealt with the impact of the success of right-wing extreme parties on the well-being of immigrants is the paper by Knabe, Rätzel, and Thomsen (2013). Using individual data on life satisfaction from the SOEP and state-level information on the election outcomes of right-wing extreme parties, the authors find a negative relationship between immigrants' life satisfaction and support for right-wing extreme parties. However, the endogenous location choices of immigrants, who are likely to avoid living in areas with strong xenophobic sentiments, is not considered explicitly.

The relationship between xenophobia in the destination country and migration intentions is explored by Friebel, Gallego, and Mendola (2013). They analyze how emigration in Mozambique was affected by xenophobic violence in South Africa using household survey data. The authors demonstrate that individuals in Mozambique were less likely to emigrate to South Africa after a series of xenophobic attacks on immigrants in a number of South African townships. This holds particularly true for households with many young children, whereas access to social networks in the sending community can mitigate the negative effect. Overall, their study indicates that violence against foreigners in destination countries negatively affects the migration intentions of potential migrants in source countries. The link between natives' attitudes toward immigrants and return migration intentions is addressed by De Coulon, Radu, and Steinhardt (2016). The authors make use of data from a survey on Romanian immigrants in Italy and exploit variation in xenophobia generated by media consumption of migrants. A widely documented crime provides a quasi-experimental setting to identify the impact of native attitudes on migrants'

settlement intentions. The results suggest a significant effect of anti-immigrant attitudes on the intended duration of stay in the host country. The effect is more pronounced for low-skilled migrants, which has implications for the convergence between sending and destination countries.

The paper that comes closest to mine is the work by Gould and Klor (2016) on the backlash after 9/11 on Muslim immigrants in the United States. In particular, they analyze how the increase in hate crimes against Muslims after 9/11 has affected the assimilation of Muslim immigrants in the United States. For this purpose, they combine individual data from the U.S. Census and different waves of the American Community Survey with data on hate crimes provided by the FBI Uniform Crime Reporting Program. They find that Muslim immigrants who lived in regions with the sharpest increase in hate crimes experienced a greater chance of inter-marriage, higher fertility, lower female labor market participation, and lower language proficiency in the following years. They further speculate that these hate crimes could increase return migration, but do not test this empirically due to data constraints. In sum, Gould and Klor (2016) find strong evidence for a negative micro-level effect and therefore document that anti-immigrant violence after 9/11 raised the cost of assimilation and made the Muslim community in America more cohesive and traditional.

The paper is organized as follows: Section 2 provides background information about immigration and xenophobic violence in Germany during the early 1990s. In Section 3, the identification strategy and the data used are described. Section 4 provides the main results of the empirical analysis, while Section 5 explores potential heterogeneity of the effects. Section 6 concludes the paper.

2 Historical Background

In this section, I will provide some background information on the situation in Germany in the early 1990s which is crucial for my estimation strategy.

2.1 Immigration to Germany and Its Foreign Population in the 1990s

In the early 1990s, Germany experienced strong immigration from Eastern European countries, including ethnic Germans, and from the territory of the former Yugoslavia. Between 1991 and 1993, Germany received a net flow of 1.8 million immigrants (Sachverständigenrat für Zuwanderung und Integration, 2004). A substantial part of this immigration was driven by asylum seekers and refugees. Between 1991 and 1993, Germany received on average 339 thousand asylum seekers per year, which was a strong increase over previous years. For comparison, between 1988 and 1990, only 139 thousand people asked for asylum per year (Bundesamt für Migration, 2015).¹ The majority of asylum seekers in the 1990s came from the former Yugoslavia (approximately 29 %) and Eastern European countries (approximately 29 %). Asylum seekers were allocated to all German regions according to a selection criterion called Königssteiner Schlüssel, which has been mainly based on regional tax revenues and population size (Sachverständigenrat für Zuwanderung und Integration, 2004).

Due to the historical political divide, the concentration of the foreign population

¹As a reaction, the German government implemented the so-called Asylum Compromise in 1993 to curtail the right to seek asylum and to reduce immigration of refugees (see Otto and Steinhardt, 2014). In the following years, the number of asylum seekers decreased strongly.

largely differed in the Eastern and Western part of Germany. In 1991, 8.1% of the population in West Germany (including Berlin) were foreigners, while in East Germany less than 1% had a foreign passport.² The East-West divide was not only in terms of magnitude, but also in terms of the composition of immigrants. In West Germany, the largest group by far among all foreigners were Turks with 31%. The second largest group were immigrants from the former Yugoslavia with 13.4%, followed by Italians with 9.7%. In East Germany, the three largest foreign groups were immigrants from Poland (21%), Vietnam (18%), and the former Soviet Union (11.6%). While the composition in West Germany was mainly influenced by the guest-worker area in the 1960s and 1970s and family reunification in the 1980s, the Eastern composition still reflected the political history of the East as a socialistic state within the Soviet Union.³ As a result, Turkish immigrants were only a very small minority in East Germany (less than 1% of all foreigners were Turks).

2.2 Xenophobic Violence

In the first years after the reunification, Germany experienced a strong increase in xenophobic sentiments and violence against foreigners. This is illustrated by Figure 1, which shows the development of right-wing extremist crimes against foreigners in Germany between 1991 and 1993.⁴ The data used is based on newspaper reports

²These and the following figures were calculated using data provided by the Statistical Office of Germany.

³The GDR had several bilateral agreements with the Socialist Republic of Vietnam which allowed Vietnamese citizens to come to the GDR for training and work purposes.

⁴Before 1991, the level of right-wing extremist crimes was relative low. According to reports from the Federal Office for the Protection of the Constitution, between 1980 and 1990, the yearly number of right-wing extremist crimes in West Germany was 100, while in West and East Germany, 1,600 crimes were reported in 1991 and 2,580 were reported in 1992 (Hennig, 1993).

and is provided by Krueger and Pischke (1997). This paper relies on newspaper data for two reasons. First, we are interested in the public perception of xenophobic violence in the 1990s. Crime in official statistics might have not been recognised by immigrants unless they have been directly affected. Second, for the early 1990s, there is no data from police or other governmental institutions on xenophobic crime below the level of Federal States (Bundeslaender) Krueger and Pischke (1997). The regional dimension of the newspaper data will instead allow us to distinguish between micro and macro exposure to xenophobic violence (see Section 5).

Figure 1 illustrates that such crimes started to increase in East Germany, where it was more pronounced than in West Germany during the whole period. This is in so far remarkable, as the share of immigrants in East Germany was, as described, much lower than in the West.⁵ The two most infamous criminal events in East Germany were mass riots in Hoyerswerda and Rostock in 1991 and 1992, during which hundreds of German civilians attacked residencies of asylum seekers.

The reasons for the outbreak of xenophobic violence are far from clear. An obvious explanation is the rise in unemployment in the early nineties, which affected both West and East Germany. However, the existing empirical evidence on the link between right-wing extremist violence and unemployment for post-unification Germany speaks against this explanation. Krueger and Pischke (1997) do not find any significant relationship between unemployment and right-wing extremist crime using the data set used to construct Figure 1. Falk, Kuhn, and Zweimüller (2011) use data on German federal states for the years 1996 to 1999 and find only a weak association between violent crimes and unemployment. However, there is some

⁵However, within East Germany, Krueger and Pischke (1997) find a positive association between foreigner concentration and xenophobic crimes per resident.

evidence in the UK that increasing local economic deprivation is associated with higher rates of violence directed against immigrant-origin minorities (Dancygier, 2010). An alternative explanation is the ascribed increase in immigration and asylum seekers or the highly controversial debate about it, as a number of studies have documented that immigration can result in increased electoral support of far right parties (e.g. Otto and Steinhardt, 2014; Barone, D'Ignazio, de Blasio, and Naticchioni, 2016; Halla, Wagner, and Zweimueller, 2017). However, to the best of my knowledge, so far no study has investigated this link explicitly. It is also noteworthy that in the period of investigation, no incidence or terrorist attack took place which could provoke a backlash on immigrants such the one after 9/11 in the United States (Gould and Klor, 2016).

