MAX PLANCK INSTITUTE
FOR DEMOGRAPHIC RESEARCH

Konrad-Zuse-Strasse 1 · D-18057 Rostock · Germany · Tel +49 (0) 3 81 20 81 - 0 · Fax +49 (0) 3 81 20 81 - 202 · www.demogr.mpg.de

MPIDR Working Paper WP 2023-035 I August 2023
https://doi.org/10.4054/MPIDR-WP-2023-035

The interplay between refugee inflows and media coverage in determining attitudes towards immigration in Germany

Chia-Jung Tsai I tsai@demogr.mpg.de
R. Gordon Rinderknecht I rinderknecht@demogr.mpg.de
Emilio Zagheni I office-zagheni@demogr.mpg.de

The interplay between refugee inflows and media coverage in determining attitudes towards immigration in Germany

Chia-Jung Tsai, R. Gordon Rinderknecht, Emilio Zagheni
Max-Planck Institute for Demographic Research

Abstract

In this study, we examined the role media plays in moderating the relationship between refugee influx and anti-immigration attitudes across German regions. Specifically, we focused on the salience of refugees in local news media in each region, and we explored the extent to which such attention heightened the connection between increasing refugees in an area and growth in anti-immigration views. We conducted this analysis using data from the German Socio-Economic-Panel (2011-2017), asylum applications data from the Federal Office of Statistics, and the Gdelt database, which is a real-time news database. Using a mixed effect approach, we found that the effect of refugee influx on anti-immigration attitudes across regions was moderated as expected by the salience of refugees in local news, albeit in former East Germany but not in former West Germany. We contend that this difference between East and West Germany relates to East Germany's relatively stronger ethnonationalist attitudes. Based on this, we conclude that refugee salience in media plays an essential, albeit inconsistent, role in characterizing changes in population composition as threatening, and thus in triggering anti-immigration attitudes.

1. Introduction

Why do people have differential perceptions of population change caused by mass migration? (Butz and Kehrberg 2019; Guia 2016; Jaret 1999; Lippard 2011; Smith 2016) The rise of anti-immigration attitudes in Europe over recent decades has been attributed to the large number of immigrants who regard western European countries as their destination. Studies have found that media coverage of demographic change influences the political attitudes and behaviors of residents (Brosius, van Elsas, and de Vreese 2019; Gonzalez O'Brien et al. 2019; Koch et al. 2020; Vestergaard 2020). The media salience, specifically the salience of coverage of demographic change, provides people with a cognitive framework for understanding changes in the surrounding areas (Hopkins 2010). In this study, we argue that news events can amplify people's negative perceptions of the growing outgroup, particularly in the context of the refugee crisis in Germany. Our focus is on the moderating role of refugee-related news events in the local states, and we contribute to the literature by examining the relationships between local media's focus on immigrants and residents' views of immigrants in the German context.

The German case is different from contexts examined in previous studies in several important ways. First, German audiences attach more importance to regional news than other countries. According to a 2012-2013 survey by the Reuters Institute, German audiences are more likely than other countries to report regional newspapers as their primary information source (Hasebrink and Hölig 2013). Therefore, variation in coverage of refugees by local news is likely to have a relatively strong impact on attitudes towards immigrants. Second, the refugee crisis has had a more significant impact on Germany than on other European nations, resulting in criticism of immigration policy (Hornig 2021; Laubenthal 2019). Finally, hostility toward immigration in Germany is partly related to ethnonationalism, with differences in these beliefs remaining from the history of division between the former East and West Germany (Doerr 2021). Previous studies in Germany have either considered both contextual and individual factors together or focused on a major factor causing a strong impact on native attitudes toward immigration (Chen 2020; Frey 2020). However, the factors that moderate demographic

changes and their impact on attitudes toward outgroups at the local level remain relatively blurred. In this paper, we address this ambiguity by investigating how the moderating role of media may work differently in the former East and West Germany.

This paper aims to explore the relationship between the refugee influx and anti-immigration attitudes, and how this relationship is moderated by the salience of refugees in local news media. We combine three datasets—the German Socio-Economic-Panel (GSOEP, 2011-2017), data from the Federal Office of Statistics, and the Gdelt database of news events—and employ multilevel modeling. This paper pays particular attention to the different moderation roles of media in the previous East and West German regions. Additionally, we seek to assess the extent to which regional news events play an essential role in politicizing changes in the surrounding population as threats. Ultimately, this study aims at providing a better understanding of regional differences in the German political climate toward asylum seekers. The rest of the paper is structured as follows. Session 2 reviews the existing literature regarding the effect of refugee presence on attitudes toward immigration, while session 3 examines the literature about the framing role of the media on political attitudes. Session 4 provides context about the regional difference between former West and East German states. Session 5 explains the data sources used, the construction of explanatory variables, and the analytical approach. Session 6 presents our findings, and session 7 offers concluding remarks and our discussion of potential limitations.

2. Perceived threat and immigrant presence

This section provides an overview of the association between perceived threat and immigrant presence on anti-immigration attitudes. An attitude is defined as a mental state of "readiness for response." (Allport 1935: pp. 798-844; Oskamp and Schultz 2005). We usually want to explain one's behavior while referring to his or her attitudes (Pickens 2005). Attitudes toward immigration, therefore, from Oskamp and Schultz (2005), represent a "posture of mind" toward inflows of outgroups. A sufficiently large outgroup is often perceived as a threat to locals, which can lead to hostility (Blalock 1967; Key and Heard 1949). Economic threat arises from the competition with outgroups for scarce resources (e.g. Ben-Nun Bloom et al. 2015; Halikiopoulou and Vlandas 2020; Ponce 2017; Semyonov et al. 2006), while cultural threat is a symbolic concern that a group's cultural norms or identities are violated (Citrin, Reingold, and Green 1990; Citrin et al. 1990; Kinder and Sears 1981; Sears 1988). Cultural threats may arise from exposure to outgroup culture, such as language, or from observing outgroups not putting enough effort into embracing ingroup culture (Taylor 1998; Newman, Hartman, and Taber 2012). Another variant of the threat theory considers the societal level and suggests that outgroups can trigger policy preferences for limiting immigration and immigrant welfare use (Crepaz 2020; Feldman and Stenner 1997). Generally, native residents tend to develop negative attitudes toward outgroups after exposure to an acute outgroup increase or even to a potential increase (Gorodzeisky 2022). In contrast, contact theory posits that intergroup contacts generate positive perceptions toward outgroups (Gordon Willard Allport, Clark, and Pettigrew 1954; Pettigrew 1998; Stein, Post, and Rinden 2000; Wagner et al. 2006). Yet, some variants of contact theory suggest that intergroup contacts can also lead to negative attitudes toward immigrants and refugees. For instance, distant encounters and negative experiences reduce trust in immigrants (Koopmans and Veit 2014). Exposure to immigrants speaking a non-native language may increase cultural threats (Newman, Hartman, and Taber 2012).

The above studies demonstrate how threat theory and contact theory can lead to divergent predictions. This divergence could be attributed to the fact that the effects of these two theories are hard to disentangle, as they may offset each other. Furthermore, contact theory is also used to complement interpretations of null or positive effects of immigrant presence.

For instance, Green et al. (2018) use data from the Swiss International Social Survey Programme to demonstrate that intergroup contacts can alleviate the impact of conservative ideological climates. Through positive contacts and cooperation, stereotypes and negative perceptions generated from racial threats can be effectively eliminated. Additionally, due to differences in day-to-day experiences with immigrants and refugees, and differences in economic and cultural threats depending on one's social status, it is difficult to generalize what influences perceptions toward outgroups based on encounters. This can also be related to the fact that immigrants tend to work in segmented job markets, live in segmented communities, and cannot vote, making them relatively invisible in local society.

Anti-immigration attitudes tend to increase as the immigrant population grows, particularly among those who believe their country accepts more immigrants than other countries (Blinder, Ford, and Ivarsflaten 2013, focusing on Britain). As outgroups are often invisible in society, the media plays a crucial role in increasing their visibility, especially for stigmatized outgroups, such as refugees (Blinder 2015). The media can generate both stereotypes and communicate misperceptions about the size of outgroups among native residents. Since people's attitudes often stem from perceptions rather than reality (Wong 2007), we argue that the media's attention to outgroups (in this case, refugees in Germany) amplifies the effect of perceiving the refugee presence as threats, leading to a rise in anti-immigration attitudes.

3. The framing role of the media

The media plays a critical role in framing public attitudes during times of change. Studies have found that media coverage of demographic change can impact the political attitudes and behaviors of residents (Brosius, van Elsas, and de Vreese 2019; Gonzalez O'Brien et al. 2019; Koch et al. 2020; Vestergaard 2020). This heightened salience provides a cognitive framework for individuals to understand the changes in their surrounding areas (Hopkins 2010). Media salience is defined as a noticeable amount of media coverage that draws people's attention to an issue. This framework is particularly relevant for understanding demographic changes, as it enables native residents to make sense of the evolving makeup of their communities (Hopkins 2010). While this assumption is built based on the long-term trend of nationalization in American political behaviors, regional places (e.g. states and cities) are indicated to matter relatively less for public political attitudes and behaviors (Hopkins 2018) than national news media. Previous research has shown that national newspapers are more likely than local newspapers to frame arguments supporting immigration-restricting bills in terms of threats to economic and public safety (Fryberg et al. 2012). As the amount of news articles about an event increases, the public's attention is drawn to the event (Lee 2009). Exposure to this news provides a signal to alert people to events and changes in their environment.

A recent study also found that exposure to negative contents from mass media of specific topics (e.g. the high risk of domestic violence in the immigrant household) increase negative concerns regarding immigration while others (e.g. scientific studies done by immigrant scientists and international matches won by immigrant soccer players) decrease such concern (Erhard, Heiberger, and Windzio 2022). Hopkins (2010) argues that the media can connect individual perceptions regarding the increasing immigrant population to collective frames. The mass media is key to affect people's perception toward demographic changes because it can evoke predispositions of individuals by emphasizing the most salient symbols in a political controversy (Hopkins 2010). Media effects are mediated through different media outlets (e.g. Carmichael and Brulle 2017; Fung and Scheufele 2014; Gamson et al. 1992; Mutz 1992; Perloff 2021) and can moderate people's perceptions in day-to-day experience. For

example, if someone recently watched a news report about rising rates of immigration, they may perceive it negatively when encountering someone who appears to be an immigrant, framing it as a national crisis. Additionally, Menshikova and van Tubergen (2022) found a positive association of posting negative tweets about immigrants and the salience of immigration in personalized outlets that one follows on Twitter as well as the national news coverage.

Media can frame changes at both local and national levels, depending on the circumstances (Hopkins 2012). Local news events can generate a concentrated impact on certain places. It is also possible to convey political frames through neighborhoods and communities to call attention to changes and to provide ready-made ways of relating them to politics (Hopkins 2012). That is, local news events can raise concerns of residents about changes in their communities, while national news can provide information about changes in the status and growth of the nation. Local and regional news outlets, including both online and in traditional newspapers, have historically dominated the German news market (Harnischmacher 2015), while in the U.S. the distinction between local and national news is becoming less pronounced (Martin and McCrain 2019; Melusky and Richman 2020). Therefore, in Germany, changes in the surrounding living environment might be more likely to change the perceptions toward the outgroup than national news that focus on the harm to the "nation-as-a-whole." In the context of the refugee crisis in Germany, regional news events may play a more important role than national news media in amplifying negative perceptions of the growing outgroup. We therefore focus our analysis on the impact of media salience specifically at the level of regional news.

4. The effect of “East Germany”

In this section, we build on the argument that news events provide frames to amplify people’s negative perceptions of a growing outgroup (Hopkins 2010; 2018). Since frames emanate from individuals' ideologies and the mass media, the pre-existing political ideology of individuals in a particular region becomes essential in shaping attitudes towards immigrants. Therefore, pre-conditions in a region are required to amplify negative attitudes during a mass refugee influx (Hooghe and De Vroome 2015; Kellermann and Winter 2019). The different predispositions in a region signal differential perceptions of people toward refugee influx while receiving information from news outlets. For instance, regions where right-wing supporters are predominant are more likely to exhibit negative attitudes towards outgroups during a refugee influx, often accompanied by economic distress (Ferrari 2021).

The rise of anti-immigration attitudes in Germany is closely tied to ideological outcomes, such as ethno-nationalism, that arise from regional disparities inherited from the previous East and West German divisions (Heinze 2022; Hildebrandt and Trüdinger 2021; Weisskircher 2020). Experiencing decline or perceived vulnerability as well as social marginalization are positively associated with supporting nationalist policies in former East Germany (Hillje 2018). Previous studies have shown that East Germans appeared to be more pro-state but showed less solidarity due to the influence of this long-term division. Alesina and Fuchs-Schündeln (2007) analyzed data from the German Socio-Economic Panel (GSOEP) to conclude that the preference for public social policy related to redistribution is affected by the political regime differences between former East and West Germany. Their finding reveals that East Germans are more pro-state than West Germans due to the effect of Communism via indoctrination or the long-term influence of a large public sector. In addition, Brosig et al. (2010) found that the different political regimes in former East and West Germany affect social norms through a controlled laboratory study. They found that East Germans consistently exhibit less solidarity compared to West Germans, even after the unification in 1990.

Furthermore, Ockenfels and Weimann's (1999) earlier result of a controlled laboratory experiment indicated that less cooperation and solidarity behaviors of people from East Germany appear to be heavily influenced by different cultural-specific norms. Pro-state behaviors and attitudes suggest an embodiment of ethno-nationalism. In general, the insufficient social conditions and norms necessary for the development of a modern economy after reunification suggests lower levels of solidarity and cooperation in East German society. Conversely, the comparable social conditions in the former West Germany make the differences in political attitudes between the two regions more conspicuous.

The differentials in life satisfaction and consumption also represented the different levels of social marginalization between former East and West Germany. Biermann and Welsch (2021) have pointed out how the different ways in which birth cohorts socialized under different political regimes—communist and liberal-capitalist— have contributed to the gap in mentality-related satisfaction. The mentality-related satisfaction indicates happiness patterns above economic, institutional and other material conditions. However, this gap between former East and West Germany has disappeared in the youngest cohort group. Additionally, Fuchs-Schündeln, Krueger, and Sommer (2010) found that, prior to the unification of Germany, inequality remained relatively stable. Although inequality in market wage and earnings increased after the reunification, it was more distinct in the East, and there was some convergence between the two regions. The division of Germany into the communist GDR (German Democratic Republic; DDR, Deutsche Demokratische Republik in German) and the democratic FRG (Federal Republic of Germany; BRD, Bundesrepublik Deutschland in German), as well as the reunification in 1990, were also used by Friehe and Mechtel (2014) as a natural experiment. They found that people in East Germany were more likely to have conspicuous consumption even 18 years after the German reunification.

