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

This study aims to examine the effect of increasing refugees on the rise of anti-immigrant attitudes across German regions. We explore how the interaction of local news events and demographic changes affects anti-immigrant attitudes. This study relies on data from 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 show that the effect of immigrant presence on anti-immigrant attitudes across macro-regions, including the former West and East Germany, is moderated by the salience of local refugee-focused news event. As the refugee presence in a region causes a rise in anti-immigrant attitudes, the increasing media attention on refugees in some regions amplify this relationship. Based on this, we conclude that media coverage plays an essential, albeit inconsistent, role in politicizing changes in the population composition as threats, and thus in triggering anti-immigrant attitudes.
The interplay between refugee inflows and media coverage in determining attitudes towards immigrants in Germany

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1. Introduction

In the past decade, the rise of anti-immigration attitudes in Europe has been attributed to a large number of immigrants who regard western European countries as their destination. Many studies have attributed the effect of immigrants’ arrival on individuals’ attitudes toward immigrants via either increased political and cultural threats or socio-economic threats (e.g. Newman, Hartman, and Taber 2012; Ben-Nun Bloom, Arikan, and Lahav 2015; Ponce 2017; Halikiopoulou and Vlandas 2020). Besides this, the prevalent political ideology of a region is also regarded as influencing individual perception and responses to the large emergence of immigrants (Semyonov, Rajzman, and Gorodzeisky 2006; Fryberg et al. 2012a). A competing theory of group contact is also used to explain the decline or reverse anti-immigration attitudes at a relatively micro-level (Allport, Clark, and Pettigrew 1954; Pettigrew 1998). Overall, studies in anti-immigrant attitudes caused by the growing outgroups remain divergent.

This divergence firstly comes from divergent theories. The measurement from the threat theory includes the socio-economic threat on an individual level and the cultural-political threat on a group level. The contact theory measures the intergroup contacts on an individual level and subsequent positive perceptions of immigrants (Ceobanu and Escandell 2010; Newman, Hartman, and Taber 2012; Koopmans and Veit 2014; Green, Visintin, and Sarrasin 2018; Hangartner et al. 2019; Frey 2020). Effects from assumptions of these two theories are difficult to be disentangled, as they may offset each other. Therefore, the hypothesis of threat theory which indicates that immigration growth increases anti-immigration sentiments has been effectively verified in some cases, whereas the hypothesis of contact theory which indicates that immigration growth reduces anti-immigration sentiments has been supported in some other cases instead. Second, this divergence can be attributed to the heterogeneous individual perceptions related to concentrations of immigrants in segmented communities and jobs, leaving them at times largely unseen by native residents (Hopkins 2010). Accordingly, a micro-macro approach, i.e. controlling for the individual as well as the contextual characteristic in modeling attitudes toward immigrants, is commonly adopted in most studies (Green et al. 2018; Jeannet 2020), although these studies often fail to clarify how these factors interweave at various levels, especially at the meso-level, such as precincts and communities. As a result of this divergence, we want to ask whether there is a factor that induces people to have consistent political attitudes or political behaviors toward immigration.

Studies have found that media coverage and demographic change in one area influence the political attitudes and behaviors of residents (Fryberg et al. 2012a; Koch et al. 2020). The mechanism is that the media salience provides people an interpretive framework for understanding changes in the surrounding areas (Hopkins 2010). Media salience is defined as a noticeable amount of media coverage that draws people’s attention to an issue. The case of the U.S. has shown that changing demographics and a salient media frame help to connect people’s local experience to collective political understanding, which refers to “the U.S. as a whole” and how it is threatened, based on a long-term trend of the nationalization of American political behavior (Hopkins 2018). Instead of the framing role of a national media frame, we argue that regional news events can bring a concentrated amplification of people’s negative perceptions on the growing outgroup, especially in the context of the refugee crisis in Germany.