Figure 2 provides a more detailed picture of right-wing crimes in West Germany since my analysis focuses on Western Germany.⁶ In contrast to Figure 1, it shows the absolute number of violent crimes against asylum seekers, namely refugees, and immigrants. In total, the majority of right-wing extremist crimes was against refugees.⁷ Nonetheless, there was also significant violence against immigrants.

Starting in July 1991, 4 months later than in East Germany, West Germany also experienced growing violence against immigrants and asylum seekers. Until late 1992, the pattern was very similar for both groups, with larger levels of crime against asylum seekers. During Autumn 1992, the pattern started to change and xenophobic violence was directed more against immigrants. The peak of anti-

⁶I have used the detailed descriptions in the data provided by Krueger and Pischke (1997) and in the original data source to classify the victims of xenophobic crimes into three categories: refugees and asylum seekers, immigrants, and German individuals or institutions. The latter is only a minor category during my period of interest as compared to the first two categories. I define Berlin as belonging to the West.

⁷The same holds true for East Germany.

immigrant violence was in June 1993, with more than 30 reported crimes in newspapers, while violence against asylum seekers was much less frequent. In sum, there were three periods of massive violence against immigrants in West Germany: Autumn 1991, Autumn 1992, and Summer 1993.

2.3 The Fire Attacks in Moelln and Solingen

The climax of anti-immigrant violence in West Germany were two horrific arson attacks on Turkish families. The first happened in Autumn 1992 in a small-size city in the North of Germany called Moelln. On November 23, 1992, two neo-Nazis attacked two houses of Turkish families with Molotov cocktails. Three family members died, and 9 were seriously injured. The second attack happened in Summer 1993 in Solingen, a medium-size city in Nordrhein-Westfalen. On May 5, 1993, right-wing extremists attacked a house in Solingen, killing 5 people and injuring 14 others. The events are marked green in Figure 2.

Both events caused a massive reaction in national as well as international media, and within the Turkish community (e.g. Der Spiegel, 1992; New York Times, 1993). This is also reflected by the fact that high-level politicians from Germany and Turkey were participating in the public funeral service. These events were unique in so far as they represented the first large-scale attacks on Turkish immigrants in Germany. The two arson attacks were therefore unexpected shocks for the Turkish community. Another peculiarity was that the attacks were not directed toward refugees, asylum seekers, or any kind of recently- arrived immigrants, but were rather against long-term residents of Turkish descent. In both cases, the attacked families came to Germany as guest workers or were born in Germany as

children of guest workers. And in both cases, the names of the cities are nowadays associated with the two arson attacks in public discourse.

The attacks cannot be classified as classical terrorist acts, as they were not long-term planned attacks from an organized group of terrorists like the murders of the Nationalsozialistischer Untergrund (NSU). Instead, they were committed by single individuals with loose connections to right-wing extremist groups. In contrast to terrorist attacks, they were also not accompanied by systematic propaganda after the event nor had they been announced in advance.

3 Estimation Strategy and Data

Any study aiming to analyze the impact of xenophobia on immigrants' integration faces a number of methodological challenges. Approaches linking the regional prevalence of xenophobia with immigrants' outcomes face the problem of endogenous settlement decisions. Immigrants are likely to avoid regions with strong xenophobic sentiments or high levels of anti-immigrant crime. Instead, they will self-select into regions with low levels of xenophobia, which will bias any estimator exploiting regional variation in xenophobia. Studies using any kind of subjective information on perceived xenophobia as a treatment have to cope with problems like measurement error, simultaneity, and omitted variables.

This paper tries to overcome these methodological challenges by exploring a unique increase in xenophobic violence in a difference-in-differences setting. As described in Section 3, immigrants living in West Germany during the 1990s experienced an unexpected increase in anti-immigrant crime. However, not all immi-

grants were equally affected by the wave of violence. Instead, the violence mainly focused on immigrants of Turkish origin both with respect to frequency and magnitude. Looking at the aggregate number of anti-foreigner attacks between 1991 and May 1993 in West Germany shows that Turks were overrepresented among the victims. While in 1993 approximately 31% of the foreign population in Germany were of Turkish origin, 40% of attacks were directed against Turks (Krueger and Pischke, 1997). In terms of magnitude, statistics about fatal victims depict a similar picture. Among the 28 foreigners killed due to xenophobic violence between 1991 and May 1993 in West Germany, 16 people (57%) had a Turkish background.⁸ Moreover, as described in Section 3, the two largest attacks in West Germany in Moelln and Solingen were against Turkish families. As a consequence, Turks will serve as the treatment group in my empirical analysis.

The choice of the control group is less obvious than that of the treatment group. Ideally, we would like to compare Turkish immigrants with a group of immigrants with similar characteristics which was not affected by the wave of xenophobic violence. Most importantly, the control group should have the same trends in integration outcomes as the treatment group before the treatment. A group which fulfills these criteria are Italian and Greek immigrants who came to Germany as guest workers during the 1970s.⁹ Although South-European immigrants (including Spanish and Portuguese immigrants) accounted for approximately 20% of the for-

⁸The corresponding figures are based on newspaper data used by Krueger and Pischke (1997). In reaction to the murders by the NSU, German security authorities have started to reinvestigate all unsolved cases of death of foreigners since the 1990s. Unofficial reports by civil institutions and media suggest that the number of foreign murders was larger than those recorded by official authorities. For my purposes, it makes sense to refer to the figures derived from newspapers in the 1990s since my treatment is about the public perception of xenophobic violence in the 1990s.

⁹We will provide formal tests on the common time trend assumption in Section 4.

eign population in 1993, they were hardly affected by right-wing extremist crime in the early 1990s.¹⁰ According to newspaper data, less than 5% of the crimes were committed against Southern European immigrants. Among the foreigners killed by right-wing crime, the same data lists one victim of Italian descent; therefore, I cannot claim that individuals in my control group have been completely unaffected by the rise in xenophobic violence. As a result, my estimates might reflect a lower bound of the true causal effect.

Throughout most of the paper, I treat the increase in xenophobic violence as a nationwide shock to all Turks living in Germany. By doing so, I assume that all Turks have been affected by these massive events through media consumption or social networks and analyze the effect of macro-level exposure. In different contexts, it has been shown that news of shocking events can affect individual well-being (Metcalf, Powdthavee, and Dolan, 2011), schooling choices (Abouk and Adams, 2013) and cognitive performance (Poutvaara and Ropponen, 2018). In section 5, I also explore the regional dimension of the crime data in an attempt to obtain some evidence on the role of local exposure.