The relative disadvantage of the former East German region contributes to the hostility about outgroups in this region (Hagan et al. 1999), while the relatively greater development of the former West German regions has made the difference between the two even more pronounced. Despite reunification, the ideological division persists. With regard to regional differences, we argue that local news events can bring a concentrated impact, making individuals feel more exposed to threats (Akay, Bargain, and Elsayed 2020). Media exposure can amplify a certain change in the surrounding area, leading those who are ideologically predisposed to see immigrants as a threat to feel especially threatened. The pre-existing ideology of individuals plays a crucial role in shaping their attitudes towards immigrants. Our paper assesses the hypothesis that the framing effect of the media may not necessarily reverse attitudes of people more open towards outgroups but it may harden the stance of those who are already hostile towards outgroups. It also considers geographic heterogeneity in the response.

5. Methods

This study aims to examine whether and to what extent the effect of the refugee increase on anti-immigration attitudes is moderated by local news events about refugees in Germany. *We hypothesize that (1) the increasing refugee presence in a region increases anti-immigration attitudes in this region, and (2) this effect is strengthened by the media salience about refugees in this region.*

This paper relies on the integration of three data sources. We combine data from the German Socio-Economic Panel (GSOEP), the German Federal Office of Statistics and the Gdelt database. The data is in longitudinal format from 2011 to 2017. In total, there are 183,373 cases from GSOEP across 7 years and 16 German states.

5.1 Dependent variable

The measurement of anti-immigration attitudes comes from GSOEP and uses the question "How concerned are you about the following issues?" and the answer to one of the issues listed in the SOEP core study[1] is: "Immigration to Germany". Tucci (2005) uses the same question from GSOEP to measure negative attitudes toward immigration[2]. There are three values that this variable can take: "very concerned", "somewhat concerned", and "not concerned at all." Tucci (2005) uses the ordered probit model for this ordinal variable; we instead code "very concerned" as 1 (others as 0) as a proxy for anti-immigration attitudes.

We consider that "somewhat concerned" is difficult to be defined as a negative attitude toward immigration. Overall, we consider that a change from "not concerned at all" to "somewhat concerned" does not imply especially strong anti-immigration attitudes. Therefore, we remain conservative in our assessment of changing anti-immigration attitudes by only defining changes in attitudes from "not concerned at all" to "very concerned" and from "somewhat concerned" to "very concerned" as an increase in negative attitudes toward immigration. In addition, since we measure a longitudinal change, recoding an ordinal variable into binary would only decrease the variability. We do this also to avoid exaggerating the effect that we hypothesize. In other words, we choose to proceed in a conservative way. Our robustness checks using the original variable with 3 levels shows that the effect remains in the same direction.

5.2 Independent variables

5.2.1 The refugee presence across regions (states)

Data on inflows of immigrants to Germany, in particular asylum seekers, come from the German Federal Office of Statistics (Statistisches Bundesamt). We use the number of asylum seekers registered before the end of the year (e.g., before 31st Dec 2011 for year 2011) in each German federal states (see the definition of asylum seekers from the German Federal Office of Statistics in Appendix). This statistic indicates the number of arrivals and the short-term stay of asylum seekers not the overall stocks of asylum seekers. We define the refugee presence as the ratio of asylum seeker applications and the size of the total population in each state per year. This variable can be interpreted as a proxy for variations in the native population's exposure to refugees.

Karacuka (2021) measures the share of the refugees in the population of Turkish provinces to test how it affects the voting decisions of Turkish citizens. Usta (2022) uses the number of refugees in a place throughout the year to measure the baseline refugee exposure of Turkish natives. Altındağ and Kaushal (2021) use the historical dispersion of Arabic speakers and the driving distance between Turkish and Syrian residential area as instruments to solve the endogeneity in the geographic dispersion of refugees in Turkey. In European countries, the distribution of the number of refugee registrations is usually decided by the dispersal policy. For example, in Italy, each province receives a certain number of migrants according to the

[1] The original question is "Wie ist es mit den folgenden Gebieten –machen Sie sich da Sorgen?" We use one of the listed issues: "Über die Zuwanderung nach Deutschland." The answer to this question includes three scales: "Große Sorgen," "Einige Sorgen," and "Keine Sorgen."

[2] In the original question, "Sorgen" indicates negative concerns. Therefore, if we interpret it as "positive concerns", it would be incorrect. Diehl and Tucci (2011) interpret this variable as "the fear of immigration." Steinhardt and Poutvaara (2015) translate the word "Sorgen" in this question into "worry," which is closer to the original meaning in the questionnaire of the German version ("How is it with the following topic – immigration to Germany – do you have worries about it?"). We use the official translation of GSOEP website here. However, we have to notice that this question is mean to ask the negative perception of respondents on certain issues.

resident population (Campo, Giunti, and Mendola 2021). Germany, which is the focus of this study, has adopted a similar dispersion policy. Asylum seekers cannot choose the location themselves [3]. The geographic dispersion of asylum seekers in Germany is allocated by a fixed quota calculated by the tax revenue and the resident population of each state[4]. In section 6.1 we can see that the lower numbers of refugee arrivals in the former East German states are also due to the lower fixed quota in these states (e.g., the distribution quotas in 2022 was: 13.04% in Baden-Württemberg and 1.98% in Mecklenburg-Western Pomerania, two states which have large differences tax revenues and population sizes).

We test the cross-sectional relationship between the rate of asylum applications and differential attitudes toward immigrants. The result shows that the higher share of refugee presence (state/ per year) correlates with the higher (negative) concerns about immigration (see Figure A.1 in Appendix).

5.2.2 The media salience of region (state)

The measurement of the media coverage comes from the Gdelt database. The Gdelt is a real-time open database that collects news from news media all over the world, digging into reactions and sentiments of news events. In order to build a real-time, computable record of global societies, GDELT has been monitoring most of the news media in the world. The two main databases from the GDELT project are the Global Knowledge Graph (GKG) and the Event Database. In this study, we use the Event 1.0 database for measuring media salience. Since 2013, more than 300 kinds of physical events, such as riots, protests, and diplomatic exchanges, have been georeferenced and recorded every 15 minutes in the Gdelt Event 1.0 database, dating back to 1979. For example, a sentence like "Some 800,000 Iraqi Kurds sought refuge in Germany last month" would be split into keywords "IRAQI KURDS, SOUGHT REFUGE, GERMANY" and with a CAMEO event code "1033: Demand Humanitarian Aid" (Schrodt 2012). Around 60 features of each event, such as the location of the event action, the total amount of articles, and the average sentiments of articles for each news event, are also included in the event database. One row in the data frame indicates one news event.

At the time of writing, the GDELT event 1.0 database includes news events produced in English format. As German news events are also reported by English outlets inside or outside of Germany, we still use the article amount that we aggregate from these news events as a

[3] According to the Federal Office for Migration and Refugees, "These individuals (asylum seekers) must live and take up their habitual residence at the place to which they were assigned" (**section 23 subsection (4), second sentence** of the Residence Act in conjunction with section 24 subsection. Source: https://www.bamf.de/EN/Themen/AsylFluechtlingsschutz/ResettlementRelocation/Resettlement/resettlement-node.html

[4] From the Federal Office for Migration and Refugees:

- Asylum seekers are initially registered in the closest reception facilities of the respective Federal Land. The responsible reception facility is determined by the EASY ((Erstverteilung Asylbegehrende, initial distribution of asylum seekers) quota system at the initial registration with a fixed admission quota. This is designed to ensure an appropriate and fair distribution among the Federal Länder.
- The admission quota is based on the so-called "Königstein Key"(Königssteiner Schlüssel):
  - Annual recalculation by the Joint Science Conference (Gemeinsame Wissenschaftskonferenz – GWK)
  - Composition: two-thirds tax revenue and one-third population of the Länder
- If a cross-border distribution of asylum seekers is required, the closest destination reception center is selected from those possible. The Federal Office designed the EASY programme together with the Federal Länder and acts as the central distribution and administration office. The allocation to a specific reception centre also determines which branch office of the Federal Office is to process the asylum seeker's application.
  Source:
  https://www.bamf.de/DE/Themen/AsylFluechtlingsschutz/AblaufAsylverfahrens/Erstverteilung/erstverteilung-node.html

proxy variable of the salience of a news topic in the specific German region. The same approach can also be seen in Koch et al. (2020) (see (2) The profile of the GDELT dataset in the Appendix).

In the GDELT event 1.0, the regional information can be identified at the level of states (Bundesland), i.e., the location of the event action. Considering that people usually pay attention particularly to news events happening around them, especially in the case of Germany (Harnischmacher 2015), we define the salience of refugees in news media (sometimes shorted to "refugee salience") as the proportion of refugee-related news articles to the overall number of news articles in one's living state. For example, the salience of refugees in news media in Berlin in 2014 is indicated by the proportion of all news articles related to refugees in Berlin in the year 2014. We show the monthly trend of such salience and the average sentiments of these news events from the GDELT database in Appendix (See Figure A.2).

We do not include the sentiment of the news events in this study. We define media salience as the volume of news, instead of distinguishing the stance of the news. The media salience of a news event is not equal to the media exposure of individuals, since we identify the location from "location of event" not the "location of publication." We focus on media salience, rather than on sentiments of the news, in part because exposure and the tone of the news may be the result of a process of self-selection whereby media consumers may choose media outlets based on their political stances and habits. We concentrate on media salience, operationalized in terms of the number of news articles of news events, as we consider it an effective way for measuring the extent to which residents of specific regions receive the signal of the news event.

5.3 Control variables

Apart from the predictors mentioned above, we also control for the salience of the national media at the macro level, as well as age, education, sex, and nationality at the individual level. The salience of the national media is also measured from the Gdelt database. We acquired the amount of media coverage in the location of "Germany (general)." Since Hopkins (2014) has reported an influence of national media on people's political attitudes, we consider it is necessary to control for this variable.

The individual-level control variables are obtained from GSOEP and defined as follows: age is calculated from the birth year of the respondent; education is a binary variable indicating having been in higher education; nationality is also binary (German: 1, others: 0) as well as sex (male: 1, female: 0). These demographic characteristics are under control since they may have correlations with one's political attitudes.

5.4 Analytical strategy

In this study, we apply a logistic mixed-effect approach, which is also known as the random slope model or the multi-level model. We specify the model as below. In this model, "Anti-Immigration-Attitude" indicates an individual's concerns toward immigration from GSOEP data, "Refugee Presence" indicates the share of asylum applications in an individual's living state, and "Media Salience" indicates the proportion of news articles of refugee topics in an individual's living state. Anti-Immigration-Attitudeij denotes the i-th observation of state j of the response of concerns about immigration.

$$logit(\text{Anti-Immigration-Attitude}_{ij}) = \beta 0 + \beta 1_j \, log\,(\text{Refugee-Presence}_{ij}) * \text{Media-Salience}_{ij} + \delta_t + \varepsilon_{ij}$$

$$logit\ (Anti\text{-}Immigration\text{-}Attitude_{ij}) = ln\ (Anti\text{-}Immigration\text{-}Attitude_{ij}) / (1- Anti\text{-}Immigrationt\text{-}Attitude_{ij})$$

Where $\beta 1_j = \beta 1 + u1_j$, $\beta 1$ is the fixed effect slope at the state level, $u1_j$ allows the state-level variation in the rate of change in y, which indicates the variation of the different slopes in different states. $u1_j$ is thus the random slope. Besides, $\beta 0$ is the fixed intercept[5] and δt is the yearly effect. ε_{ij} represents the residual errors.

Our empirical strategy is to identify the effect of the interaction of the asylum application rate and the media coverage about refugees in one's living state on the anti-immigration attitude of individuals with the geographic level 1 data of the whole Germany and the level 2 data of 16 German states. We adopt a random slope model with a fixed intercept to consider the regional difference of this effect in different German states. Besides this, the yearly effect δt is also controlled. We show the ANOVA test among random intercept model, random slope model fixed intercept and random slope model in the appendix (Table A3). We chose the random slope model with a fixed intercept since we aim to investigate the association of the longitudinal change among our outcome and covariates. Apart from our main model, we also put control variables to check if our main result is robust (see Table A4, A5, and A6 of the appendix).

6. Results

6.1 Media Salience of Refugees and the Influx of Asylum seekers

Figure 1 provides an overview of the change in the media salience of the refugee issue in Germany from 2014 to 2016. The map displays the share of the salience of refugees in news media[6]. The trend indicates that such salience increased sharply in 2015 and remained relatively high in 2016. There is considerable variation across states. In 2015, the media attention is especially salient in Brandenburg, with 4.8%, and Thuringia (Thüringen), with 4.9%. In 2016, it is notably high in Saxony (Sachsen), with 5.8%, Mecklenburg-Western Pomerania (Mecklenburg-Vorpommern), 6.2%, and Hamburg, 6.9%. Overall, the salience of refugees in news media increased significantly during these years, particularly in former East Germany.

In Figure 2, we present the change regarding the influx of asylum seekers in Germany[7]. The ratio of asylum applications relative to the overall state population is not significantly higher in former East Germany compared to states in former West Germany. For example, in 2016 it was 2.4% in North Rhine-Westphalia (Nordrhein-Westfalen), compared to 1.3% in Thuringia. The states of Bremen, Hamburg, and Berlin consistently had the highest proportion of the refugee influx throughout this period. This could be partly attributed to the policy of the fixed admission quota in Germany, which we have discussed in section 5.2.1. In general, the refugee influx increased over the years in most of the regions. However, states in former West Germany experienced higher refugee influx than former East Germany from the refugee crisis. Overall, the refugee influx comprises between 1% and 2.5% of the population in the 16 states during the refugee crisis.

[5] In a mixed effect model, the random intercept is $\beta 0_j = \beta 0 + U0_j$, where $\beta 0$ denotes the fixed effect intercept and $U0_j$ is the variation of the different intercepts in different state. $U0_j$ is not specified in this model since we fix the intercept.