The impact of the refugee crisis on Germany has been more acute than the impact of the same wave of immigration to most other destination countries. Since 2015, the German
government has accepted more than one million refugees from Middle East countries, such as Syria and Afghanistan, and processed their asylum applications. In 2016, the share of asylum applications in the EU that were filed in Germany achieved 59%. As Germany became the most popular destination for refugees and immigrants in Europe, several violent acts involved by refugees stimulated suspicions toward immigrant policy. The increasing hostility toward immigrants is inseparable from ethnonationalism, with regional differences left over from the history of division between the former East and West Germany (Doerr 2021). Previous studies in Germany have also either adopted a micro-macro approach, i.e. a contextual-individual method, or focused on a major factor causing a strong impact on natives’ attitudes toward immigrants (Hangartner et al. 2019; Chen 2020; Frey 2020). However, the mechanism of molding the interaction of collective political issue and individual characteristics in localities are relatively blurred. In this study, we show that the regional refugee influx and the salience of media coverage of regional events bring an interplaying effect on the rise of anti-immigrant attitudes. We also seek to show how regional news events play an essential role in politicizing changes in the surrounding population as threats. Using a combination of data from the German Socio-Economic-Panel (2011-2017), data from the Federal Office of Statistics, and the Gdelt database of news coverage, within the framework of a random slope regression model, this study aims at offering a more consistent explanation for the rise of anti-immigration attitudes across German regions than is available from past research.

**Perceived threat and immigrant presence**

A sufficiently large outgroup can be perceived as a threat to local people and, consequently, triggers hostility (Key and Heard 1949; Blalock 1967). Studies have shown that the economic threat is from the competition for scarce resources with outgroups (e.g. Semyonov et al. 2006; Ben-Nun Bloom et al. 2015; Ponce 2017; Halikiopoulou and Vladas 2020) and the cultural threat comes from outgroup culture exposure, such as language (e.g. Taylor 1998; Newman, Hartman, et al. 2012). Another variant of the threat theory looks at a societal level and indicates outgroups can trigger policy preferences to restrict immigration and immigrant welfare use (Feldman and Stenner 1997; Crepaz 2020). In general, native residents tend to perceive threats after sensing an acute change in their communities.

A competing contact theory indicates intergroup contacts generate positive perceptions toward outgroups (Allport et al. 1954; Pettigrew 1998; Stein, Post, and Rinden 2000; Wagner et al. 2006). Studies show divergent results while considering the group threat together with the assumption of contact theory. First, the reason for this divergence could be attributed to effects from these two theories that are hard to disentangle. Further, contact theory is also used to complement interpretations in the null or positive effects of immigrant presence. For example, Green et al. (2018) use data of Swiss International Social Survey Programme to show that intergroup contacts can buffer the impact of conservative ideological climates. As positive contacts and cooperation happen among groups, stereotypes, as well as negative perceptions generated from racial threats, can be effectively eliminated. Second, people usually do not perceive the change in local demographics instantly because immigrants are relatively invisible in local society—they work in segmented job markets, live in segmented communities, and cannot vote—these changes can only be perceived consciously with certain frames, such as frames from the media. Therefore, the hypothesis of threat theory which indicates that immigration growth increases anti-immigration attitudes has been effectively verified in some cases, whereas the hypothesis of contact theory which indicates the immigration growth reduces anti-immigration sentiments has been supported in some other cases (Key and Heard 1949; Blalock 1967; Green et al. 2018; Newman, Hartman, et al. 2012).
Studies have also shown that threats can come from the misperception about outgroups. The size of the foreign population tends to be overestimated by native residents (Nadeau, Niemi, and Levine 1993; Sigelman and Niemi 2001; Theiss-Morse 2003; Herda 2017, 2019). Research has also shown evidence that natives in European countries and the United States tend to overestimate the size of the foreign-born population (Citrin and Sides 2008). An overestimation of the size of the immigrant group is usually associated with the rise of anti-immigrant attitudes (Markaki and Longhi 2013; Hooghe and De Vroome 2015). Besides this, anti-immigrant attitudes increase with the size of the immigrant population, especially among those people who think their country accepts more immigrants than others (Blinder, Ford, and Ivarsflaten 2013, which focuses on Britain). As outgroups are relatively invisible in society, the media often plays the function of increasing their visibility, especially those of stigmatized outgroups, such as refugees (Blinder 2015). This generates both stereotypes and misperceptions of the outgroup size to the native residents. As change in people's attitudes are often based on perceptions rather than reality (Wong 2007), we argue that the media 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-immigrant attitudes.