The basic difference-in-differences equation then is:

$$Int_{it} = \alpha + \beta treated_i + \gamma post_t + \delta(treated_i * post_t) + \epsilon_{it}, \quad (1)$$

with Int_{it} being an integration outcome of immigrant i belonging at time t (1991, 1993). The dummy $treated_i$ takes the value 1 for respondents of Turkish origin and

¹⁰In the empirical analysis, we do not include Spanish and Portuguese immigrants, as the SOEP contains only very few immigrants from those countries. The number of immigrants from the former Yugoslavia is instead much larger. However, they would not be a proper control group for our purposes since the Yugoslav Wars happened parallel to the increase in xenophobic violence in Germany.

0 otherwise. $Post_t$ is a dummy variable that takes the value of 1 in 1993 one year after the rise in xenophobic violence happened. The treatment effect is captured by the coefficient δ of the interaction term ($treated_i * post_t$). The equation can be easily extended by adding a vector of individual control variables X'_{it} . The crucial underlying assumptions of my identification approach is that both groups would be characterized by equal trends in outcomes in absence of the treatment (common time trend assumption). This also implies that any parallel event unrelated to my treatment affects both groups in the same way (sometimes referred to as common shock assumption). I will provide a number of formal tests in Section 4 and Appendix B.4 trying to convince readers that both assumptions hold in my case.

The micro data on immigrants comes from the German Socio-Economic Panel (SOEP).¹¹ The SOEP is a representative, longitudinal micro data set on people, families and households in Germany. It is well suited for the purposes of my analysis since it provides detailed information on the migration history of its respondents, such as country of birth, citizenship, and ethnicity. An oversampling of the migrant population in Germany allows to distinguish between different ethnic groups of migrants, which is crucial for my estimation strategy described above.

In my analysis, I focus on immigrants living in West Germany, including Berlin. An immigrant is defined as being born abroad or having parents being born outside of Germany. My immigrant definition therefore captures first-generation immigrants as well as second-generation immigrants.¹² Since I am interested in labor market relevant integration outcomes, I exclude immigrants at retirement age (older

¹¹The data used comes from the Socio-Economic Panel (SOEP), data for years 1984 to 2014, version 31, SOEP, 2015, doi:10.5684/soep.v31. For a detailed description of the SOEP data, see Wagner, Frick, and Schupp (2007).

¹²As a robustness check, results will also be reported for first-generation immigrants only.

than 63). The main empirical exercise covers the time period from 1991 to 1993, in which Germany experienced a strong increase in xenophobic violence. To test the common time trend assumption underlying my difference-in-differences approach, I also include earlier waves of the SOEP. For methodological reasons, I drop those observations in 1991 that were based on interviews conducted after July (less than 0.5% of all respondents in 1991) when xenophobic crime started to increase (see Figure 2).

I will focus on three different outcomes. In the first step, I test in how far the wave of xenophobic violence affected subjective well-being. If macro exposure to the violence had any influence on immigrants, we would expect to find that immigrants within the treatment group experienced a decline in subjective well-being. To measure the latter, I rely on self-reported life satisfaction, which is measured on an 11-point scale with 0 being the lowest value, while 10 is reported by respondents who are very satisfied with their actual life. As the most severe reaction would be to leave Germany, respectively the intention to do so, I next look at self-reported return intentions. As previously shown (e.g. Dustmann and Mestres, 2010), these intentions have multiple implications for migrant decisions, such as those on the investment in host country-specific skills. My measure of return intentions is a dummy coded as 1 if the respondent plans to return to his or her home country within the next 5 years, and 0 otherwise. In addition, I look at proxy measures for realized return migration. My third and final measure is native language skills, as these skills have been shown to be an essential component of country-specific human capital for integration of immigrants (e.g. Chiswick, 1991). In the main analysis, I rely on a question on self-reported German language skills. Based on

this, I constructed a dummy variable taking the value of 1 if the respondent reports having good or very good German language skills, and 0 otherwise.¹³

Table A1 in the Appendix shows the final structure of my data set. My sample of Italian and Greek immigrants, which serves as my control group, consists out of 2,241 observations during the period 1991 to 1993. In 74% of cases, we have three observations per individual. The treatment group is marginally larger and consists of 2,647 observations. In 77% of cases, we observe an individual in every year of my sample.

In terms of socio-economic structure, Turkish and Southern European immigrants exhibit a number of similarities due to their common history as guest workers. As Table 1 shows, they have a very similar skill structure, with low skilled being the dominant category. Also with respect to labor market participation and income, there are many similarities. However, there are a number of significant differences with respect to demographic characteristics. Immigrants of Italian and Greek origin used to be older, lived longer in Germany, were longer part of the SOEP, were less likely to be married, and were more often childless than Turkish immigrants. To account for these differences, which potentially could result in a violation of the basic underlying common trend assumption of my identification strategy, I combine my difference-in-difference estimations with a matching approach (Abadie, 2005; Smith and Todd, 2005; Blundell and Dias, 2009). In the first step, I estimate the propensity score using the covariates reported in Table 1 in the pre-treatment year. In the second step, I compute weights using the Epanechnikov kernel matching estimator. The weights are created in such a way that the control group is weighted

¹³In the Appendix, we also report results when using an objective measure of German language skills.

to be similar to the treatment group in the pre-treatment period. In the third step, I estimate my difference-in-difference regressions using the weights derived from the matching estimator. In essence, I estimate DiD regressions in which the observations in the control groups are assigned weights varying between 0 and 1 to resemble the structure of the treatment group. To exclude treated and untreated cases that are not comparable, I restrict the sample to inside the range of common support. Recent examples of applications of this estimation approach are (Becker and Fetzer, 2016; Curto-Grau, 2017).

Table 2 shows that I do not find any statistically significant differences in pre-treatment observables after the matching exercise; instead, the covariates are very balanced. Additional evidence in favor of the quality of matching is provided by Figure B1 in the Appendix. It shows the standardized bias after matching for all variables used to estimate the propensity score.¹⁴ Only one variable has a standard bias slightly larger than 5%, which is a standard threshold used in the literature. In sum, both tables suggest that the matching procedure was successful.

4 Main Results

As a starting point, it is instructive to look at the means of my outcomes of interest in the treatment and control group before and after the increase in xenophobic violence. This is done in Table 3. The first row shows the average subjective well-being of Southern European and Turkish migrants in 1991 before the wave of hate crimes,

¹⁴The standardized bias is defined as the difference of sample means in the treated and matched control subsamples as a percentage of the square root of the average of sample variances in both groups (Caliendo and Kopeinig, 2008).

and in 1993 after the attacks in Moelln, as well as their corresponding changes during this period. The figures show that subjective well-being declined in both groups over time. However, the decrease in well-being was much more pronounced among Turkish immigrants. This is reflected in the simple, unconditional difference-in-differences estimate provided in the last column of Table 3. It suggests that the wave of xenophobic attacks reduced subjective well-being of Turks by 0.23 points.

The second line of Table 3 reports the share of respondents who want to return to their home country within the next 5 years. While this share was almost constant between 1991 and 1993 within the control group, we see a strong increase in return intentions after the outbreak of violence among Turks. The naïve DiD estimate suggests that the xenophobic attacks led to an increase in return intentions among Turks by 6 percentage points. With respect to language acquisition, both groups instead experienced a positive development. However, the increase in the share of people speaking good to very good German was less pronounced within the treatment group. Overall, Table 3 delivers first suggestive evidence that the massive increase in xenophobic violence in 1991, which culminated in the fire attacks in Moelln and Solingen in 1992 and 1993, negatively affected the integration of immigrants in Germany. In the following, I will investigate whether this finding continues to hold when I account for differences in observable characteristics between the treatment and control group.