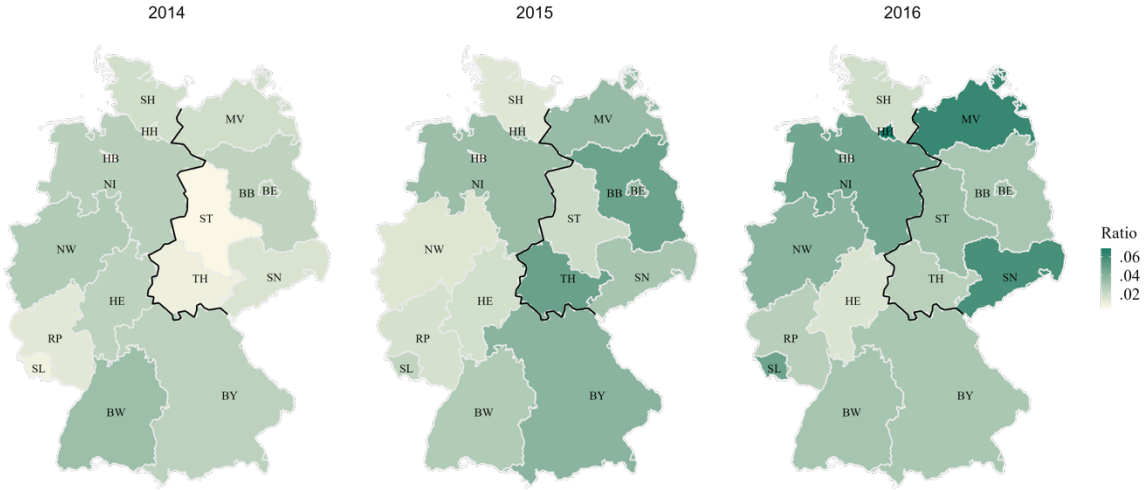
[6] Table A1 in the appendix shows the salience of refugees in media in 16 German states from 2010 to 2017.

[7] Table A2 in the appendix shows the influx of refugees in 16 German states from 2010 to 2017.

A few points are noteworthy. Firstly, areas with high refugee arrivals do not necessarily coincide with areas of prominent media salience on this issue. Although the former East German region resettled relatively fewer refugees, the salience of refugees in news media was higher. Secondly, refugee influxes in the three city states (Bremen, Hamburg, and Berlin) have been the highest, but refugee salience did not always reflect this proportionally. The regional variation in refugee salience and the influx of asylum seekers displays different trends over years.

Figure 1: Salience of Refugee in Media in 16 German states

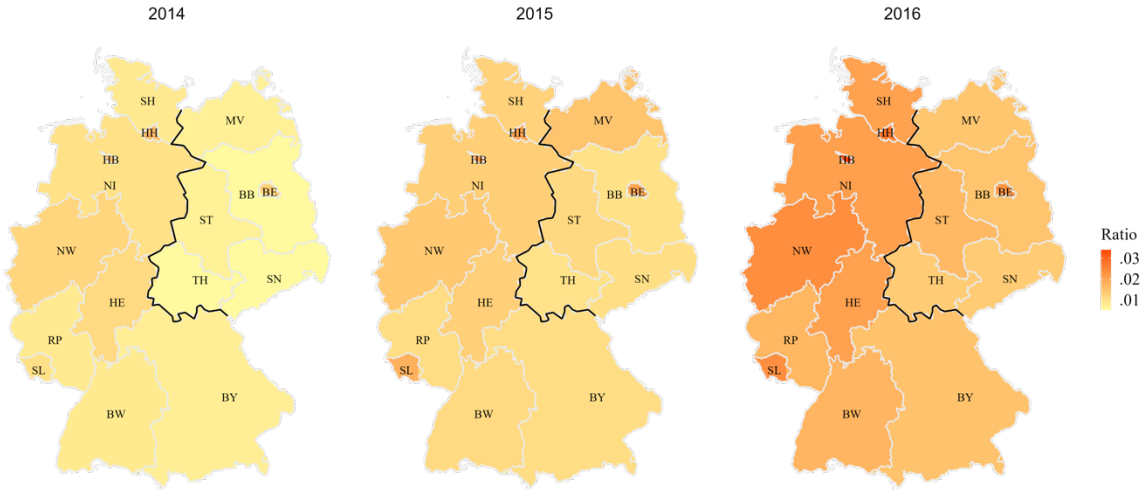
Ratio of the amount of news events including a reference of refugees to the amount of overall news events in one state



Data Source: The Gdelt Database
BW=Baden-Württemberg; BY=Bayern (Bavaria); BE= Berlin; BB=Brandenburg; HB=Bremen; HH=Hamburg; HE=Hessen; NI=Niedersachsen (Lower Saxony); MV=Mecklenburg-Vorpommern (Mecklenburg-Western Pomerania); NW=Nordrhein-Westfalen (North Rhine-Westphalia); RP=Rheinland-Pfalz (Rhineland-Palatinate); SL=Saarland; SN=Sachsen (Saxony); ST=Sachsen-Anhalt (Saxony-Anhalt); SH=Schleswig-Holstein, TH=Thüringen (Thuringia)

Figure 2: The Influx of Refugees in 16 German states

Ratio of the number of arrivals of asylum seekers to the overall population in one state



Data Source: German Federal Office of Statistics
BW=Baden-Württemberg; BY=Bayern (Bavaria); BE= Berlin; BB=Brandenburg; HB=Bremen; HH=Hamburg; HE=Hessen; NI=Niedersachsen (Lower Saxony); MV=Mecklenburg-Vorpommern (Mecklenburg-Western Pomerania); NW=Nordrhein-Westfalen (North Rhine-Westphalia); RP=Rheinland-Pfalz (Rhineland-Palatinate); SL=Saarland; SN=Sachsen (Saxony); ST=Sachsen-Anhalt (Saxony-Anhalt); SH=Schleswig-Holstein, TH=Thüringen (Thuringia)

6.2 The Moderation Role of Refugee Salience in News Media

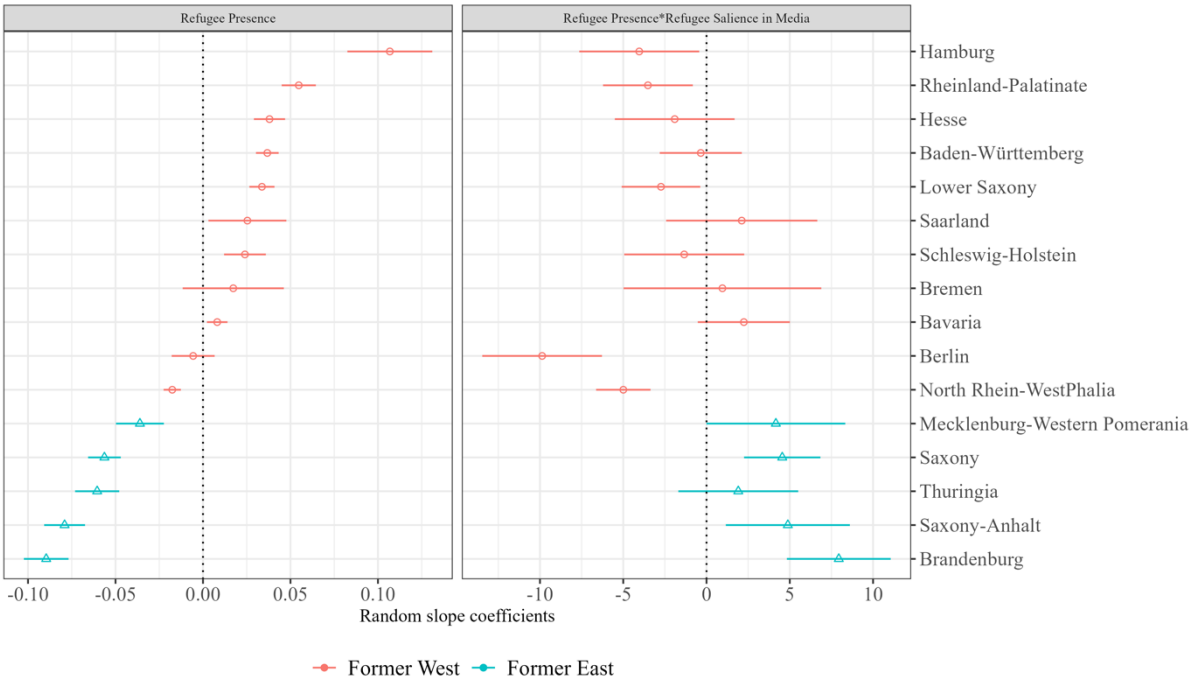
In order to better understand the effect of refugee influx and refugee salience in news media on the rise of anti-immigration attitudes in German states, we have adopted a mixed-effect approach, which takes into account the state-level information available in the data.

Figure 3 displays the visual representation of the random effect coefficients centralized by the estimation of the fixed effect. This figure shows the different slopes of predictors across 16 German states with a fixed intercept. From Figure 3, the effect of the refugee influx on anti-immigration attitudes exists (as shown in the left column) but is weaker in Berlin, North Rhine-Westphalia (Nordrhein-Westfalen) and former East Germany, which includes Saxony (Sachsen), Thuringia (Thüringen), Saxony-Anhalt (Sachsen-Anhalt), Brandenburg, and Mecklenburg-West Pomerania (Mecklenburg-Vorpommern) relative to the former West Germany, where a higher influx of refugees associated more strongly with anti-immigration attitudes.

In the right column, the effect of the interaction of the refugee influx and refugee salience shows a stronger effect than the effect of refugee influx alone in the area of Saarland, Bavaria (Bayern), Bremen, and the area of former East Germany. The findings in Figure 3 partially support our hypothesis that a greater presence of refugees in a region, especially former West Germany, increases anti-immigration attitudes. This result from the interaction term of refugee influx and refugee salience indicates that the negative perception of the native resident caused by the influx of refugees is moderated by the degree of media attention focused on refugees. However, the results display regional variations, with the effects being strengthened in Saarland, Bavaria, Bremen, and former East Germany states, while, unexpectedly, effects are weakened in other states.

To test the assumption of Hopkins (2010), we also control for the salience of the national media and the interaction of the influx of asylum seekers and the salience of national media as robustness checks (see "(4) Model set-up" in the appendix). In Table A4 of the appendix, we report coefficients and odds ratio of the fixed effect of all our models. The fixed effect coefficients of the salience of local media and refugee influx remain insignificant in all models because the huge difference in the effect among East and West German states cannot generate a robust estimation for the whole Germany. In Table A5 of the appendix, we report coefficients and odds ratio of the random effect of all models in 5 East German states. The main effect of all models within East German states remains robust. For West German states (refer to Table A6 of the appendix), the main effect in most states remains robust except for Baden-Württemberg and Bremen. Adding the salience of national media flips the main effect in Baden-Württemberg from negative to positive. Moreover, the main effect in Bremen flips from positive to negative when controlling for the salience of the national media without other control variables.

Figure 3: The Random Slope Estimation across German States



This figure shows the effect of refugee influx and its interaction with media salience on the anti-immigration attitudes across states.
Data Source: SOEP 2011-17, German Federal Office of Statistics & The GDELT Database

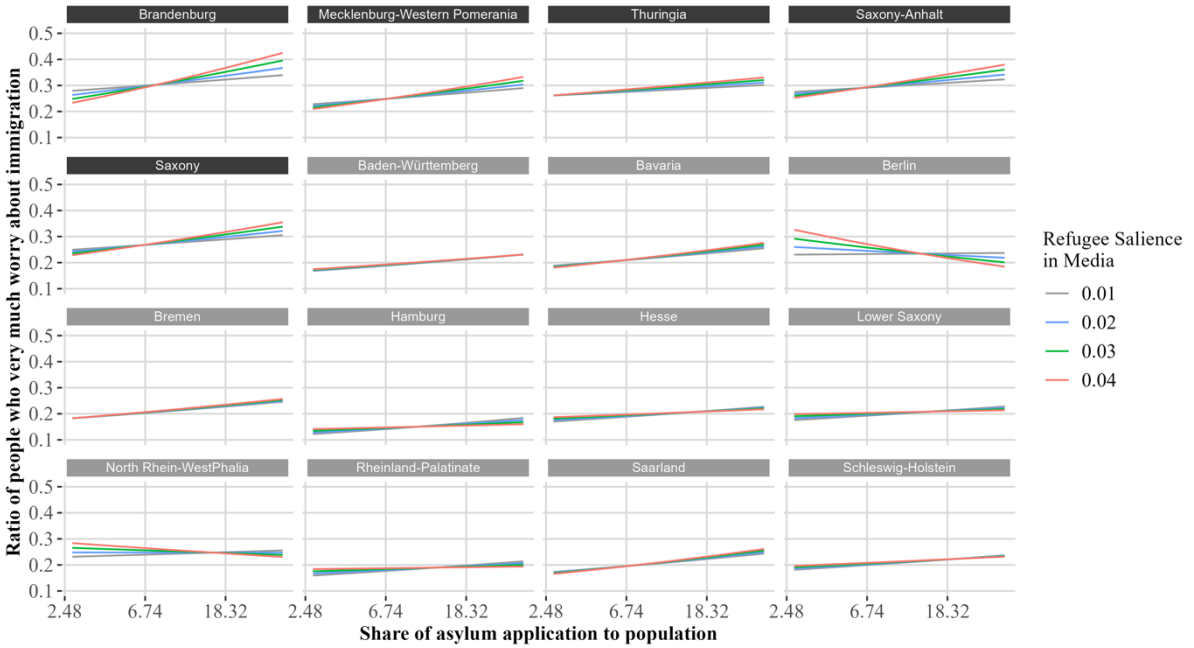
6.3 The predicted Probabilities across regions

Figure 4 shows the predicted marginal effect of the interaction of the refugee influx and the refugee salience of news media on anti-immigration attitudes across 16 German states. This figure decomposes the effect of the interaction of refugee influx and refugee salience in each state. Our findings suggest that in East German states, which consist of Saxony, Thuringia, Saxony-Anhalt, Brandenburg, and Mecklenburg-West Pomerania, there is a positive association between refugee presence and negative concern towards immigration, as indicated by the positive slopes. Moreover, an increase in media salience from 0.01 to 0.04 is also associated with higher concerns about immigration. Our results indicate that the effect of refugee salience amplifies the effect of the refugee presence (i.e., the share of asylum application to total population) on anti-immigration attitudes (i.e., very concerned about immigration), particularly in the states of former East Germany. The negative perceptions toward immigrants in former East German states caused by the refugee presence also increase with higher refugee salience. Conversely, states like Berlin and North Rhine-Westphalia show that the increase of refugees does not necessarily lead to an increase in anti-immigration attitudes. Meanwhile, in former West German states, the refugee influx tends to slightly increase the anti-immigration attitudes, but is not amplified by refugee salience. The Appendix includes Figures 4.1, 4.2, and 4.3, which display individual marginal effects based on the year, ratio of asylum seekers, and ratio of local media salience, comparing former West and East Germany.