The framing role of the media

Media usually plays a framing role in times of change. The salience of media coverage provides an interpretive framework for native residents to understand their changing communities (Hopkins 2010). As this assumption is built based on the long-term trend of nationalism 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). Research shows national newspapers were more likely than local newspapers to frame arguments supporting immigrant-restricting bills in terms of threats to economic and public safety (Fryberg et al. 2012). Through the interaction of a national political frame and personal circumstances, the negative perception from outgroup contacts is reinforced. However, it is possible for local media to also frame changes in some circumstances through the same mechanisms as the national media (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). This theoretical approach suggests media can connect individual perceptions regarding increasing immigrant population to collective understandings.

In Germany, the rise of anti-immigrant attitudes is inextricably linked to ethnonationalism based on regional differences inherited from the previous East and West German divisions (Weisskircher 2020). Research shows that experiencing decline or perceived vulnerability as well as social marginalization are positively associated with supporting nationalist policies in former East Germany (Hillje 2018). Even though the share of immigrants is generally lower in former East Germany, a survey shows that the majority of PEGIDA activists\(^1\) tend to overestimate the share of Muslim immigrants in Saxony by only 1 to 2 percent than the real share (Daphi et al. 2015). This means the low share of immigrants in former East Germany is not completely unknown to anti-immigrant locals, and these people are therefore more likely to accept a “threat” frame regarding immigrants than people in former West

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\(^1\) PEGIDA is the abbreviation of “Patriotische Europäer gegen die Islamisierung des Abendlandes,” which means “Patriotic Europeans Against the Islamicisation of the Occident” in English. It is an anti-Islam and far-right political movement emerging since the “Refugee Crisis” in 2014 across Europe.
Germany. It is especially significant when a sharp and sudden change of the immigrant share in places where immigrants had previously been comparatively rare\(^2\). Hence, the long-standing differences between the east and the west are represented in the rise of anti-immigrant attitudes during the refugee crisis from 2014.

Regarding the difference between German regions, we argue that local news events bring a more concentrated impact to make individuals feel more exposed to threats (Akay, Bargain, and Elsayed 2020). Media exposure will navigate people to notice a certain change—even an exaggerated change—in surrounding areas. \textit{We hypothesize that the increasing refugee presence in a region increases anti-immigrant attitudes in this region, and this effect is also strengthened by the media coverage about refugees in this region.} This study aims to examine whether and to what extent the effect of the refugee increase on the rise of anti-immigrant attitudes is moderated by local news events about refugees in Germany.

\section*{Research Methods and Data}

This study relies on the integration of various data sources. Data on inflows of immigrants to Germany, in particular asylum seekers, comes from the German Federal Office of Statistics (Statistisches Bundesamt). We define the rate of asylum applications as the proportion of asylum seeker applications in the total population in each state per year, which indicates the regional refugee presence. The measurement of anti-immigrant attitudes comes from the German Socio-Economic Panel (SOEP) and uses the question “How concerned are you about the following issues?” and the answer to one of the issues listed: “Immigration to Germany” in the SOEP core study\(^3\). This question is also seen as a measurement of negative attitudes toward immigrants (Tucci 2005) with three scales: “very concerned”, “somewhat concerned”, and “not concerned at all.” We code “very concerned” as 1 (others as 0) to represent anti-immigrant attitudes (See Figure A.1 about the cross-sectional variation of the rate of asylum applications across differential attitudes toward immigrants in Appendix).