Table 4 provides my main results using the difference-in-differences matching estimator described in the previous section. I start in column 1 with reporting the result of estimating equation (1) using weights derived from Propensity Score Matching when the dependent variable is subjective well-being. Standard errors are

clustered at the household level, as this is the primary sampling unit of the SOEP.¹⁵ I find that xenophobic violence had a negative significant impact on subjective well-being of exposed immigrants in 1993. The estimated coefficient implies that the rise in xenophobic violence reduced the subjective well-being of Turkish immigrants by approximately 0.36 points, which is about 5% of the mean and 19% of the standard deviation in my estimation sample (see Table A2 in the Appendix). The true causal effect might be even larger, as I cannot rule out that the well-being of individuals in the control group might have also been harmed by the xenophobic violence to some extent. The magnitude of the estimated impact is in the range of studies analyzing the impact of terrorism on well-being. For instance, Metcalfe et al. (2011) conclude that the 9/11 attacks reduced mental well-being in the United Kingdom by 7% of its standard deviation. In a recent paper, Clark, Doyle, and Stanca (2017) find that the Boston Marathon Bombings lowered subjective well-being, derived from unique diary data, by over a third of its standard deviation.

The estimate in column 2 of Table 4 suggests that anti-immigrant violence also increased return intentions of Turkish immigrants in 1993 after the fire attacks in Moelln took place. In reaction to the events, exposed immigrants were almost 10 percentage points more likely to plan to return to their home country within 5 years.¹⁶ The magnitude of the impact is remarkable, as the estimated effect corresponds to 56% of the sample mean and 25% of the standard deviation. My results complement the findings of Friebel et al. (2013), who demonstrated that incidents of xenophobic violence in South Africa reduced migration intentions among potential

¹⁵See Abadie, Athey, Imbens, and Wooldridge (2017) for a discussion about the appropriate level of clustering.

¹⁶In line with this, I also find a positive impact on the likelihood of reporting a strong attachment to the country of origin; see Table B2 in the Appendix.

migrants in Mozambique by approximately 5 percentage points, which corresponds to approximately 14% of the mean.

I have also analyzed how far these return intentions result in actual return migration. For this purpose, I have constructed two proxy measures of outmigration, as the SOEP does not contain any accurate measure of realized return migration. The first measure is based on attrition, while the second uses information from drop-out studies. The corresponding results are reported and discussed in detail in Appendix B.2. In sum, they deliver some first evidence that xenophobic violence not only affects migration intentions, but also actual migration.

As we know from previous studies, return intentions influence migrant behavior in many ways (e.g. Dustmann and Mestres, 2010). Among others, they lower incentives for investment in country-specific skills. For this purpose, I have analyzed the impact on German language skills among those immigrants who have not returned to their home country within 5 years after the violence started. In other words, I excluded those who realized their return intentions. As column 3 of Table 4 shows, the probability of speaking good to very good German is lowered by the wave of hostility against immigrants by approximately 10 percentage points, which is approximately 20% of the sample mean and standard deviation. This is driven by the fact that Turkish immigrants decreased their accumulation of language skills, while the control group continued to experience a growing share of respondents with good German language skills (see Table 3). The pattern is very similar if we use an objective measure of language proficiency. The corresponding results are reported in the Appendix in Table B2. My results are in line with the findings of Gould and Klor (2016), who demonstrated that the post-9/11 increase in anti-Muslim crime in

the United States reduced the proficiency of English among U.S. Muslims.

In Table 5, I provide a series of robustness checks to test the sensitivity of my findings. Column 1 shows the estimates from my benchmark specification. Column 2 reports results when including respondents of all ages, while column 3 focuses on foreign-born only. In both latter cases, my coefficients of interest remain almost unchanged. Column 4 provides estimates from difference-in-differences regressions without matching when controlling for exogenous characteristics, such as gender, age, second-generation migrant, years since migration, and education. The size and significance of the coefficients are very similar to those of the naïve DiD estimates provided in Table 3. Finally, my results also hold if I include those variables used to estimate the propensity score as controls in my matched DiD estimations. The corresponding results are reported in Table B3.

My identification strategy relies on the crucial assumption that the chosen integration outcomes of South European and Turkish immigrants follow the same time trend behavior. In other words, I assume that time trends in integration outcomes would be the same for both groups without the shock in xenophobic violence. In the following, I will conduct a placebo treatment to test whether the basic common trend assumption holds. In a first step, I extend my sample to the pre-treatment period of 1986 to 1989, during which the number of incidents of xenophobic violence in West Germany was very low (Hennig, 1993). By doing so, I can compare the behavior of the control group (Southern European immigrants) with the behavior of the treatment group (Turkish immigrants) prior to the treatment. I then assume that xenophobic attacks happened in the second half of 1986 after the interviews took place and, and estimate difference-in-differences regressions as outlined in equa-

tion 1. Table 6 provides the corresponding estimates. In all cases, coefficients of my placebo treatment are not significantly different from zero, supporting my assumption of equal trends for Turkish and Southern European immigrants. The same hold true without matching (Table B4) and when using a different time window (Table B5).

However, a remaining concern is that another event or shock could have happened between the middle of 1991 and 1993 which was unrelated to the increase in xenophobic violence that affected the treatment and control group in different ways. In the case of return intentions, this could have been an event in Turkey, Italy, or Greece which acted as a pull factor for return migration. To address this concern, I further explore the timing of the fire attack in Solingen, which took place on May 29, 1993. In Table 7, I report estimates from a specification which includes only observations from interviews conducted between April and August of 1993.¹⁷ As the treatment, I define the fire attacks in Solingen. Every Turk who has been interviewed on or after the day of the attack in the aforementioned time window is being defined as treated.¹⁸ Focusing on the first months before and after the Solingen attack makes it fairly unlikely to produce estimates which could have been affected by a parallel, unrelated shock which affected Turks and Southern Europeans differently. In contrast to the other regressions reported, my sample now consists of repeated cross-sections. Given the large impact of the event, I would expect to find a substantial effect on life satisfaction. The a priori expectation about return intentions might be less clear, while I would not expect to find any effect on language skills as these would need some time to be affected. The results in Table 7 are

¹⁷This gives us a symmetric time window of 3 months before and after the events.

¹⁸I include those respondents interviewed on May 29, as the attack happened in the early morning.

in-line with my expectations. I find a strong and significant impact on subjective well-being and return intentions, and no significant effect on language skills. The fact that we also find an impact on subjective well-being and return intentions when exploiting only within-year variation speaks in favor of my assumption that events or shocks unrelated to the increase in xenophobic violence have the same effect on the treatment and control group. In other words, the estimates in Table 7 support the common shock assumption.

5 Impact Heterogeneity

In the following, I will investigate whether the impact found varies along various dimensions. A natural first step is to test how far the effects vary over time. Table 8 shows my benchmark results in column 2, as well as the estimates for one year earlier (column 1) and one year later (column 3). I find that subjective well-being was already reduced in 1992, while I do not find any response in return intentions in the first year after the outbreak of violence started.¹⁹ However, I do find that intentions to return had not only been affected in 1993 after the events in Moelln, but also in 1994 after the attacks in Solingen. For subjective well-being, I find a negative insignificant effect in 1994 which is not statistically different from the effect found in 1993.