To compare the regional difference in the refugee salience on changing people's perception toward refugee influx, Figure 5 shows the marginal effect in all states in former East and West Germany with two breakpoints of media salience at 0.01 and 0.04. We exclude Berlin from these two figures because it cannot be completely classified as East Germany or West Germany. From these two figures, the effect of refugee salience between the former West and East Germany are different. In former West Germany, the refugee salience has almost no influence on the effect of the refugee influx on anti-immigration attitudes while we observe a discernible effect in former East Germany. On average, people in former East Germany appear

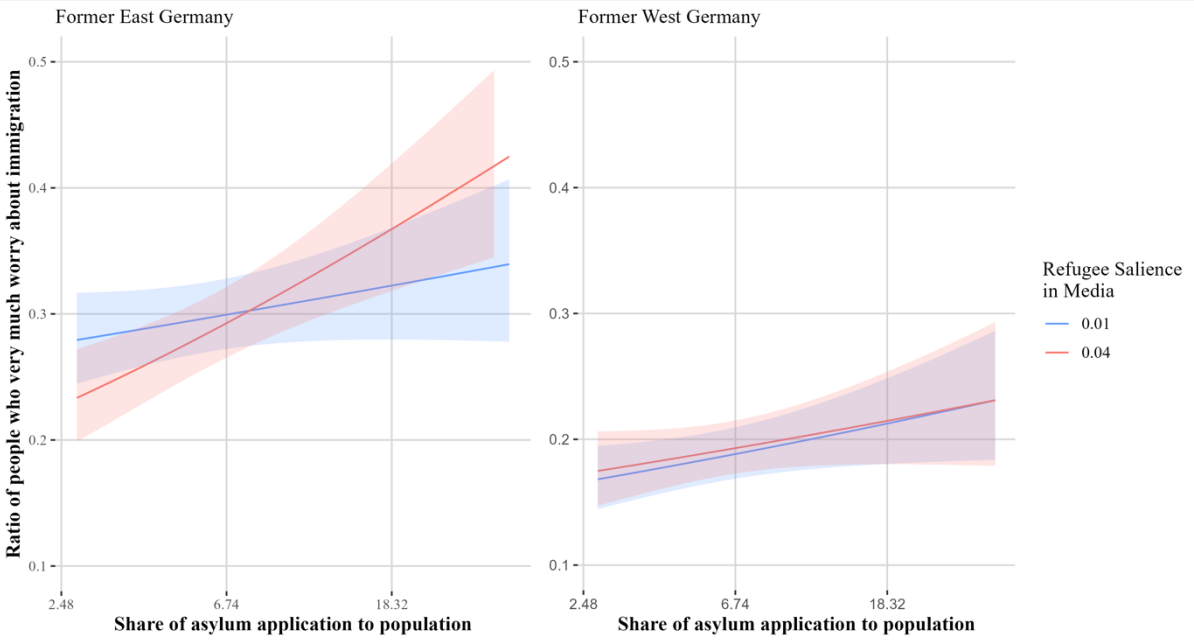
more likely to accept a threat frame about refugees from the media, resulting in a more negative perception of the refugee influx than those in former West Germany. These findings suggest that the processes regarding the role of news theorized by Hopkins may depend on the initial condition of a particular region, such as the level of ethnonationalism and social marginalization, beyond the country-level context.

Figure 4: Predicted Probabilities across German states



This figure shows the predicted marginal effect of the interation of the refugee influx and the media salience of refugee on anti-immigration attitudes across 16 German states.
Data Source: SOEP 2011-17, German Federal Office of Statistics & The Gdelt Database
Note: Ratio of asylum seekers has been log-tranformated in the model,therefore the interval is not equidistant.

Figure 5: Predicted Probabilities in Former East and West Germany



This figure shows the marginal effect of the interation of the refugee influx and the media salience of refugee on anti-immigration attitudes with 95% confidence intervals cross former East and West Germany (Excludes Berlin).
Data Source: SOEP 2011-17, German Federal Office of Statistics & The Gdelt Database
Note: Ratio of asylum seekers has been log-tranformated in the model, therefore the interval is not equidistant.

7 Discussion and Conclusion

To clarify whether the attention received by local refugees in news media (i.e., refugee salience) can amplify the effect of refugee presence on anti-immigration attitudes, we examined the interaction of refugee influx and refugee salience on the rise of anti-immigration attitudes across German regions. Extended from Hopkins (2010), we argue that individuals who are ideologically opposed to immigrants will be particularly sensitive to changes in media coverage. This kind of ideological opposition is more prevalent in former East Germany as opposed to former West Germany, therefore the former East German states tend to have higher anti-immigration attitudes. Our study reveals that the moderating effect of media is particularly potent in East Germany, whereas it may not be as significant in other regions of Germany.

This paper makes three important contributions to the literature. Firstly, it seeks to reconcile the divergence of racial threat theory and contact theory and point out how the rise of anti-immigration attitudes is moderated by refugee salience across different German regions. This study shows that refugee salience may help shape individuals' perceptions toward population changes. Secondly, this paper highlights the moderating role of regional news events in providing signals about changes in the composition of the local population. While previous studies have focused on national news events (Hainmueller and Hopkins 2014; Schemer 2012; Van Klingeren et al. 2015), this study shows that regional news events about refugees, which are reported through both local and national media, appear to play a role in shaping people's perceptions toward immigration. Lastly, this study demonstrates how different initial conditions between previous East and West Germany are represented in the signaling of regional news events on people's perception toward refugee influx. . For instance, areas where right-wing supporters comprise the majority of the population are more likely to experience amplified hostility toward outgroups during the mass refugee influx. Our findings contribute to our understanding of the refugee impact as well as the indirect role of media on anti-immigration sentiments.

Our study comes with limitations that we would like to acknowledge. Firstly, we must be cautious in interpreting our findings in causal terms. This paper does not attempt at establishing causation. Instead, it explores the moderating role of media on the association between refugee influx and anti-immigration attitudes. Using a longitudinal dataset (2011-2017), we control for stable individual differences as well as period effects. However, we still cannot rule out the possibility of reverse causality. The growing anti-immigration attitudes may in turn lead to media producing more relevant stories for their audience. Secondly, the distribution of refugee influx and stocks among German states may be endogenous by policies that date back to the refugee crisis. It is possible that the lower influx of refugees in East German states can be attributed to the fact that these states had fewer resources and capacity to support it. Finally, there are concerns about the validity of the Gdelt data. At this moment, the Gdelt database only contains data of English-composed news. We use the amount of refugee news events as the salience of refugee-related information in the media since we consider that the amount of English and German coverage of the same event in Germany should be proportional. In other words, English coverage of one news event is a subsample of the German coverage of the same event because every main media outlet in Germany (e.g. Bild, Deutsche Welle, Die Zeit and so on) has its own English version and duplicates important news events in different languages, including the most salient news at a local level. While Gdelt has limitations as a source, Gdelt data remain the most appropriate ones for our purposes, among available sources.

Overall, increased refugee influx associated with greater negative attitudes towards immigrants in Germany, and our findings suggest that the media's focus on refugees bolstered

this relationship in East but not West Germany. These differential effects indicate that certain initial conditions of a particular region—in this case, the relatively greater level of ethnonationalism in East Germany—affect how media attention impacts attitudes. Germany is useful for exploring such regional variation due to the sharp contrasts between former East and West Germany relative to the comparatively consistent increase in nationalism in the political behavior across most U.S. states (Sommer 2008; Yoder 2020). Conducting more empirical research in contexts outside the U.S., especially in western European countries, could provide further insights into the role of media in shaping people's perceptions of outgroups. Additionally, future research should explore the role of media in triggering not only anti-immigration attitudes but also political behaviors (e.g., bills or petitions) and violence.

References

Akay, Alpaslan, Olivier Bargain, and Ahmed Elsayed. 2020. "Global Terror, Well-Being and Political Attitudes." *European Economic Review* 123: 103394.

Alesina, Alberto, and Nicola Fuchs-Schündeln. 2007. "Good-Bye Lenin (or Not?): The Effect of Communism on People's Preferences." *American Economic Review* 97 (4): 1507–28.

Allport, G. Willard. 1935. "Attitudes: A Handbook of Social Psychology, Worcester, Mass." *Clark University Press. Anderson, JC, & Gerbing, DW (1988). Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. Psychological Bulletin* 103 (3): 411.

Allport, Gordon Willard, Kenneth Clark, and Thomas Pettigrew. 1954. "The Nature of Prejudice."

Altındağ, Onur, and Neeraj Kaushal. 2021. "Do Refugees Impact Voting Behavior in the Host Country? Evidence from Syrian Refugee Inflows to Turkey." *Public Choice* 186 (1): 149–78.

Ben-Nun Bloom, Pazit, Gizem Arikan, and Gallya Lahav. 2015. "The Effect of Perceived Cultural and Material Threats on Ethnic Preferences in Immigration Attitudes." *Ethnic and Racial Studies* 38 (10): 1760–78.

Biermann, Philipp, and Heinz Welsch. 2021. "An Anatomy of East German Unhappiness: The Role of Circumstances and Mentality, 1990–2018." *Journal of Economic Behavior & Organization* 181: 1–18.

Blalock, Hubert M. 1967. *Toward a Theory of Minority-Group Relations*. Vol. 325. New York: Wiley.

Blinder, Scott. 2015. "Imagined Immigration: The Impact of Different Meanings of 'Immigrants' in Public Opinion and Policy Debates in Britain." *Political Studies* 63 (1): 80–100.

Blinder, Scott, Robert Ford, and Elisabeth Ivarsflaten. 2013. "The Better Angels of Our Nature: How the Antiprejudice Norm Affects Policy and Party Preferences in Great Britain and Germany." *American Journal of Political Science* 57 (4): 841–57.

Brosig, Jeannette, Christoph Helbach, Axel Ockenfels, and Joachim Weimann. 2010. "Still Different after All These Years: Solidarity in East and West Germany."

Brosius, Anna, Erika J. van Elsas, and Claes H. de Vreese. 2019. "How Media Shape Political Trust: News Coverage of Immigration and Its Effects on Trust in the European Union." *European Union Politics* 20 (3): 447–67.

Butz, Adam M., and Jason E. Kehrberg. 2019. "Anti-immigrant Sentiment and the Adoption of State Immigration Policy." *Policy Studies Journal* 47 (3): 605–23.

Campo, Francesco, Sara Giunti, and Mariapia Mendola. 2021. “The Refugee Crisis and Right-Wing Populism: Evidence from the Italian Dispersal Policy.”
Carmichael, Jason T., and Robert J. Brulle. 2017. “Elite Cues, Media Coverage, and Public Concern: An Integrated Path Analysis of Public Opinion on Climate Change, 2001–2013.” *Environmental Politics* 26 (2): 232–52.
Chen, Shuai. 2020. “Unemployment, Immigration, and Populism: Evidence from Two Quasi-Natural Experiments in the United States.” GLO Discussion Paper.
Citrin, Jack, Beth Reingold, and Donald P. Green. 1990. “American Identity and the Politics of Ethnic Change.” *The Journal of Politics* 52 (4): 1124–54.
Citrin, Jack, Beth Reingold, Evelyn Walters, and Donald P. Green. 1990. “The" Official English" Movement and the Symbolic Politics of Language in the United States.” *Western Political Quarterly* 43 (3): 535–59.
Crepaz, Markus ML. 2020. “Immigration and the Politics of Welfare Exclusion: Selective Solidarity in Western Democracies. By Edward Anthony Koning. Toronto: Toronto University Press, 2019. 307p. 29.96 Paper.” *Perspectives on Politics* 18 (1): 295–96.
Diehl, Claudia, and Ingrid Tucci. 2011. “Who Can Become German? Xenophobia and Attitudes towards Naturalization.” *DIW Economic Bulletin* 1 (3): 3–8.
Doerr, Nicole. 2021. “The Visual Politics of the Alternative for Germany (AfD): Anti-Islam, Ethno-Nationalism, and Gendered Images.” *Social Sciences* 10 (1): 20.
Erhard, Lukas, Raphael H. Heiberger, and Michael Windzio. 2022. “Diverse Effects of Mass Media on Concerns about Immigration: New Evidence from Germany, 2001–2016.” *European Sociological Review* 38 (4): 629–47.
Feldman, Stanley, and Karen Stenner. 1997. “Perceived Threat and Authoritarianism.” *Political Psychology* 18 (4): 741–70.
Ferrari, Diogo. 2021. “Perceptions, Resentment, Economic Distress, and Support for Right-Wing Populist Parties in Europe.” *Politics and Governance* 9 (3): 274–87.
Frey, Arun. 2020. “‘Cologne Changed Everything’—the Effect of Threatening Events on the Frequency and Distribution of Intergroup Conflict in Germany.” *European Sociological Review* 36 (5): 684–99.
Friehe, Tim, and Mario Mechtel. 2014. “Conspicuous Consumption and Political Regimes: Evidence from East and West Germany.” *European Economic Review* 67: 62–81.
Fryberg, Stephanie A., Nicole M. Stephens, Rebecca Covarrubias, Hazel Rose Markus, Erin D. Carter, Giselle A. Laiduc, and Ana J. Salido. 2012. “How the Media Frames the Immigration Debate: The Critical Role of Location and Politics.” *Analyses of Social Issues and Public Policy* 12 (1): 96–112.
Fuchs-Schündeln, Nicola, Dirk Krueger, and Mathias Sommer. 2010. “Inequality Trends for Germany in the Last Two Decades: A Tale of Two Countries.” *Review of Economic Dynamics* 13 (1): 103–32.
Fung, Timothy KF, and Dietram A. Scheufele. 2014. “Social Norms, Spirals of Silence and Framing Theory: An Argument for Considering Cross-Cultural Differences in Media Effects Research.” In *The Spiral of Silence*, 131–44. Routledge.
Gamson, William A., David Croteau, William Hoynes, and Theodore Sasson. 1992. “Media Images and the Social Construction of Reality.” *Annual Review of Sociology*, 373–93.
Gonzalez O’Brien, Benjamin, Elizabeth Hurst, Justin Reedy, and Loren Collingwood. 2019. “Framing Refuge: Media, Framing, and Sanctuary Cities.” *Mass Communication and Society* 22 (6): 756–78.
Gorodzeisky, Anastasia. 2022. “The Influx of Refugees and Temporal Change in Attitudes towards Asylum Seekers: A Cross-National Perspective.” *European Sociological Review* 38 (4): 648–62.