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 the Gdelt Event database, over 300 categories of physical events are recorded every 15 minutes around the world. As the example shown on the Gdelt official site, a sentence like "The United States criticized Russia yesterday for deploying its troops in Crimea, in which a recent clash with its soldiers left 10 civilians injured" is recorded as “US CRITICIZES RUSSIA, RUSSIA TROOP-DEPLOY UKRAINE (CRIMEA), and RUSSIA MATERIAL-CONFLICT CIVILIANS (CRIMEA)” and then assigned into different attributes in the database. 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. From this database, a time-series dataset of news production could be created as the proxy of the amount of media coverage over time. In the Gdelt event database, the regional information could be identified at the state level (Bundesland), i.e. the location of the event action. Considering that people usually pay attention particularly to news events happening around them, we considered the number of news articles with the event location in one’s living state as the salient media effect on individuals. We also considered the overall news output because the increase of online news channels in recent years

\begin{itemize}
  \item \textsuperscript{3} 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.”
\end{itemize}
has also led to a surge in news production of all types of topics. As a normalization, we calculated the proportion of the refugee news amount to the overall news amount as the variable measuring media salience on the topic of refugees (See Figure A.2 about the monthly trend of rate of media salience and the average sentiments of these media reports in Appendix). In this study, we apply a mixed-effect approach, which is also known as the random slope model or the multi-level model. 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-immigrant 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 constrained intercept to consider the regional difference of this effect in different German states. Besides this, the yearly effect is also controlled.

Results

Figure 1 presents an overview of the change in levels of the media salience of the refugee issue from 2014 to 2016 in Germany. The map represents the media attention to local events relating to asylum seekers. We can see the salience of refugees in the media increases significantly, mainly in former East Germany. In 2015, the media attention is especially salient in Brandenburg and Thuringia (Thüringen), and also in Saxony (Sachsen) and Mecklenburg-Western Pomerania (Mecklenburg-Vorpommern) in 2016.

Figure 2, we examine the demographic change regarding the influx of refugees in Germany. The ratio of asylum seekers to the overall state population is not significantly high in former East Germany but relatively higher in North Rhine-Westphalia (Nordrhein-Westfalen), Bremen, and Hamburg. In general, states in former West Germany encountered more significant demographic changes than former East Germany from the refugee crisis. This trend is not consistent with the trend of media salience on refugees in Figure 1.
To better understand the effect of refugee influx and local news events about refugees on the rise of anti-immigrant attitudes in German states, we adopt the mixed-effect approach as a result of the state-level information in the data. We specify the model as below. In this model, “Anti-Immigrant-Attitude” indicates an individual’s negative concerns toward immigrants from SOEP data, “Refugee Influx” indicates the rate of asylum applications in an individual’s living state, and “Media Salience” indicates the proportion of news articles in refugee topics in an individual’s living state. $u_{1j}$ allows state-level variation in rate of change in y (slope) and $e_{ij}$ is the state-level residuals.

$$\text{Anti-Immigrant-Attitude}_{ij} = \beta_0 + \beta_1 \times \log(\text{Refugee-Influx})_i \times \text{Media-Salience} + u_{1j} + e_{ij}$$

Figure 3 displays the random effect coefficients centralized by the estimation of the fixed effect with a constrained intercept. From Figure 3, the effect of the refugee influx on the anti-immigrant attitudes does exist (see 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-Vorpommern. In the right column, the effect of the interaction of the refugee influx and the media salience (about refugees) shows a stronger effect, than the effect of simply refugee influx, in the area of Saarland, Bavaria (Bayern), Bremen, and the area of former East Germany, which demonstrates that the effect of the refugee influx is strengthened via the media salience. Figure A.3 represents random slopes of German states in Appendix.