Next, we split the estimation sample by skill. Table 9 shows the results for low- and high-skilled immigrants. The latter are defined as having at least an upper sec-

¹⁹In contrast to subjective well-being and language intentions, information on native language skills is asked only every 2 years in the SOEP. I therefore cannot test the impact on language skills in 1992 and 1994.

ondary education, which corresponds to an International Standard Classification of Education (ISCED) level of 3 or higher. Low-skilled immigrants, which comprise the large majority of my sample (see also Table 1), are defined as having only a basic level of education (ISCED levels 0 to 2). For comparison, column 1 shows my benchmark estimates. For each split by skill, I present results of a Wald test that the coefficients are identical. The pattern is very similar across outcomes: the effects are only significant in the subsample of low skilled immigrants, with the size of the coefficients being slightly larger than in the benchmark sample. However, I cannot reject that coefficients in both subsamples are equal.²⁰ In other words, I cannot rule out that low- and high-skilled immigrants have been affected in the same way. However, this might partly be driven by a reduction in statistical power, as the sample sizes substantially shrink when focusing on high-skilled immigrants.

So far, I have treated the xenophobic attacks as a nationwide shock and assumed that all Turkish immigrants in West Germany have been affected by the wave of xenophobic violence, since the events were heavily reported in newspapers and media and within the Turkish community. On the other hand, it is reasonable to assume that the exposure to xenophobic violence depended to some extent on geographic distance. Immigrants living closer to places of xenophobic violence were likely to be more directly affected than immigrants living in areas with very few violent crimes against foreigners. To test this, I exploit the regional variation in crime provided by Krueger and Pischke (1997). In particular, I distinguish between regions with low and high levels of violent anti-immigrant crimes.²¹ The latter are

²⁰The same holds true for the coefficients for low-skilled and the ones in column 1 when using the full sample.

²¹Regions are in my case Raumordnungsregionen. These are functional units situated between the state and municipal levels, of which 75 exist in West Germany.

defined as those regions with incidents of violent crimes above the national average. The other regions are defined as having relatively low levels of violent crimes. The corresponding results are provided in Table 10. The pattern is once again quite stable across outcomes: I only find significant effects in the subsample of regions with above-average crime. The size of the coefficients is slightly larger than in the benchmark sample, although not statistically different. However, I cannot reject that immigrants with different exposure to local crime are equally affected. This speaks in favor of a dominant impact of macro exposure.²² However, to investigate this in greater detail, different types of data would be needed which would have sufficient numbers of observations and detailed information about the geographic location of crimes and respondents.²³

6 Conclusions

These days, most Western states are experiencing controversial debates on the question of how to improve the integration of immigrants and refugees. Parallel to this, many Western societies face growing violence against immigrants and ethnic minorities. This paper addresses these developments by providing new insights on the impact of xenophobic violence on different dimensions of immigrants' integration. For this purpose, this paper exploits a series of massive anti-immigrant attacks in

²²The same holds true when I distinguish between regions which had at least one xenophobic crime in 1991 and at least one crime in 1992, and those which had not. See Table B6 in the Appendix.

²³An obvious take would be to focus on those respondents living in Moelln or Solingen or nearby. However, given the sample size and composition, I cannot focus on those individuals who were living closely to where the major attacks happened. In the region in which Moelln is located, I only have 26 interviews of Turkish respondents in 1992. In the region where Solingen is located, the corresponding number in 1993 is 19.

the early 1990s in West Germany in a difference-in-differences setting. I thereby treat the wave of xenophobic violence as a nationwide shock to the entire Turkish community in Germany, as Turks have been the main target group of xenophobic attacks in West Germany. The empirical results show that macro exposure to xenophobic violence hampers the integration of immigrants in many ways. It not only reduces subjective well-being, but also strengthens intentions to return to the country of origin or migrate to the parental home country, implying reduced incentives to invest in host country-specific human capital. In line with this, I find evidence that xenophobic violence lowers German language accumulation of among those exposed to the violence.

My findings have important policy implications. They point out that xenophobic violence not only has direct costs through lives lost, physically harmed, and threatened victims, but it also has substantial indirect costs by impairing the integration of all those immigrants who belong to the target group of xenophobic attacks. This amplifier effect highlights the necessity to foster social and political initiatives to prevent the emergence of anti-immigrant violence.

References

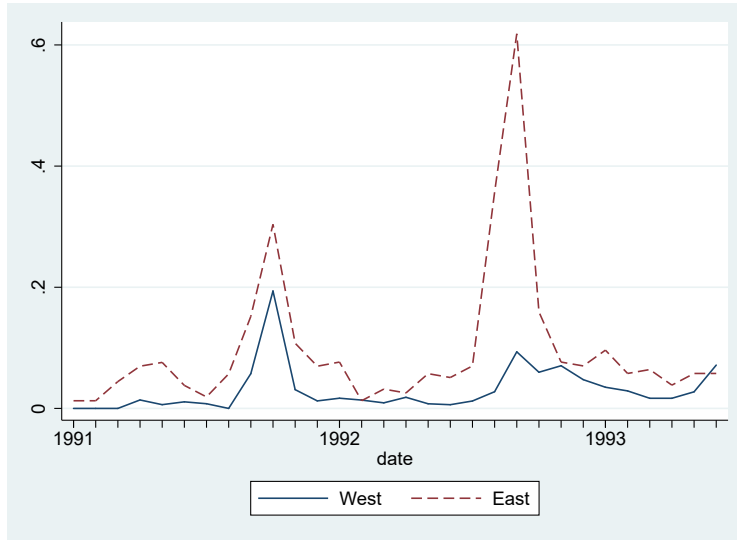
- Abadie, A. (2005). Semiparametric difference-in-differences estimators. *Review of Economic Studies* 72, 1–19.
- Abadie, A., S. Athey, G. W. Imbens, and J. Wooldridge (2017). When should you adjust standard errors for clustering? NBER Working Paper 24003.
- Abouk, R. and S. Adams (2013). School shootings and private school enrollment. *Economics Letters* 118(2), 297–299.
- Barone, G., A. D’Ignazio, G. de Blasio, and P. Naticchioni (2016). Mr. Rossi, Mr. Hu and politics. The role of immigration in shaping natives voting behaviour. *Journal of Public Economics* 136(1–13).
- Becker, S. O. and T. Fetzer (2016). Does migration cause extreme voting? *CAGE Working Paper* 306/2016..
- Bleakley, H. and A. Chin (2010). Age at arrival, english proficiency, and social assimilation among us immigrants. *American Economic Journal. Applied Economics* 2(1), 165–192.
- Blundell, R. and M. C. Dias (2009). Alternative approaches to evaluation in empirical microeconomics. *Journal of Human Resources* 44, 565–640.
- Bundesamt für Migration (2015). Aktuelle Zahlen zu Asyl. Nuremberg.
- Caliendo, M. and S. Kopeinig (2008). Some practical guidance for the implementation of propensity score matching. *Journal of Economic Surveys* 22, 31–72.
- Chiswick, B. R. (1991). Speaking, reading, and earnings among low-skilled immigrants. *Journal of Labor Economics* 9(2), 149–170.