Green, Eva GT, Emilio Paolo Visintin, and Oriane Sarrasin. 2018. “From Ethnic Group Boundary Demarcation to Deprovincialization: The Interplay of Immigrant Presence and Ideological Climate.” *International Journal of Comparative Sociology* 59 (5–6): 383–402.

Guia, Aitana. 2016. “The Concept of Nativism and Anti-Immigrant Sentiments in Europe.”

Hagan, John, Susanne Rippl, Klaus Boehnke, and Hans Merkens. 1999. “The Interest in Evil: Hierarchic Self-Interest and Right-Wing Extremism among East and West German Youth.” *Social Science Research* 28 (2): 162–83.

Hainmueller, Jens, and Daniel J. Hopkins. 2014. “Public Attitudes toward Immigration.” *Annual Review of Political Science* 17.

Halikiopoulou, Daphne, and Tim Vlandas. 2020. “When Economic and Cultural Interests Align: The Anti-Immigration Voter Coalitions Driving Far Right Party Success in Europe.” *European Political Science Review* 12 (4): 427–48.

Harnischmacher, Michael. 2015. “Journalism after All: Professionalism, Content and Performance–A Comparison between Alternative News Websites and Websites of Traditional Newspapers in German Local Media Markets.” *Journalism* 16 (8): 1062–84.

Hasebrink, Uwe, and Sascha Hölig. 2013. “Lagging behind or Choosing a Different Path? Information Behaviour in Germany.” *Reuters Institute Digital News Report*, 81–83.

Heinze, Anna-Sophie. 2022. “Dealing with the Populist Radical Right in Parliament: Mainstream Party Responses toward the Alternative for Germany.” *European Political Science Review*, 1–18.

Hildebrandt, Achim, and Eva-Maria Trüdinger. 2021. “Belonging and Exclusion: The Dark Side of Regional Identity in Germany.” *Comparative European Politics* 19 (2): 146–63.

Hillje, Johannes. 2018. “Rückkehr Zu Den Politisch Verlassenen.” *Gespräche in Rechtspopulistischen Hochburgen in Deutschland Und Frankreich. Berlin*, 1–26.

Hooghe, Marc, and Thomas De Vroome. 2015. “The Perception of Ethnic Diversity and Anti-Immigrant Sentiments: A Multilevel Analysis of Local Communities in Belgium.” *Ethnic and Racial Studies* 38 (1): 38–56.

Hopkins, Daniel J. 2010. “Politicized Places: Explaining Where and When Immigrants Provoke Local Opposition.” *American Political Science Review* 104 (1): 40–60.

———. 2012. “Flooded Communities: Explaining Local Reactions to the Post-Katrina Migrants.” *Political Research Quarterly* 65 (2): 443–59.

———. 2018. *The Increasingly United States: How and Why American Political Behavior Nationalized*. University of Chicago Press.

Hornig, Eike-Christian. 2021. “The German Parties’ Reaction to the 2015 Refugee Crisis—A Long-Term Analysis of Party Positioning Dynamics.” In *Immigration Policy and Crisis in the Regional Context*, 165–84. Springer.

Jaret, Charles. 1999. “Troubled by Newcomers: Anti-Immigrant Attitudes and Action during Two Eras of Mass Immigration to the United States.” *Journal of American Ethnic History*, 9–39.

Karacuka, Mehmet. 2021. “Refugees and Votes: The Impact of Refugee Influx and Internet on Voting Decisions.” *Journal of Refugee Studies* 34 (3): 2933–59.

Kellermann, Kim Leonie, and Simon Winter. 2019. “A New East-West Divide?–Immigration and Anti-Immigrant Voting in the 2017 German Parliamentary Election.”

Key, Valdimer Orlando, and Alexander Heard. 1949. *Southern Politics in State and Nation*. Vol. 510. New York: AA Knopf.

Kinder, Donald R., and David O. Sears. 1981. “Prejudice and Politics: Symbolic Racism versus Racial Threats to the Good Life.” *Journal of Personality and Social Psychology* 40 (3): 414.
Koch, Caleb M., Izabela Moise, Dirk Helbing, and Karsten Donnay. 2020. “Public Debate in the Media Matters: Evidence from the European Refugee Crisis.” *EPJ Data Science* 9 (1): 1–27.
Koopmans, Ruud, and Susanne Veit. 2014. “Ethnic Diversity, Trust, and the Mediating Role of Positive and Negative Interethnic Contact: A Priming Experiment.” *Social Science Research* 47: 91–107.
Laubenthal, Barbara. 2019. “Refugees Welcome? Reforms of German Asylum Policies between 2013 and 2017 and Germany’s Transformation into an Immigration Country.” *German Politics* 28 (3): 412–25.
Lee, Jong Hyuk. 2009. “News Values, Media Coverage, and Audience Attention: An Analysis of Direct and Mediated Causal Relationships.” *Journalism & Mass Communication Quarterly* 86 (1): 175–90.
Lippard, Cameron D. 2011. “Racist Nativism in the 21st Century.” *Sociology Compass* 5 (7): 591–606.
Martin, Gregory J., and Joshua McCrain. 2019. “Local News and National Politics.” *American Political Science Review* 113 (2): 372–84.
Melusky, Benjamin, and Jesse Richman. 2020. “When the Local Is National–A New High-Water Mark for Nationalization in the 2018 United States State Legislative Elections.” *Regional & Federal Studies* 30 (3): 441–60.
Menshikova, Anastasia, and Frank van Tubergen. 2022. “What Drives Anti-Immigrant Sentiments Online? A Novel Approach Using Twitter.” *European Sociological Review*.
Mutz, Diana C. 1992. “Mass Media and the Depoliticization of Personal Experience.” *American Journal of Political Science*, 483–508.
Newman, Benjamin J., Todd K. Hartman, and Charles S. Taber. 2012. “Foreign Language Exposure, Cultural Threat, and Opposition to Immigration.” *Political Psychology* 33 (5): 635–57.
Ockenfels, Axel, and Joachim Weimann. 1999. “Types and Patterns: An Experimental East-West-German Comparison of Cooperation and Solidarity.” *Journal of Public Economics* 71 (2): 275–87.
Oskamp, Stuart, and P. Wesley Schultz. 2005. *Attitudes and Opinions*. Psychology Press.
Perloff, Richard M. 2021. *The Dynamics of Political Communication: Media and Politics in a Digital Age*. Routledge.
Pettigrew, Thomas F. 1998. “Intergroup Contact Theory.” *Annual Review of Psychology* 49 (1): 65–85.
Pickens, Jeffrey. 2005. “Attitudes and Perceptions.” *Organizational Behavior in Health Care* 4 (7): 43–76.
Ponce, Aaron. 2017. “Gender and Anti-Immigrant Attitudes in Europe.” *Socius* 3: 2378023117729970.
Schemer, Christian. 2012. “The Influence of News Media on Stereotypic Attitudes toward Immigrants in a Political Campaign.” *Journal of Communication* 62 (5): 739–57.
Schrodt, P. 2012. *Conflict and Mediation Event Observations Event and Actor Codebook V. 1.1 B3*.
Sears, David O. 1988. “Symbolic Racism.” In *Eliminating Racism*, 53–84. Springer.
Semyonov, Moshe, Rebeca Raijman, and Anastasia Gorodzeisky. 2006. “The Rise of Anti-Foreigner Sentiment in European Societies, 1988-2000.” *American Sociological Review* 71 (3): 426–49.

Smith, Heather Jane. 2016. “Britishness as Racist Nativism: A Case of the Unnamed ‘Other.’” *Journal of Education for Teaching* 42 (3): 298–313.
Sommer, Bernd. 2008. “Anti-Capitalism in the Name of Ethno-Nationalism: Ideological Shifts on the German Extreme Right.” *Patterns of Prejudice* 42 (3): 305–16.
Stein, Robert M., Stephanie Shirley Post, and Allison L. Rinden. 2000. “Reconciling Context and Contact Effects on Racial Attitudes.” *Political Research Quarterly* 53 (2): 285–303.
Steinhardt, Max Friedrich, and Panu Poutvaara. 2015. “Bitterness in Life and Attitudes towards Immigration.”
Taylor, Marylee C. 1998. “How White Attitudes Vary with the Racial Composition of Local Populations: Numbers Count.” *American Sociological Review*, 512–35.
Tucci, Ingrid. 2005. “Explaining Attitudes towards Immigration: New Pieces to the Puzzle.” DIW Discussion Papers.
Usta, Emine Kübra. 2022. “Effects of Refugee Inflow on the Voting Behavior of Natives: Application of Mobile Phone Data.” *CESifo Economic Studies* 68 (3): 219–52.
Van Klingeren, Marijn, Hajo G. Boomgaarden, Rens Vliegenthart, and Claes H. De Vreese. 2015. “Real World Is Not Enough: The Media as an Additional Source of Negative Attitudes toward Immigration, Comparing Denmark and the Netherlands.” *European Sociological Review* 31 (3): 268–83.
Vestergaard, Karsten Tingleff. 2020. “The Battle for the Public Perception: How Increases in Asylum Seekers and Media Framing Affected the Perception of the Refugee Crisis and Support for Additional Measures across the Left-Right Spectrum.” *Journal of Contemporary European Studies* 28 (4): 411–33.
Wagner, Ulrich, Oliver Christ, Thomas F. Pettigrew, Jost Stellmacher, and Carina Wolf. 2006. “Prejudice and Minority Proportion: Contact Instead of Threat Effects.” *Social Psychology Quarterly* 69 (4): 380–90.
Weisskircher, Manès. 2020. “The Strength of Far-Right AfD in Eastern Germany: The East-West Divide and the Multiple Causes behind ‘Populism.’” *The Political Quarterly* 91 (3): 614–22.
Wong, Cara J. 2007. “‘Little’ and ‘Big’ Pictures in Our Heads: Race, Local Context, and Innumeracy about Racial Groups in the United States.” *Public Opinion Quarterly* 71 (3): 392–412.
Yoder, Jennifer A. 2020. “‘Revenge of the East’?: The AfD’s Appeal in Eastern Germany and Mainstream Parties’ Responses.” *German Politics and Society* 38 (2): 35–58.

Data Sources

Socio-Economic Panel (SOEP), data for years 1984-2017, version 34, SOEP, 2019, doi: 10.5684/soep.v34.
Statistisches Bundesamt (Destatis), Genesis-Online; Data license by-2-0
The GDELT project: https://www.gdeltproject.org/

Appendix

(1) Definition of asylum seeker (Schutzsuchende)

Asylum seekers are foreign nationals who are staying in Germany for reasons of international law, humanitarian or political reasons and who are recorded in the Central Register of Foreign Nationals (AZR) with the relevant legal residence status. This includes three subgroups that should always be considered separately due to their heterogeneity:

- Asylum seekers with an open protection status are staying in Germany to carry out an asylum procedure, although their protection status has not yet been decided.
- Asylum seekers with a recognized protection status have a limited or unlimited residence title from the humanitarian area of the Residence Act.
- Asylum seekers with refused protection status remain in Germany as persons obliged to leave Germany after being rejected in the asylum procedure or after losing their humanitarian residence permit.

Terms such as refugees, asylum seekers or persons entitled to asylum are often used as synonyms for refugees, but in aliens and asylum law they only describe a specific subset of those seeking protection.

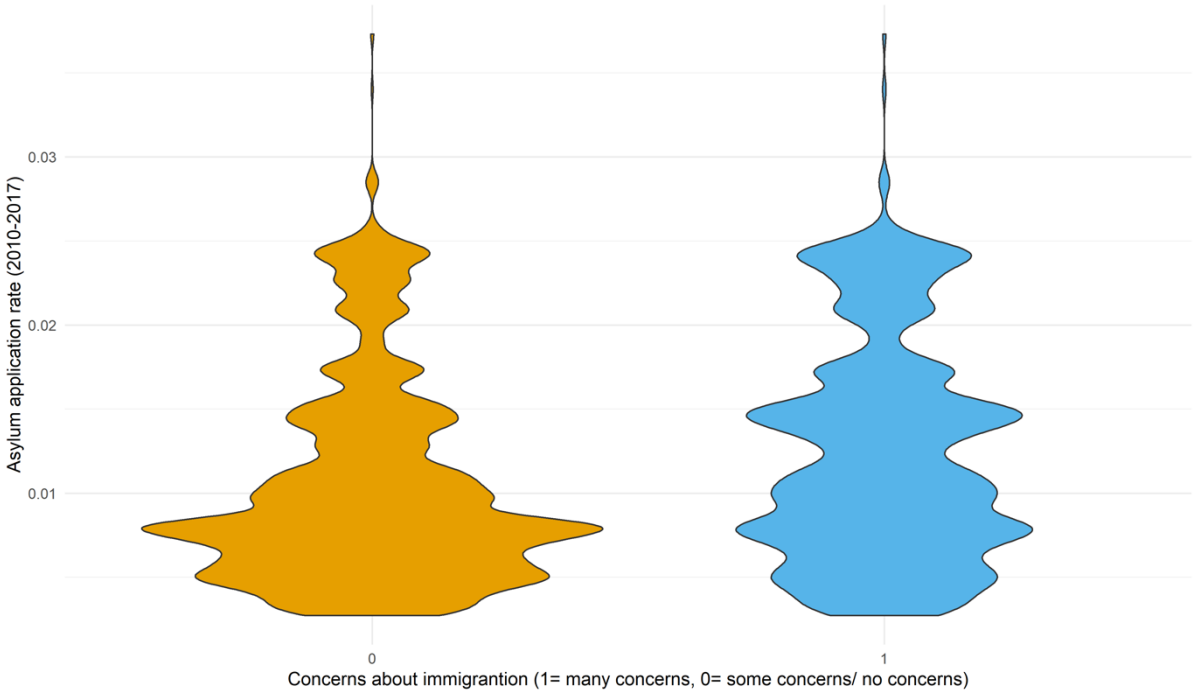
Source: https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Migration-Integration/Glossar/schutzsuchende.html

(2) The profile of the GDELT dataset

Data Source: The GDELT Event 1.0 database				
Data size: 34.8 GB (zip file)				
Geographical scope: Germany ▪ FIPS country codes: GM ▪ Scrape data with GM in three features: ActionGeo_CountryCode (51), Actor1Geo_CountryCode (37), Actor2Geo_CountryCode (44)				
Time period: 1979-2020				
Data size: 2.89 GB (tsv file)				
Sample Size based on Time Period				
	Time Period	N of Events	N of Articles	Data Size (rda file)
All Events	1979-2020	11,584,956	109,710,843	49189 KB
Refugee Events	1979-2020	411,222	4,030,078	1810 KB
All Events	2011-2017	6,029,285	65,750,673	26808 KB
Refugee Events	2011-2017	251,454	2,664,106	1062 KB
Refugee Events are selected via the CAMEO Event Code in the feature “EventCode”: 0233, 030, 0333, 0343, 075, 0833, 1033, 1223, 1424, 1623, 1663, 180, 1822, 184, and 201.				