The result in Figure 3 partially supports our expectation that the increasing refugee presence in a region increases anti-immigrant attitudes, and this effect is strengthened by the media salience about refugees. This indicates that the negative perception of the native resident caused by the influx of refugees is moderated by the media attention to refugees. However, our result displays a regional difference as effects are strengthened in Saarland, Bavaria, Bremen, and former East Germany states while, unexpectedly, effects are weakened in other states.
In Figure 4, we predict the marginal effect of the interaction of the refugee influx and the media salience on refugees across 16 German states. This figure decomposes the effect of the interaction of demographic changes and media attention on refugees in each state. The effect of the media salience (i.e. ratio of refugee news to total news production) amplifies the effect of the refugee influx (i.e. ratio of asylum seekers to total population) on anti-immigrant attitudes (i.e. ratio of people worrying very much about immigration) especially in the states of former East Germany (states with dark strips). The higher negative perceptions of immigrants in former East German states caused by the influx of refugees also increase with higher media attention on refugees. States like Berlin and North Rhine-Westphalia show that the increase of refugees does not necessarily lead to an increase in anti-immigrant attitudes. In other states in former West Germany, the refugee influx would slightly increase the anti-immigrant attitudes, but it is not amplified by the media salience on refugees. In Appendix, Figure 4.1, 4.2 and 4.3 shows individual marginal effects by year, ratio of asylum seekers, and ratio of media salience between former West and East Germany.

To better compare the regional difference in the media effect on changing people’s perception toward refugee influx, Figure 4.1 shows the marginal effect in all states in former East Germany with two breaks of media salience at 0.01 and 0.04, and Figure 4.2 shows the same prediction in former West Germany. We exclude Berlin in these two figures because it cannot be completely classified as East Germany or West Germany. From these two figures, media effects between the former West and East Germany are different. In former West Germany, the media has almost no influence on the effect of the refugee influx on anti-immigrant attitudes while we observe a distinct media effect in former East Germany. Overall, on average, people in former East Germany are more likely to accept a threat frame about refugees from the media and thus perceive negatively the refugee influx than former West Germany. Beyond the German context, these findings suggest that the processes regarding the role of news theorized by Hopkins may be dependent on initial conditions of a particular region, such as the level of ethnonationalism and social marginalization.
Figure 4: Predicted Probabilities across German states

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

Note: Ratio of asylum seekers has been log-transformed in the model, therefore the interval is not equidistant.

Figure 4.1: Predicted Probabilities in Former East Germany

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

Note: Ratio of asylum seekers has been log-transformed in the model, therefore the interval is not equidistant.

(Excludes Berlin)
Discussion

To clarify whether the media salience of local refugee events can amplify the effect of refugee presence on anti-immigrant attitudes, we examine the interaction of increasing refugees and media salience on the rise of anti-immigrant attitudes across German regions. Beyond threats triggered by outgroups and outgroup contacts offsetting negative perceptions from these threats, yet, little is known about the mechanism of how people accept a threat frame about outgroups. Our results contribute to understandings of the refugee impact as well as the indirect role of media theorized by Hopkins, but this study still remains some limitations.

The first limitation is the size of the increase of anti-immigrant attitudes at the state level. A mixed-effect approach provides us with an understanding of between- and within-group variations. As the largely differential effects across states, the estimation of the fixed effect i.e. the overall trend in Germany, is not significant. Besides, the random effect, which represents the between-state difference, is selected through an ANOVA comparison (see Table A1 in Appendix). From the comparison, we consider a random slope model with a constrained intercept fitting the best. However, it is not reasonable to report the effect size of the random effect in a mixed-effect approach. Therefore, we can conclude the regional difference between East and West Germany in our results, but not the size of these differential effects. Second, our results have to be cautious to be interpreted in causal terms. By using a longitudinal dataset (2011-2017), we control for the stable individual difference as well as period effects. However, we still cannot completely avoid the possibility of reverse causality. The rise of anti-immigration attitudes may also induce the media to publish more relevant reports to gain media traffic amounts.