- Clark, A. E., O. Doyle, and E. G. F. Stancanelli (2017). The impact of terrorism on well-being: Evidence from the boston marathon bombing. *UCD Geary Institute Discussion Papers WP2017/08*.
- Curto-Grau, M. (2017). Voters responsiveness to public employment policies. *Public Choice* 170, 143–169.
- Dancygier, R. M. (2010). *Immigration and Conflict in Europe*. Cambridge Univ. Press, New York.
- De Coulon, A., D. Radu, and M. F. Steinhardt (2016). Pane e cioccolata: The effects of native attitudes on return migration. *Review of International Economics* 24, 253–281.
- Der Spiegel (1992). Moerder von rechts. 49(December 6). Cover Story.
- Dustmann, C. and J. Mestres (2010). Remittances and temporary migration. *Journal of Development Economics* 92, 62–70.
- Facchini, G. and A. M. Mayda (2009). Individual attitudes towards immigrants: Welfare-state determinants across countries. *Review of Economics and Statistics* 91, 295–314.
- Falk, A., A. Kuhn, and J. Zweimüller (2011). Unemployment and right-wing extremist crime. *Scandinavian Journal of Economics* 113, 260–285.
- Friebel, G., J. M. Gallego, and M. Mendola (2013). Xenophobic attacks, migration intentions, and networks: Evidence from the south of africa. *Journal of Population Economics* 26(2), 555–591.
- Gould, E. D. and E. F. Klor (2016). The long-run effect of 9/11: Terrorism, backlash, and the assimilation of muslim immigrants in the west. *The Economic Journal* 126, 2064–2114.

- Halla, M., A. F. Wagner, and J. Zweimueller (2017). Immigration and voting for the far right. *Journal of the European Economic Association* 15(6), 1341–1385.
- Hennig, E. (1993). Neonazistische Militanz und fremdenfeindliche Lebensformen in der alten und neuen Bundesrepublik Deutschland. In H.-U. Otto and R. Merten (Eds.), *Rechtssradikale Gewalt im vereinigten Deutschland*, pp. 64–79. Leske und Buderich, Opladen.
- Knabe, A., S. Rätzel, and S. L. Thomsen (2013). Right-wing extremism and the well-being of immigrants. *Kyklos* 66, 567–590.
- Kroh, M. and H. Kroeger (2017). Lifespell: Information on the pre- and post-survey history of soep-respondents. In J. Goebel (Ed.), *SOEP-Core v32 Documentation on Biography and Life History Data*, Series D, Variable Descriptions and Coding. DIW.
- Krueger, A. B. and J.-S. Pischke (1997). A statistical analysis of crime against foreigners in unified Germany. *Journal of Human Resources* 32, 182–209.
- Kuhlenkasper, T. and M. F. Steinhardt (2017). Who leaves and when? selective outmigration of immigrants from Germany. *Economic Systems* 41(4), 610–621.
- Metcalfe, R., N. Powdthavee, and P. Dolan (2011). Destruction and distress: Using a quasi-experiment to show the effects of the september 11 attacks on mental well-being in the united kingdom. *The Economic Journal* 121(550), F81–F103.
- New York Times (1993). Thousands of germans rally for the slain turks. (June 4). Author: Stephen Kinzer.
- Nwabuzo, O. and L. Schaeder (2017). Racism and discrimination in the context of migration to Europe. *European Network Against Racism Shadow Report 2015-2016*.

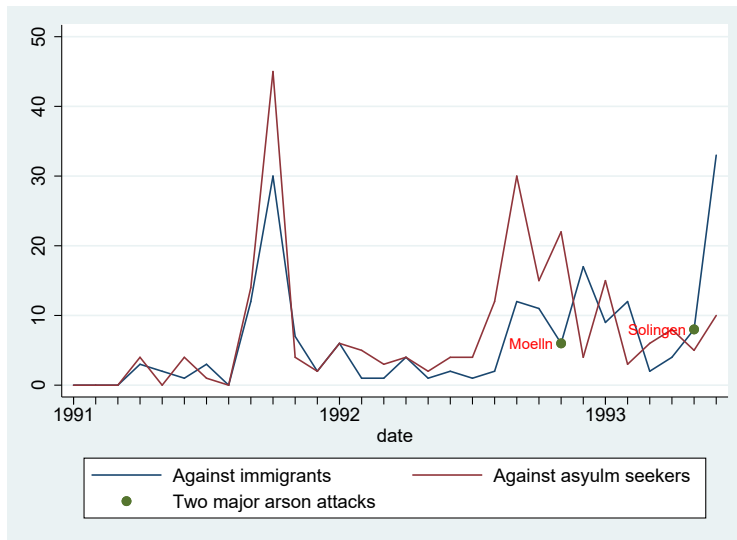
- OECD (2018). International migration outlook 2018. Technical report, OECD Publishing, Paris.
- Otto, A. H. and M. F. Steinhardt (2014). Immigration and election outcomes - Evidence from city districts in Hamburg. *Regional Science and Urban Economics* 45, 67–79.
- Poutvaara, P. and O. Ropponen (2018). Shocking news and cognitive performance. *European Journal of Political Economy* 51, 93–106.
- Sachverständigenrat für Zuwanderung und Integration (2004). Migration und Integration - Erfahrungen nutzen, Neues wagen. Jahrgutachten 2004. Bundesministerium des Innern.
- Smith, J. A. and P. E. Todd (2005). Does matching overcome lalonde’s critique of nonexperimental estimators? *Journal of Econometrics* 125(1), 305–353.
- The Economist (2015). Playing with fear. *December 12*.
- Wagner, G., J. Frick, and J. Schupp (2007). The German Socio-Economic Panel Study (SOEP) - Scope, evolution and enhancements. *Journal of Applied Social Science Studies* 127, 139–169.

FIGURE 1: CRIMES AGAINST FOREIGNERS PER 100,000 INHABITANTS REPORTED BY NEWS-PAPERS, JANUARY 1991 - JUNE 1993



Source: Own calculations with data used by Krueger and Pischke (1997).

FIGURE 2: VIOLENT CRIMES AGAINST FOREIGNERS IN WEST GERMANY REPORTED BY NEWS-PAPERS, JANUARY 1991 - JUNE 1993



Source: Own calculations with data used by Krueger and Pischke (1997).

TABLE 1: SUMMARY STATISTICS: MEANS AND DIFFERENCES, 1991

	(1)	(2)	(3)
	Control Group	Treatment Group	(1)-(2)
female	0.44 (0.50)	0.47 (0.50)	-0.02 (-0.86)
2ndGen Migrant	0.20 (0.40)	0.11 (0.32)	0.08*** (4.49)
age	38.38 (13.71)	34.29 (13.23)	4.10*** (5.76)
YSM	21.47 (6.80)	16.48 (6.43)	4.98*** (14.30)
YearsInSoep	6.65 (1.24)	6.22 (1.77)	0.43*** (5.21)
single	0.30 (0.46)	0.24 (0.43)	0.06* (2.55)
married	0.69 (0.46)	0.73 (0.44)	-0.04 (-1.85)
children	0.79 (0.41)	0.91 (0.29)	-0.12*** (-6.66)
low-skilled	0.68 (0.47)	0.68 (0.47)	0.00 (0.11)
medium-skilled	0.29 (0.45)	0.27 (0.45)	0.01 (0.58)
high-skilled	0.03 (0.16)	0.02 (0.13)	0.01 (1.23)
logRealHHIncom	7.60 (0.41)	7.58 (0.51)	0.02 (0.87)
unemployed	0.05 (0.23)	0.07 (0.26)	-0.02 (-1.54)
part time work	0.06 (0.23)	0.07 (0.26)	-0.02 (-1.32)
working	0.73 (0.44)	0.60 (0.49)	0.13*** (5.22)
Observations	639	814	1453

Notes: Standard deviations in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$