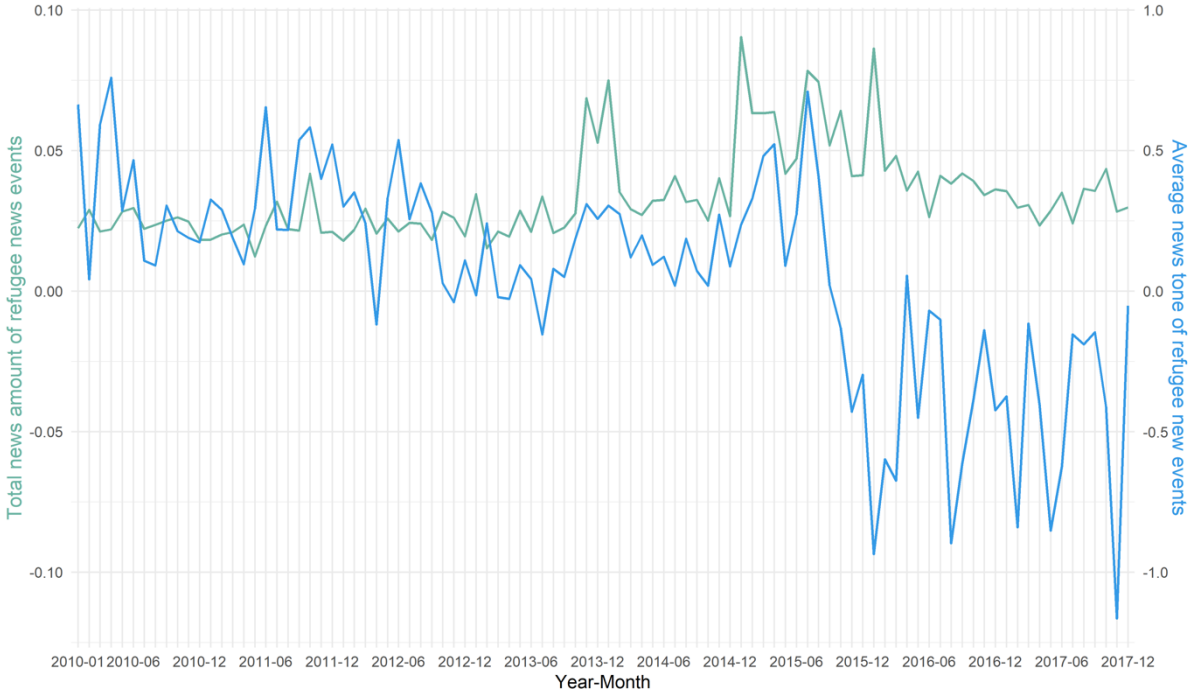
(3) Supplementary Figures

Figure A.1: Cross-sectional variation of asylum application rate in living states
(Across group with different concerns on immigrantion)



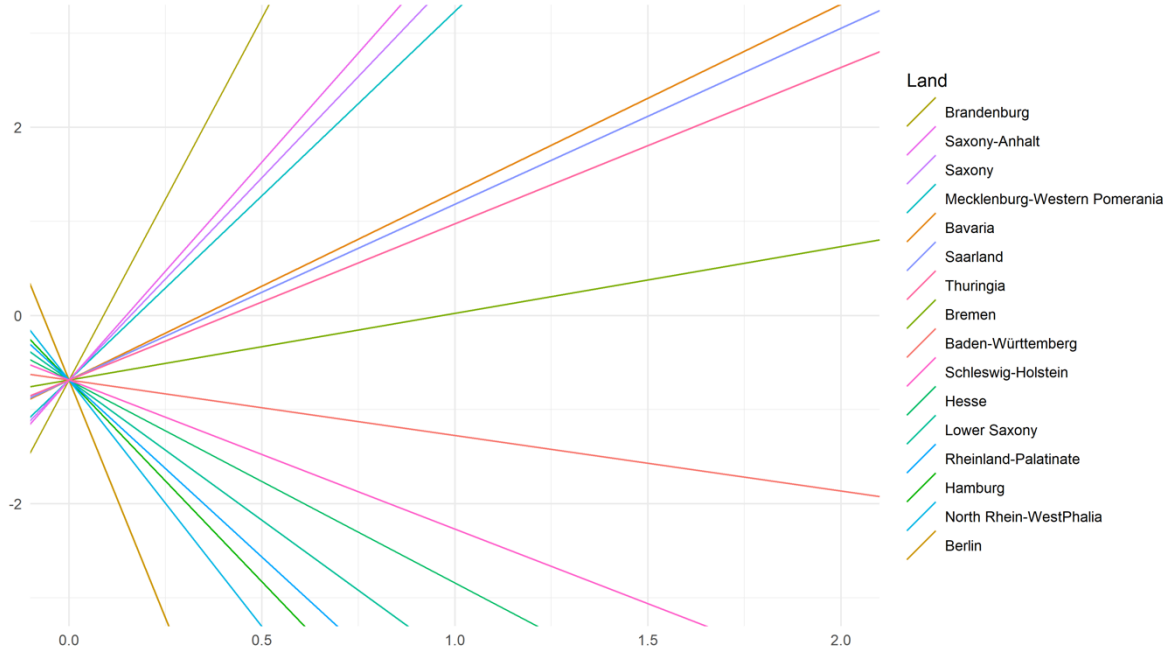
Data Source: SOEP 2010-2017 & German Federal Office of Statistics

Figure A.2: Media salience in Germany 2010-2017
Topics about Refugees/Asylum seekers



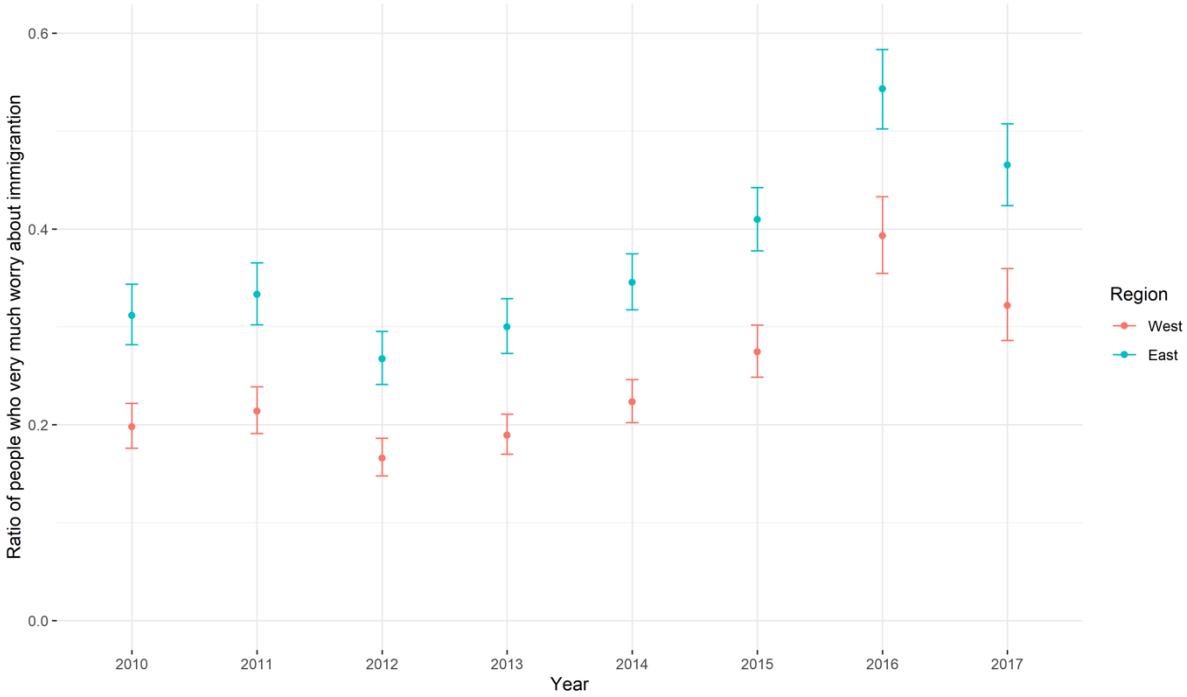
Data Source: The GDELT database

Figure A.3: Random slope estimation with a fixed intercept



Data Source: SOEP 2011-17, German Federal Office of Statistics & The Gdelt Database

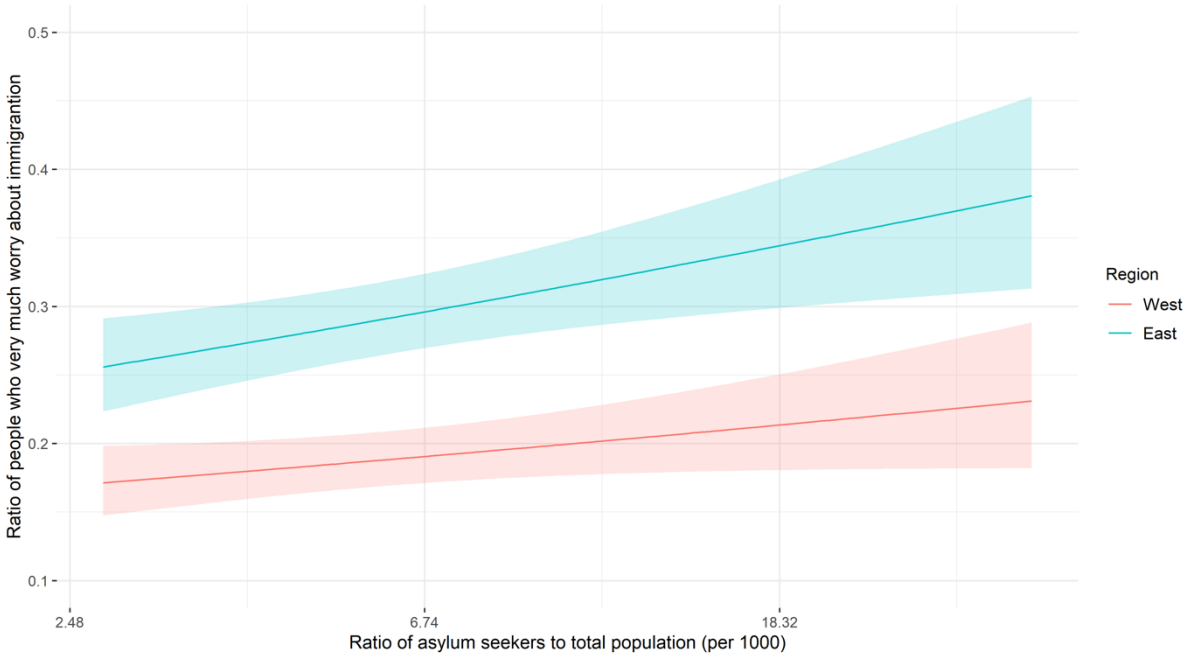
Figure A4.1 : Predicted Probabilities in Germany (by Year)



(Excludes Berlin)

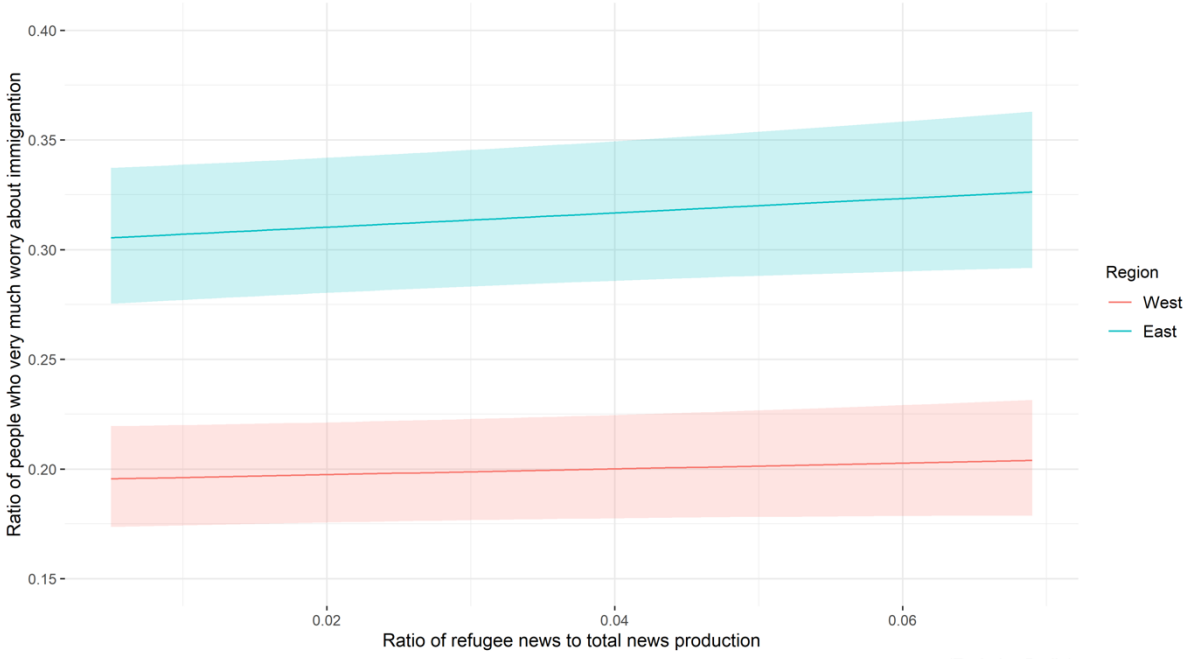
Data Source: SOEP 2011-17, German Federal Office of Statistics & The Gdelt Database

Figure A4.2 : Predicted Probabilities in Germany (by Ratio of Asylum Seekers)



(Excludes Berlin)
Data Source: SOEP 2011-17, German Federal Office of Statistics & The Gdelt Database
Note: Ratio of asylum seekers has been log-tranformated in the model, therefore the interval is not equidistant.