Overall, the media effect in framing people’s perception toward refugees is bolstered in East Germany by our findings. The differential results among states in former East and West Germany represent that the initial conditions of a particular region, such as the level of ethnonationalism and social marginalization, make the role of the media stand out differently. Compared to a steady increase of nationalism in the U.S. political behavior, ethnonationalism
in former East Germany presents more xenophobia than that of West Germany. Resonating to Hopkins’ (2010) theory, the long-term historical division in Germany leads to differential initial conditions between former East and West Germany. More empirical results in contexts out of the U.S., especially in western European countries, could bring comparisons and complements of the role of media on how people perceive outgroups. Furthermore, extensions could be developed in the role of media on triggering anti-immigrant political behaviors (e.g. bills or Petitions) or violence. Yet anti-immigrant attitudes are not necessary to causally lead to anti-immigrant political behaviors (e.g. bills) or violence (e.g conflicts), albeit there should be some correlations. This emphasizes the importance of determining when and where anti-immigrant attitudes are triggered in the destination countries of refugees.
References


Data Sources
Statistisches Bundesamt (Destatis), Genesis-Online; Data licence by-2.0
The GDELT project: https://www.gdeltproject.org/
Appendix

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

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 constarined intercept

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

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

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)

[Graph showing the relationship between the ratio of asylum seekers to total population and the ratio of people who are very much worried about immigration, with regions East and West shown separately.]

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

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

[Graph showing the relationship between the ratio of refugee news to total news production and the ratio of people who are very much worried about immigration, with regions East and West shown separately.]

Data Source: SOEP 2011-17, German Federal Office of Statistics & The Gdelt Database
Note: Ratio of asylum seekers has been log-transformed in the model, therefore the interval is not equidistant.
Table A1: ANOVA Test for Model Selection

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<th>BIC</th>
<th>loglik</th>
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<th>Chisq</th>
<th>Df</th>
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Data Source: SOEP 2011-17, German federal office of statistics, & the Gdelt Database

Table A2: Fixed Effect Estimation in Random Slope Model (with constrained intercept)

| Outcome: Negative concerns about immigration | Estimate | Std. Error | Z value | Pr(>|z|) | Odds Ratio | CI-lower | CI-upper |
|----------------------------------------------|----------|------------|---------|---------|------------|----------|----------|
| Log asylum rate                              | 0.10     | 0.07       | 1.32    | 0.19    | 1.10       | 0.95     | 1.27     |
| Media salience rate                          | 0.42     | 7.56       | 0.06    | 0.96    | 1.52       | 0.00     | 4119661.31 |
| Log asylum rate * Media salience rate         | -0.27    | 1.67       | -0.16   | 0.87    | 0.76       | 0.03     | 20.28    |
| year 2011                                    | 0.09     | 0.02       | 4.12    | 0.00    | 1.10       | 1.05     | 1.15     |
| year 2012                                    | -0.21    | 0.03       | -8.40   | 0.00    | 0.81       | 0.77     | 0.85     |
| year 2013                                    | -0.05    | 0.03       | -1.71   | 0.09    | 0.95       | 0.90     | 1.01     |
| year 2014                                    | 0.16     | 0.04       | 4.40    | 0.00    | 1.17       | 1.09     | 1.26     |
| year 2015                                    | 0.44     | 0.06       | 7.58    | 0.00    | 1.56       | 1.39     | 1.75     |
| year 2016                                    | 0.98     | 0.09       | 11.10   | 0.00    | 2.65       | 2.23     | 3.15     |
| year 2017                                    | 0.67     | 0.09       | 7.30    | 0.00    | 1.95       | 1.63     | 2.33     |
| (Intercept)                                  | -0.82    | 0.37       | -2.21   | 0.03    | 0.44       | 0.21     | 0.91     |

N-groups (States) | 16
Observations       | 190598
Data Source: SOEP 2011-17, German federal office of statistics, & the Gdelt Database

Table A3: Random Effect Estimate in Random Slope Model (with constrained intercept)

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<tr>
<th>Outcome: Negative concerns about immigration</th>
<th>Log asylum rate</th>
<th>Media salience rate</th>
<th>Log asylum rate * Media salience rate</th>
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Observations: 190598

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