TABLE 2: SUMMARY STATISTICS: MEANS AND DIFFERENCES, MATCHED, 1991

	(1) Control Group	(2) Treatment Group	(3) (1)-(2)
female	0.45 (0.50)	0.46 (0.50)	0.01 (0.51)
2ndGen Migrant	0.12 (0.32)	0.11 (0.32)	-0.01 (-0.34)
age	34.46 (12.09)	34.37 (13.24)	-0.09 (-0.15)
YSM	16.67 (6.79)	16.68 (6.28)	0.01 (0.03)
YearsInSoep	6.31 (1.70)	6.28 (1.71)	-0.02 (-0.27)
single	0.26 (0.44)	0.24 (0.43)	-0.02 (-0.76)
married	0.71 (0.45)	0.73 (0.45)	0.01 (0.54)
children	0.91 (0.28)	0.91 (0.29)	-0.00 (-0.16)
low-skilled	0.71 (0.46)	0.69 (0.46)	-0.02 (-0.82)
medium-skilled	0.26 (0.44)	0.28 (0.45)	0.01 (0.57)
high-skilled	0.02 (0.13)	0.02 (0.13)	0.00 (0.09)
logRealHHIncom	7.60 (0.38)	7.58 (0.51)	-0.02 (-0.78)
unemployed	0.09 (0.28)	0.07 (0.26)	-0.01 (-1.02)
part time work	0.08 (0.26)	0.07 (0.26)	-0.00 (-0.07)
working	0.62 (0.48)	0.61 (0.49)	-0.02 (-0.63)
Observations	639	801	1440

Notes: Standard deviations in parentheses. * $p < .10$, ** $p < .05$,
*** $p < .01$

TABLE 3: AVERAGE OUTCOMES BEFORE AND AFTER THE RISE IN XENOPHOBIC VIOLENCE

	1991	1993	Difference	1991	1993	Difference	DiD
Subjective Well-Being	7.29 (0.08)	7.19 (0.08)	-0.10 (0.08)	7.08 (0.09)	6.75 (0.09)	-0.33 (0.10)	-0.23 (0.12)
Return Intentions	0.19 (0.02)	0.18 (0.02)	-0.01 (0.02)	0.15 (0.02)	0.19 (0.02)	0.05 (0.02)	0.06 (0.03)
German Language Skills	0.59 (0.02)	0.65 (0.02)	0.07 (0.02)	0.48 (0.02)	0.50 (0.02)	0.02 (0.02)	-0.05 (0.03)

Notes: Means and standard errors clustered at the household level (in parentheses) estimated by OLS regressions.

TABLE 4: MAIN RESULTS

	Subjective Well-Being	Return Intentions	German Language Skills
Diff-in-Diff	-0.348** (0.143)	0.0953*** (0.0360)	-0.104*** (0.0346)
Observations	2726	2628	2471

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$

TABLE 5: ROBUSTNESS CHECKS

	(1) Benchmark	(2) All Ages	(3) Foreign Born Only	(4) Unmatched
Subjective Well-Being	-0.348** (0.143)	-0.339** (0.141)	-0.343** (0.158)	-0.210* (0.126)
Return Intentions	0.0953*** (0.0360)	0.0889** (0.0350)	0.0876** (0.0401)	0.0607** (0.0286)
German Language Skills	-0.104*** (0.0346)	-0.0926*** (0.0336)	-0.0978*** (0.0366)	-0.0554** (0.0254)

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$

TABLE 6: PLACEBO TESTS

	(1)	(2)	(3)
	1987	1988	1989
Subjective Well-Being	0.0307 (0.170)	0.0622 (0.173)	0.00718 (0.198)
Return Intentions	-0.0156 (0.0402)	-0.00958 (0.0451)	-0.000964 (0.0445)
German Language Skills	-0.0325 (0.0309)	-	-0.0104 (0.0375)

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$

TABLE 7: VARIATION IN 1993 ONLY

	Subjective Well-Being	Return Intentions	German Language Skills
Diff-in-Diff	-0.831** (0.419)	0.177* (0.0983)	-0.0854 (0.128)
Observations	1396	1347	1224

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$

TABLE 8: IMPACT BY TIME

	(1)	(2)	(3)
	1992	1993	1994
Subjective Well-Being	-0.242** (0.120)	-0.348** (0.143)	-0.245 (0.154)
Return Intentions	0.0287 (0.0319)	0.0953*** (0.0360)	0.0852** (0.0394)
German Language Skills	-	-0.104*** (0.0346)	-

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$

TABLE 9: IMPACT BY SKILLS

	(1) Benchmark	(2) Low-skilled	(3) High-skilled
Subjective Well-Being	-0.339** (0.141)	-0.400** (0.168)	-0.350 (0.251)
P-val, coefs (2) and (3) equal		0.85	
<i>N</i>	2808	1906	858
Return Intentions	0.0889** (0.0350)	0.111** (0.0438)	0.0497 (0.0432)
P-val, coefs (2) and (3) equal		0.30	
<i>N</i>	2712	1865	765
Language Skills	-0.0926*** (0.0336)	-0.120*** (0.0439)	-0.0293 (0.0601)
P-val, coefs (2) and (3) equal		0.18	
<i>N</i>	2523	1699	745

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$

TABLE 10: IMPACT BY REGION

	(1) Benchmark	(2) Low Crime Region	(3) High Crime Region
Subjective Well-Being	-0.339** (0.141)	-0.199 (0.246)	-0.532*** (0.175)
P-val, coefs (2) and (3) equal		0.25	
<i>N</i>	2808	1185	1558
Return Intentions	0.0889** (0.0350)	0.0502 (0.0573)	0.127*** (0.0434)
P-val, coefs (2) and (3) equal		0.30	
<i>N</i>	2712	1151	1503
Language Skills	-0.0926*** (0.0336)	-0.0556 (0.0503)	-0.0940** (0.0442)
P-val, coefs (2) and (3) equal		0.59	
<i>N</i>	2523	1046	1410

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$

Appendix A Data and Variable Definitions

TABLE A1: SAMPLE STRUCTURE

	(1) Control Group	(2) Treatment Group
1991	753	878
1992	757	898
1993	731	871
Observations	2241	2647

TABLE A2: SUMMARY STATISTICS: OUTCOMES , 1991

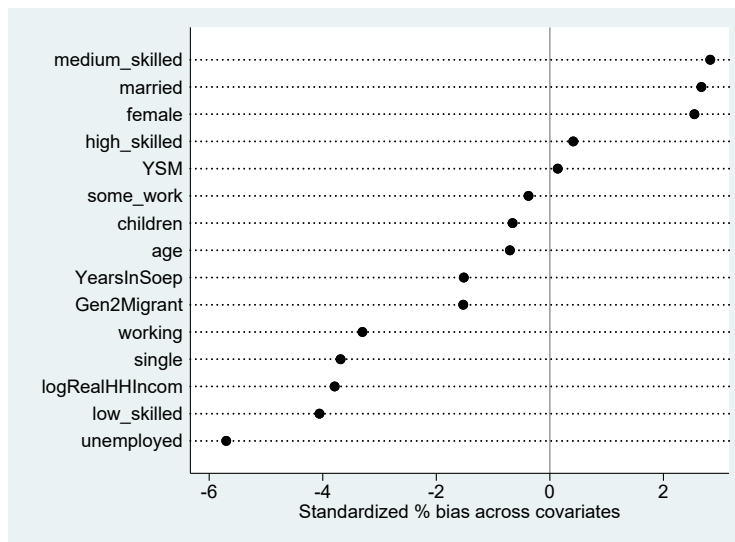
	(1) All
Life Satisfaction	7.16 (1.80)
ReturnSoon	0.17 (0.38)
GoodGerman	0.51 (0.50)
Observations	1453

Notes: Standard deviations in parentheses.