Figure A4.3 : Predicted Probabilities in Germany (by Ratio of Media Salience)



(Excludes Berlin)
Data Source: SOEP 2011-17, German Federal Office of Statistics & The Gdelt Database
Note: Ratio of asylum seekers has been log-tranformated in the model, therefore the interval is not equidistant.

(4) Model set-up

M- 1 (main model):

Level 1: Log share of refugee presence + Media Salience (state-level) + Log share of refugee presence *Media Salience (state-level) + Yearly effect
Level 2 (states): Log share of refugee presence+ Media Salience (state-level) + Log share of refugee presence*Media Salience (state-level)

M 1.1:

Level 1: main model + Media Salience (national-level)
Level 2 (states): main model

M - 1.2:

Level 1: main model + control variables (sex, age, nationality, education)
Level 2 (states): main model

M - 1.3:

Level 1: main model + Media Salience (national-level) + control variables (sex, age, nationality, education)
Level 2 (states): main model

M - 2:

Level 1: main model + Media Salience (national-level)
Level 2 (states): main model + Media Salience (national-level) + Log share of refugee presence* Media Salience (national-level)

M - 2.1:

Level 1: main model + Media Salience (national-level) + control variables (sex, age, nationality, education)
Level 2 (states): main model + Media Salience (national-level) + Log share of refugee presence * Media Salience (national-level)

(5) Supplementary Tables

Table A1: The Salience of Refugees on Media in 16 German states

	Baden-Württemberg	Bavaria	Berlin	Brandenburg	Bremen	Hamburg	Hesse	Mecklenburg-West Pomerania
2010	0.029	0.016	0.022	0.026	0.014	0.020	0.018	0.016
2011	0.018	0.014	0.023	0.022	0.012	0.026	0.024	0.023
2012	0.019	0.022	0.023	0.026	0.023	0.021	0.012	0.026
2013	0.037	0.017	0.026	0.022	0.013	0.018	0.016	0.014
2014	0.034	0.024	0.022	0.023	0.005	0.017	0.024	0.019
2015	0.028	0.039	0.032	0.048	0.014	0.025	0.018	0.035
2016	0.031	0.030	0.030	0.030	0.029	0.069	0.015	0.062
2017	0.031	0.024	0.030	0.024	0.012	0.021	0.032	0.018

	Lower Saxony	North Rhine-Westphalia	Rheinland-Palatinate	Saarland	Saxony	Saxony - Anhalt	Schleswig -Holstein	Thüringia
2010	0.024	0.026	0.025	0.053	0.036	0.016	0.009	0.011
2011	0.018	0.019	0.018	0.033	0.021	0.020	0.017	0.020
2012	0.023	0.018	0.011	0.016	0.015	0.023	0.017	0.036
2013	0.023	0.025	0.044	0.034	0.025	0.033	0.010	0.013
2014	0.026	0.027	0.013	0.009	0.015	0.006	0.018	0.009
2015	0.034	0.014	0.017	0.023	0.030	0.020	0.014	0.049
2016	0.046	0.039	0.025	0.047	0.058	0.033	0.019	0.025
2017	0.018	0.022	0.060	0.010	0.023	0.014	0.044	0.013

The ratio of media salience of refugees is defined as the proporsion of the article number of refugee news event to the total news events by year happened in each state

Data Source : German Federal Office of Statistics

Table A2: The influx of Refugees in 16 German states

	Baden-Württemberg	Bavaria	Berlin	Brandenburg	Bremen	Hamburg	Hesse	Mecklenburg-West Pomerania
2010	0.006	0.005	0.008	0.003	0.010	0.013	0.008	0.004
2011	0.006	0.005	0.009	0.003	0.010	0.014	0.008	0.004
2012	0.007	0.005	0.010	0.003	0.011	0.014	0.009	0.004
2013	0.007	0.006	0.011	0.004	0.012	0.015	0.009	0.005
2014	0.008	0.007	0.013	0.005	0.016	0.017	0.011	0.007
2015	0.011	0.010	0.020	0.010	0.022	0.021	0.013	0.015
2016	0.017	0.015	0.023	0.015	0.034	0.028	0.021	0.014
2017	0.018	0.016	0.025	0.015	0.037	0.029	0.023	0.015

	Lower Saxony	North Rhine-Westphalia	Rheinland-Palatinate	Saarland	Saxony	Saxony - Anhalt	Schleswig -Holstein	Thüringia
2010	0.007	0.008	0.005	0.006	0.003	0.004	0.005	0.003
2011	0.007	0.008	0.005	0.006	0.003	0.004	0.005	0.003
2012	0.007	0.009	0.005	0.007	0.004	0.004	0.005	0.003
2013	0.008	0.009	0.006	0.008	0.004	0.005	0.006	0.004
2014	0.010	0.012	0.008	0.010	0.005	0.007	0.008	0.005
2015	0.013	0.014	0.010	0.018	0.010	0.011	0.012	0.009
2016	0.021	0.024	0.017	0.024	0.014	0.017	0.021	0.013
2017	0.022	0.025	0.019	0.026	0.014	0.017	0.022	0.014

The ratio of refugee influx is defined as the proporsion of asylum applications to the total population by year in each state

Data Source : German Federal Office of Statistics

Table A3: ANOVA Test for Model Selection

	npar	AIC	BIC	Log-likelihood	Deviance	Chisq	Df	Pr(>Chisq)
Random intercept model	12	219798	219920	-109887	219774			
Random slope model (fixed intercept)	17	219757	219930	-109861	219723	51.377	5	0.00000
Random slope model	21	219754	219968	-109856	219712	10.610	4	0.03132

Data Source: SOEP 2011-17, German fereral office of statistics, & the Gdelt Database

Table A4 : Fixed Effect Estimation in Random Slope Model (with fixed intercept)

	M -1				M -1.1			
Outcome: Negative concerns about immigration	Estimate	CI-lower	CI-upper	P-value	Estimate	CI-lower	CI-upper	P-value
Log share of refugee presence	0.12	-0.03	0.27	0.11	0.12	-0.03	0.26	0.12
Media Salience (state-level)	0.26	-14.41	14.94	0.97	0.17	-14.86	15.19	0.98
Log share of refugee presence* Media Salience (state-level)	-0.24	-3.60	3.05	0.88	-0.28	-3.60	3.05	0.87
Media Salience (national-level)					87.68	63.37	112.00	0.00
Log share of refugee presence* Media Salience (national-level)								
(Intercept)	-0.69	-1.44	0.07	0.08	-1.31	-2.21	-0.41	0.00
	Odds Ratio	CI-lower	CI-upper		Odds Ratio	CI-lower	CI-upper	
Log share of refugee presence	1.13	0.97	1.31		1.12	0.97	1.3	
Media Salience (state-level)	1.30	0.00	3.07E+06		1.18	0	3.97E+06	

Log share of refugee presence* Media Salience (state-level)	0.78	0.03	20.07		0.76	0.03	21.1
Media Salience (national-level)					1.21E+38	3E+27	4.36E+48
Log share of refugee presence* Media Salience (national-level)							
(Intercept)	0.5	0.24	1.07		0.27	0.11	0.67
yearly effect control	v				v		
Random effect	Log share of refugee presence* Media Salience (state-level)				Log share of refugee presence* Media Salience (state-level)		
Number of obs: groups: Land	183373 16						

(continue)

	M- 1.2				M- 1.3			
Outcome: Negative concerns about immigration	Estimate	CI-lower	CI-upper	P-value	Estimate	CI-lower	CI-upper	P-value
Log share of refugee presence	0.10	-0.05	0.25	0.18	0.10	-0.05	0.25	0.18
Media Salience (state-level)	0.60	-14.11	15.32	0.94	0.61	-14.08	15.30	0.94
Log share of refugee presence* Media Salience (state-level)	-0.21	-3.48	3.06	0.90	-0.21	-3.47	3.06	0.90
Media Salience (national-level)					95.14	70.02	120.27	0.00
Log share of refugee presence* Media Salience (national-level)								
(Intercept)	-1.10	-1.87	-0.33	0.01	-1.75	-2.68	-0.82	0.00
	Odds Ratio	CI-lower	CI-upper		Odds Ratio	CI-lower	CI-upper	
Log share of refugee presence	1.11	0.95	1.29		1.11	0.95	1.29	
Media Salience (state-level)	1.82	0	4.49E+06		1.84	0	4.43E+06	
Log share of refugee presence* Media Salience (state-level)	0.81	0.03	21.33		0.81	0.03	21.29	
Media Salience (national-level)					2.09E+41	3E+30	1.70E+52	
Log share of refugee presence* Media Salience (national-level)								
(Intercept)	0.33	0.15	0.72		0.17	0.07	0.44	
yearly effect control	v				v			
	v				v			
Random effect	Log share of refugee presence*Media Salience (state-level)				Log share of refugee presence*Media Salience (state-level)			
Number of obs: groups: Land	183373 16							

(continue)

	M-2				M -2.1			
Outcome: Negative concerns about immigration	Estimate	CI-lower	CI-upper	P-value	Estimate	CI-lower	CI-upper	P-value

Log share of refugee presence	0.22	0.06	0.38	0.01	0.18	0.02	0.34	0.02
Media Salience (state-level)	-0.60	-12.16	10.96	0.92	-0.49	-12.39	11.40	0.94
Log share of refugee presence* Media Salience (state-level)	-0.28	-2.81	2.25	0.83	-0.30	-2.91	2.30	0.82
Media Salience (national-level)	63.66	36.55	90.76	0.00	75.25	48.18	102.32	0.00
Log share of refugee presence* Media Salience (national-level)	-2.39	-3.86	-0.91	0.00	-2.15	-3.61	-0.68	0.00
(Intercept)	-0.70	-1.67	0.27	0.16	-1.26	-2.23	-0.29	0.01
	Odds Ratio	CI-lower	CI-upper		Odds Ratio	CI-lower	CI-upper	
Log share of refugee presence	1.24	1.06	1.46		1.2	1.02	1.41	
Media Salience (state-level)	0.55	0	5.74E+04		0.61	0	8.97E+04	
Log share of refugee presence* Media Salience (state-level)	0.76	0.06	9.51		0.74	0.05	10.02	
Media Salience (national-level)	4.42E+27	7E+15	2.61E+39		4.80E+32	8E+20	2.75E+44	
Log share of refugee presence* Media Salience (national-level)	0.09	0.02	0.40		0.12	0.03	0.51	
(Intercept)	0.5	0.19	1.32		0.28	0.11	0.75	
yearly effect	v				v			
control					v			
Random effect	Log share of refugee presence*Media Salience (state-level)+ Log share of refugee presence*Media Salience (national-level)				Log share of refugee presence*Media Salience (state-level)+ Log share of refugee presence*Media Salience (national-level)			
Number of obs:	183373							
groups: Land	16							

Table A5 : Random Effect Estimation in Random Slope Model (with fixed intercept) in five East German states

	M - 1	M -1.1	M - 1.2	M - 1.3	M - 2	M - 2.1
East German State: Brandenburg						
Outcome: Negative concerns about immigration	Estimate					
Log share of refugee presence	-0.09	-0.09	-0.09	-0.09	-0.08	-0.08
Media Salience (state-level)	37.15	37.83	33.51	33.46	21.69	21.64
Log share of refugee presence* Media Salience (state-level)	7.94	8.13	7.15	7.14	4.33	4.44
Media Salience (national-level)					14.37	13.71
Log share of refugee presence* Media Salience (national-level)					2.86	2.63
	Odds Ratio					
Log share of refugee presence	0.91	0.91	1.02	1.02	1.14	1.11
Media Salience (state-level)	1.36E+16	2.68E+16	6.51E+14	6.27E+14	1.44E+09	1.52E+09
Log share of refugee presence*Media Salience (state-level)	2813.84	3392.69	1032.97	1022.37	57.46	62.67
Media Salience (national-level)					7.72E+33	4.32E+38
Log share of refugee presence*Media Salience (national-level)					1.60	1.63
yearly effect	v	v	v	v	v	v
control			v	v		v
	M - 1	M -1.1	M - 1.2	M - 1.3	M - 2	M - 2.1

East German State: Mecklenburg-Western Pomerania						
Outcome: Negative concerns about immigration	Estimate					
Log share of refugee presence	-0.04	-0.04	-0.03	-0.03	-0.03	-0.03
Media Salience (state-level)	19.28	19.84	15.57	15.54	11.05	10.11
Log share of refugee presence*Media Salience (state-level)	4.16	4.31	3.36	3.35	2.20	2.07
Media Salience (national-level)					7.00	6.10
Log share of refugee presence*Media Salience (national-level)					1.38	1.17
	Odds Ratio					
Log share of refugee presence	0.96	0.96	1.07	1.07	1.20	1.17
Media Salience (state-level)	2.36E+08	4.14E+08	1.06E+07	1.03E+07	3.45E+04	1.51E+04
Log share of refugee presence*Media Salience (state-level)	64.30	74.44	23.28	23.14	6.81	5.86
Media Salience (national-level)					4.85E+30	2.15E+35
Log share of refugee presence*Media Salience (national-level)					0.37	0.38
yearly effect	v	v	v	v	v	v
control			v	v		v

	M - 1	M -1.1	M - 1.2	M - 1.3	M - 2	M - 2.1
East German State: Saxony						
Outcome: Negative concerns about immigration	Estimate					
Log share of refugee presence	-0.06	-0.06	-0.06	-0.06	-0.06	-0.05
Media Salience (state-level)	21.36	21.69	20.26	20.23	14.13	14.64
Log share of refugee presence*Media Salience (state-level)	4.55	4.64	4.30	4.30	2.83	3.01
Media Salience (national-level)					9.27	9.29
Log share of refugee presence*Media Salience (national-level)					1.85	1.79
	Odds Ratio					
Log share of refugee presence	0.95	0.95	1.05	1.05	1.18	1.14
Media Salience (state-level)	1.89E+09	2.63E+09	1.14E+09	1.13E+09	7.46E+05	1.39E+06
Log share of refugee presence*Media Salience (state-level)	94.35	103.76	60.08	59.82	12.82	14.91
Media Salience (national-level)					4.71E+31	5.21E+36
Log share of refugee presence*Media Salience (national-level)					0.58	0.70
yearly effect	v	v	v	v	v	v
control			v	v		v

	M - 1	M -1.1	M - 1.2	M - 1.3	M - 2	M - 2.1
East German State: Saxony-Anhalt						
Outcome: Negative concerns about immigration	Estimate					
Log share of refugee presence	-0.08	-0.08	-0.07	-0.07	-0.08	-0.08
Media Salience (state-level)	23.27	24.09	18.88	18.82	12.80	11.28
Log share of refugee presence*Media Salience (state-level)	4.88	5.09	3.90	3.89	2.61	8.63
Media Salience (national-level)					9.12	2.34
Log share of refugee presence*Media Salience (national-level)					1.85	1.68
	Odds Ratio					
Log share of refugee presence	0.92	0.92	1.03	1.03	1.15	1.12
Media Salience (state-level)	1.27E+10	2.89E+10	2.89E+08	2.75E+08	1.99E+05	4.85E+04
Log share of refugee presence*Media Salience (state-level)	131.99	161.59	40.22	39.76	10.34	7.69
Media Salience (national-level)					4.03E+31	2.69E+36
Log share of refugee presence*Media Salience (national-level)					0.58	0.63
yearly effect	v	v	v	v	v	v
control			v	v		v

	M - 1	M -1.1	M - 1.2	M - 1.3	M - 2	M - 2.1
East German State: Thuringia						
Outcome: Negative concerns about immigration	Estimate					

Log share of refugee presence	-0.06	-0.06	-0.05	-0.05	-0.07	-0.06
Media Salience (state-level)	9.61	10.06	7.86	7.83	7.03	6.33
Log share of refugee presence*Media Salience (state-level)	1.91	2.01	1.53	1.52	1.46	1.33
Media Salience (national-level)					5.97	5.51
Log share of refugee presence*Media Salience (national-level)					1.22	1.08
	Odds Ratio					
Log share of refugee presence	0.94	0.94	1.05	1.05	1.16	1.14
Media Salience (state-level)	1.50E+04	2.34E+04	4.73E+03	4.62E+03	6.19E+02	3.43E+02
Log share of refugee presence*Media Salience (state-level)	6.73	7.47	3.73	1.45	3.25	2.78
Media Salience (national-level)					1.73E+30	1.19E+35
Log share of refugee presence*Media Salience (national-level)					0.31	0.35
yearly effect	v	v	v	v	v	v
control			v	v		v

Table A6: Random Effect Estimation in Random Slope Model (with fixed intercept) in Eleven West German states

	Model 1	Model 1.1	Model 1.2	Model 1.3	Model 2	Model 2.1
West German State: Baden-Württemberg						
Outcome:						
Negative concerns about immigration	Estimate					
Log share of refugee presence	0.04	0.04	0.03	0.03	0.04	0.04
Media Salience (state-level)	-2.20	-2.41	1.78	1.80	1.23	4.00
Log share of refugee presence* Media Salience (state-level)	-0.35	-0.39	0.56	0.56	0.16	0.78
Media Salience (national-level)					-0.15	0.10
Log share of refugee presence* Media Salience (national-level)					-0.08	-0.02
	Odds Ratio					
Log share of refugee presence	1.04	1.04	1.14	1.15	1.30	1.25
Media Salience (state-level)	0.11	0.09	10.84	11.09	1.87	33.42
Log share of refugee presence* Media Salience (state-level)	0.71	0.68	1.42	1.43	0.89	1.61
Media Salience (national-level)					3.82E+27	5.28E+32
Log share of refugee presence* Media Salience (national-level)					0.08	0.11
yearly effect	v	v	v	v	v	v
control			v	v		v

	Model 1	Model 1.1	Model 1.2	Model 1.3	Model 2	Model 2.1
West German State: Bavaria						
Outcome:						
Negative concerns about immigration	Estimate					
Log share of refugee presence	0.01	0.01	0.01	0.01	0.01	0.02
Media Salience (state-level)	9.89	9.77	12.21	12.22	7.48	9.44
Log share of refugee presence* Media Salience (state-level)	2.24	2.23	2.81	2.81	1.42	1.89
Media Salience (national-level)					3.92	3.59
Log share of refugee presence* Media Salience (national-level)					0.73	0.65
	Odds Ratio					
Log share of refugee presence	1.01	1.01	1.12	1.12	1.26	1.22
Media Salience (state-level)	1.97E+04	1.74E+04	3.67E+05	3.73E+05	965.02	7684.79
Log share of refugee presence* Media Salience (state-level)	9.41	9.31	13.46	13.50	3.13	4.91
Media Salience (national-level)					2.24E+29	1.74E+34
Log share of refugee presence* Media Salience (national-level)					0.19	0.22
yearly effect	v	v	v	v	v	v

control			v	v		v
	Model 1	Model 1.1	Model 1.2	Model 1.3	Model 2	Model 2.1
West German State: Berlin						
Outcome:						
Negative concerns about immigration	Estimate					
Log share of refugee presence	-0.01	0.00	-0.03	-0.03	-0.02	-0.05
Media Salience (state-level)	-44.08	-44.15	-39.24	-39.26	-22.04	-20.14
Log share of refugee presence*						
Media Salience (state-level)	-9.87	-9.95	-9.00	-9.00	-4.26	-4.03
Media Salience (national-level)					-11.21	-7.34
Log share of refugee presence*						
Media Salience (national-level)					-2.13	-1.32
	Odds Ratio					
Log share of refugee presence	0.99	1.00	1.07	1.07	1.22	1.15
Media Salience (state-level)	0.00	0.00	0.00	0.00	0.00	0.00
Log share of refugee presence*						
Media Salience (state-level)	0.00	0.00	0.00	0.00	0.01	0.01
Media Salience (national-level)					5.99E+22	3.11E+29
Log share of refugee presence*						
Media Salience (national-level)					0.01	0.03
yearly effect	v	v	v	v	v	v
control			v	v		v
	Model 1	Model 1.1	Model 1.2	Model 1.3	Model 2	Model 2.1
West German State: Bremen						
Outcome:						
Negative concerns about immigration	Estimate					
Log share of refugee presence	0.02	0.02	0.01	0.01	0.02	0.01
Media Salience (state-level)	3.96	3.77	5.19	5.20	-0.04	0.38
Log share of refugee presence*						
Media Salience (state-level)	0.95	0.92	1.21	1.21	-0.04	0.07
Media Salience (national-level)					-0.71	-0.44
Log share of refugee presence*						
Media Salience (national-level)					-0.17	-0.10
	Odds Ratio					
Log share of refugee presence	1.02	1.02	1.12	1.12	1.27	1.22
Media Salience (state-level)	52.54	43.58	326.15	332.68	0.53	0.89
Log share of refugee presence*						
Media Salience (state-level)	2.60	2.50	2.73	2.74	0.72	0.79
Media Salience (national-level)					2.18E+27	3.10E+32
Log share of refugee presence*						
Media Salience (national-level)					0.08	0.11
yearly effect	v	v	v	v	v	v
control			v	v		v
	Model 1	Model 1.1	Model 1.2	Model 1.3	Model 2	Model 2.1
West German State: Hamburg						
Outcome:						
Negative concerns about immigration	Estimate					
Log share of refugee presence	0.11	0.11	0.09	0.09	0.11	0.09
Media Salience (state-level)	-19.99	-21.04	-17.16	-17.09	-14.48	-13.69
Log share of refugee presence*						
Media Salience (state-level)	-4.04	-4.29	-3.44	-3.42	-2.99	-2.84
Media Salience (national-level)					-11.10	-10.50
Log share of refugee presence*						
Media Salience (national-level)					-2.27	-2.05
	Odds Ratio					
Log share of refugee presence	1.11	1.11	1.21	1.21	1.39	1.32
Media Salience (state-level)	0.00	0.00	0.00	0.00	0.00	0.00
Log share of refugee presence*						
Media Salience (state-level)	0.02	0.01	0.03	0.03	0.04	0.04
Media Salience (national-level)					6.71E+22	1.32E+28
Log share of refugee presence*						
Media Salience (national-level)					0.01	0.02

yearly effect	v	v	v	v	v	v
control			v	v		v
	Model 1	Model 1.1	Model 1.2	Model 1.3	Model 2	Model 2.1
West German State: Hesse						
Outcome:						
Negative concerns about immigration	Estimate					
Log share of refugee presence	0.04	0.04	0.03	0.03	0.04	0.03
Media Salience (state-level)	-9.23	-9.72	-8.43	-8.40	-3.69	-3.22
Log share of refugee presence*						
Media Salience (state-level)	-1.91	-2.03	-1.76	-1.76	-0.79	-0.68
Media Salience (national-level)					-2.96	-2.92
Log share of refugee presence*						
Media Salience (national-level)					-0.62	-0.58
	Odds Ratio					
Log share of refugee presence	1.04	1.04	1.14	1.14	1.30	1.24
Media Salience (state-level)	0.00	0.00	0.00	0.00	0.01	0.02
Log share of refugee presence*						
Media Salience (state-level)	0.15	0.13	0.14	0.14	0.34	0.38
Media Salience (national-level)					2.29E+26	2.58E+31
Log share of refugee presence*						
Media Salience (national-level)					0.05	0.07
yearly effect	v	v	v	v	v	v
control			v	v		v
	Model 1	Model 1.1	Model 1.2	Model 1.3	Model 2	Model 2.1
West German State: Lower Saxony						
Outcome:						
Negative concerns about immigration	Estimate					
Log share of refugee presence	0.03	0.03	0.04	0.04	0.03	0.04
Media Salience (state-level)	-12.84	-13.02	-13.71	-13.69	-8.57	-9.86
Log share of refugee presence*						
Media Salience (state-level)	-2.73	-2.78	-2.89	-2.89	-1.70	-2.03
Media Salience (national-level)					-5.74	-6.36
Log share of refugee presence*						
Media Salience (national-level)					-1.14	-1.22
	Odds Ratio					
Log share of refugee presence	1.03	1.03	1.16	1.16	1.28	1.25
Media Salience (state-level)	0.00	0.00	0.00	0.00	0.00	0.00
Log share of refugee presence*						
Media Salience (state-level)	0.06	0.06	0.05	0.05	0.14	0.10
Media Salience (national-level)					1.43E+25	8.28E+29
Log share of refugee presence*						
Media Salience (national-level)					0.03	0.03
yearly effect	v	v	v	v	v	v
control			v	v		v
	Model 1	Model 1.1	Model 1.2	Model 1.3	Model 2	Model 2.1
West German State: North Rhein-Westphalia						
Outcome:						
Negative concerns about immigration	Estimate					
Log share of refugee presence	-0.02	-0.02	-0.01	-0.01	-0.04	-0.03
Media Salience (state-level)	-22.05	-22.18	-23.98	-23.97	-15.34	-18.41
Log share of refugee presence*						
Media Salience (state-level)	-5.00	-5.06	-5.48	-5.48	-2.88	-3.70
Media Salience (national-level)					-8.44	-7.26
Log share of refugee presence*						
Media Salience (national-level)					-1.57	-1.32
	Odds Ratio					
Log share of refugee presence	0.98	0.98	1.09	1.09	1.20	1.17
Media Salience (state-level)	0.00	0.00	0.00	0.00	0.00	0.00
Log share of refugee presence*						
Media Salience (state-level)	0.01	0.01	0.00	0.00	0.04	0.02
Media Salience (national-level)					9.55E+23	3.39E+29

Log share of refugee presence* Media Salience (national-level)					0.02	0.03
yearly effect	v	v	v	v	v	v
control			v	v		v
	Model 1	Model 1.1	Model 1.2	Model 1.3	Model 2	Model 2.1
West German State: Rheinland-Palatinate						
Outcome:						
Negative concerns about immigration	Estimate					
Log share of refugee presence	0.05 €	0.06 €	0.07 €	0.07 €	0.05 €	0.07 €
Media Salience (state-level)	-16.72 €	-17.11 €	-19.64 €	-19.60 €	-9.70 €	-12.80 €
Log share of refugee presence* Media Salience (state-level)	-3.52 €	-3.62 €	-4.10 €	-4.09 €	-1.97 €	-8.94 €
Media Salience (national-level)					-6.70 €	-2.64 €
Log share of refugee presence* Media Salience (national-level)					-1.35 €	-1.73 €
	Odds Ratio					
Log share of refugee presence	1.06	1.06	1.19	1.19	1.31	1.28
Media Salience (state-level)	0.00	0.00	0.00	0.00	0.00	0.00
Log share of refugee presence* Media Salience (state-level)	0.03	0.03	0.01	0.01	0.11	0.05
Media Salience (national-level)					5.42E+24	6.29E+28
Log share of refugee presence* Media Salience (national-level)					0.02	0.02
yearly effect	v	v	v	v	v	v
control			v	v		v
	Model 1	Model 1.1	Model 1.2	Model 1.3	Model 2	Model 2.1
West German State: Saarland						
Outcome:						
Negative concerns about immigration	Estimate					
Log share of refugee presence	0.03	0.02	0.03	0.03	0.03	0.04
Media Salience (state-level)	9.01	9.10	12.65	12.65	1.56	3.93
Log share of refugee presence* Media Salience (state-level)	2.11	2.15	2.99	2.99	0.26	0.76
Media Salience (national-level)					-0.11	0.18
Log share of refugee presence* Media Salience (national-level)					-0.06	0.00
	Odds Ratio					
Log share of refugee presence	1.03	1.03	1.14	1.14	1.28	1.25
Media Salience (state-level)	8224.96	8915.10	5.68E+05	5.77E+05	2.62	31.11
Log share of refugee presence* Media Salience (state-level)	8.29	8.58	16.16	16.20	0.98	1.59
Media Salience (national-level)					3.98E+27	5.77E+32
Log share of refugee presence* Media Salience (national-level)					0.09	0.12
yearly effect	v	v	v	v	v	v
control			v	v		v
	Model 1	Model 1.1	Model 1.2	Model 1.3	Model 2	Model 2.1
West German State: Schleswig-Holstein						
Outcome:						
Negative concerns about immigration	Estimate					
Log share of refugee presence	0.02	0.02	0.04	0.04	0.02	0.04
Media Salience (state-level)	-6.42	-6.53	-5.75	-5.73	-3.11	-3.65
Log share of refugee presence* Media Salience (state-level)	-1.34	-1.37	-1.13	-1.12	-0.63	-0.77
Media Salience (national-level)					-2.56	-3.35
Log share of refugee presence* Media Salience (national-level)					-0.52	-0.66
	Odds Ratio					
Log share of refugee presence	1.02	1.02	1.15	1.15	1.27	1.25
Media Salience (state-level)	0.00	0.00	0.01	0.01	0.02	0.02
Log share of refugee presence*	0.26	0.26	0.26	0.26	0.40	0.34

Media Salience (state-level)							
Media Salience (national-level)					3.42E+26		1.69E+31
Log share of refugee presence*							
Media Salience (national-level)					0.05		0.06
yearly effect	v	v	v	v	v	v	
control			v	v		v	