Appendix B Supplementary Results and Robustness Checks

B.1 Matching

FIGURE B1: SELECTION BIAS IN COVARIATES AFTER MATCHING



B.2 Return Migration

As the SOEP data set does not include a measure of return migration, I needed to construct two different proxy measures. The first measure is based on panel attrition excluding those cases in which respondents leave the sample due to death (natural attrition). The corresponding variable takes the value of 1 in year t if a respondent leaves the sample in year $t+1$ for reasons other than death. The second measures uses information from the life spell data set, which includes information from panel dropout studies based on public registers and fieldwork (Kroh and Kroeger, 2017;

Kuhlenkasper and Steinhardt, 2017). The corresponding variable takes the value of 1 in year t if I know from panel dropout studies that the respondent left the SOEP in $t+1$ and lived in a foreign country afterwards. The first measure, proxy A, tends to overestimate true return migration, as it also includes respondents who leave the sample and stay in the country. The second measure, proxy B, instead tends to under-report return migration, as it captures only those cases in which dropout studies were able to identify the whereabouts of attritors. According to the first measure, 6.5 % percent of migrants who have been part of SOEP in 1991 dropped out of SOEP in 1993, while the second measure reports for the same group that 1.5 % of respondents returned to their home country in 1993. Given the prospective nature of both variables, I use 1990 as the reference year in the DiD regression. The results, reported in Table B1, suggest that xenophobic events not only affected return intentions, but also resulted in realized returns. The magnitude of the impact is remarkably large. According to the estimates, the outbreak in xenophobic crime increased the chance to drop out of SOEP by nearly 9 percentage points. The effect on return migration, measured with information from the life spell data, is even larger given the underlying distribution of the variable. However, given the imprecise and incomplete measure of both return migration proxy measures, the estimates should be interpreted with caution.

Nonetheless, my findings are in line with aggregate trends in outflows from Germany to Turkey, Greece, and Italy in the period of interest. As Figure B2 shows, the level of outflows to Turkey increased strongly between 1991 and 1993 during the outbreak of xenophobic violence. The outflow of Italians, which had a very similar pattern to those of Turks until 1991, instead slightly decreased after 1991.

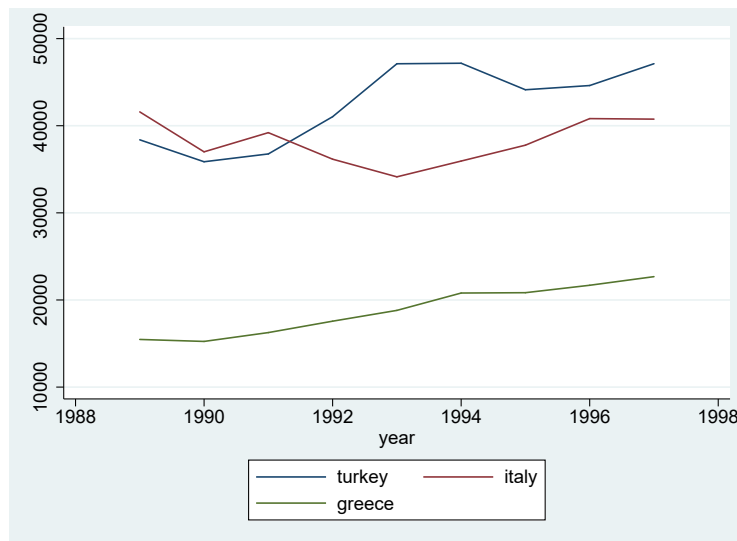
The pattern of Greeks is in so far distinct from those of Italian and Turks, as it is characterized by a modest and constant increase since 1990.

TABLE B1: RETURN MIGRATION

	Return Migration Proxy A	Return Migration Proxy B
Diff-in-Diff	0.0867** (0.0346)	0.0537** (0.0243)
Observations	2785	2785

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$

FIGURE B2: OUTFLOWS FROM GERMANY, 1989-1997



Source: Own calculations with data provided by the Federal Statistical Office of Germany.

B.3 Additional Outcomes

To measure the attachment to the home country, I make use of a question asking about how much an immigrant feels as a Turk/Italian/Greek while living in Germany. Respondents answering that they strongly or very strongly identify as a

Turk/Italian/Greek are coded as having a strong attachment to the country of origin, respectively the parental country of origin in case of second-generation migrants.

As an objective measure of language skills, I rely on information reported by the interviewer. The variable *Interview Help* takes the value of 1 if the respondent needed help from the interviewer to fill out the questionnaire. This includes cases in which a translator was needed to conduct the interview.

TABLE B2: ADDITIONAL OUTCOMES

	Strong Attachment to Country of Origin	Interview Help
Diff-in-Diff	0.0717* (0.0390)	0.0838** (0.0417)
Observations	2436	2536

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$

B.4 Regression Adjusted DiD Matching Strategy

Table B3 provides results when applying a regression-adjusted difference-in-differences matching estimator. As controls, I use gender, age, second-generation migrant, years since migration, and education, which are exogenous to the treatment. I do not use income and labor force status, as these could potentially be affected by the wave of xenophobic violence.

TABLE B3: REGRESSION ADJUSTED BENCHMARK RESULTS

	Subjective Well-Being	Return Intentions	German Language Skills
Diff-in-Diff	-0.333** (0.145)	0.0856** (0.0355)	-0.0957*** (0.0343)
Observations	2726	2628	2471

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$

B.5 Alternative Placebos

TABLE B4: PLACEBO TESTS, UNMATCHED SAMPLE

	(1)	(2)	(3)
	1987	1988	1989
Subjective Well-Being	-0.0102 (0.148)	-0.0243 (0.150)	-0.0995 (0.161)
Return Intentions	-0.0117 (0.0337)	-0.0150 (0.0349)	-0.0294 (0.0353)
German Language Skills	0.00684 (0.0253)	-	0.0151 (0.0266)

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$

TABLE B5: ALTERNATIVE PLACEBO TESTS

	(1)	(2)	(3)
	1988	1989	1990
Subjective Well-Being	0.0533 (0.163)	-0.0343 (0.177)	0.0595 (0.167)
Return Intentions	0.0148 (0.0402)	0.0374 (0.0415)	-0.0300 (0.0438)
German Language Skills	-	0.00732 (0.0340)	-

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$

B.6 Alternative Micro Exposure

TABLE B6: IMPACT BY REGION

	(1)	(2)	(3)
	Benchmark	No Crime Region	Crime Region
Subjective Well-Being	-0.339** (0.141)	-0.297 (0.276)	-0.354** (0.170)
P-val, coefs (2) and (3) equal		0.86	
<i>N</i>	2808	880	1886
Return Intentions	0.0889** (0.0350)	0.124* (0.0664)	0.0636 (0.0409)
P-val, coefs (2) and (3) equal		0.42	
<i>N</i>	2712	833	1838
Language Skills	-0.0926*** (0.0336)	-0.0574 (0.0533)	-0.0863** (0.0413)
P-val, coefs (2) and (3) equal		0.69	
<i>N</i>	2523	779	1688

Notes: Standard errors (in parentheses) are clustered at the household level. * $p < .10$, ** $p < .05$, *** $p < .01$