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Learning from the Origins: Immigrants' Networks, Political Preferences, and the European Refugee Crisis

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Abstract

This paper documents a 'home bias' in the dynamics of political preferences and social norms. Using variation in public reactions to the European Refugee Crisis, I show that opposition towards refugees and non-European immigrants spills over from countries involved in the Crisis to 1^{st}- and 2^{nd}-generation immigrants from these countries living elsewhere. Learning from the origins activates during the periods of increased issue salience and contributes to the spread of support for right-wing populist parties. Augmenting social survey data with the data from Google Trends and Facebook, I show that (i) elevated attention to events at the origin, (ii) network homophily, and (iii) social media ties are the mechanisms behind these cross-border contagion effects.

Keywords: Immigration Networks, Anti-Refugee Sentiment, Political Spillovers, Far-Right Voting, Integration, Social Media

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1 Introduction

The European Refugee Crisis was one of the most salient events in Europe over the past decade[1]. Recent research has vastly expanded our understanding of the direct effects that immigration and refugee inflows have on the economic and political landscapes of receiving countries[2]. However, in the age of growing global connectivity and unprecedented ease of cross-border communication, it is natural to ask whether the events of this salience may create political 'contagion', spreading from most affected places to the rest of the world. Do public attitudes and political preferences respond to distant events and opinions? Can the recent wave of anti-immigration, anti-globalization and right-wing populist ideology be at least partially attributed to such spillover effects?

This paper focuses on the most immediate type of a network that can allow for such spillovers - immigration network. As long as immigrants and their descendants maintain disproportionately high attention to their countries of origin[3], salient events happening there may affect immigrants' own political preferences and cultural norms. This 'home bias' in the dynamics of political preferences has not been well documented. Moreover, if we are to believe that events and opinions at the origin affect attitudes and behaviors of immigrants, what are the mechanisms behind such cultural and political spillovers?

To address these questions, I analyze the dynamics of political preferences embedded in a network of immigrants-to-origins ties. I use the massive inflow of refugees into Europe in 2014-2016 - along with the corresponding swings in public opinion across countries and political subgroups, - to show how 1st and 2nd-generation immigrants respond to political dynamics in their European countries of origin. Periods of increased issue salience trigger attention and learning from the network, and this paper allows tracing these effects.

I find that (i) opposition towards non-European immigrants and (ii) voting for right-wing populist parties spill over from European countries involved in the Crisis to immigrants from these countries living elsewhere. Using data on search intensity in different languages from

[1]According to the Eurobarometer, immigration was a top issue facing the European Union from 2014 to 2017. Moreover, 36% of respondents named immigration as number one issue facing their country at the end of 2015. Immigration remained in the top-3 most important issues until 2018, see Figures A2 and A3.

[2]See, among others, Dustmann et al. (2019), Steinmayr (2020), Dal Bo et al. (2019), and an overview in Alesina and Tabellini (2021). Reviews by Noury and Roland (2020) and Rodrik (2021) further emphasize the growth of far-right populism and its associations with immigration and refugees, among other factors.

[3]Using the Google Trends data, I demonstrate that during the Refugee Crisis, immigrants from most affected origins pay higher attention to the Crisis than other groups. The recent paper by Burchardi et al. (2019) also finds ethnic 'attention ties' to the origins, but without the time/salience dimension.

Google Trends, as well as Facebook data on the strength of inter-regional friendship links, I establish that immigrants pay disproportionate attention to events in their countries of origin and that stronger network ties increase the strength of spillovers from the origin. Moreover, I show that the bulk of the effect comes from like-minded groups at the origin, pointing at 'homophily' in immigrants' social learning. Together, these findings suggest that salient events attract attention of co-ethnics living abroad and stimulate learning from like-minded groups at the origin.

As a first step, the paper presents a new set of descriptive regularities about spillovers of political preferences from origins to immigrants. Using the data from the European Social Survey on various social and political issues, I test the effects of *changes* in origin-country attitudes on *changes* in the attitudes of immigrants in a simple framework with origin-country Fixed Effects. I find significant spillovers to both first- and second-generation immigrants[4] for many salient issues, including the opposition towards non-European immigration, EU integration, and LGBT rights. Importantly, learning from the origins is much stronger for immigrants who are less socially integrated into their host communities (as measured by citizenship status, language use at home, and the length of residence), suggesting that improving immigrants' social integration may limit the spread of populism, anti-refugee sentiment, and other attitudes and values from abroad. Consistently with the role of local 'diasporas' in facilitating information transmission from the origins, immigrants living in subnational regions with higher shares of co-ethnics also receive much stronger spillovers.

To examine the causal nature of political spillovers and dig deeper into the mechanisms, I proceed to the case of the European Refugee Crisis. Using several measures of the intensity of the Crisis at the $origin \times time$ level, I identify strong spillovers of (i) the opposition towards non-European immigrants and refugees, and (ii) voting for the right-wing populist parties. Causality is established by showing that these contagion effects activate during the time periods - and for origin countries - where the issue of immigration is particularly salient. To diminish the threat that correlated changes in outcomes between immigrants and origins may be driven by correlated shocks (see Manski (1993) for a broader discussion), I limit the sample of host countries to those that were relatively unaffected by the Crisis themselves (such as Estonia, Russia, or Portugal, among others) and show that my findings are not driven by correlated exposures to the Crisis. Additional tests confirm that there were no

[4]As I show in the Supplementary Appendix, whether immigrants live together with their parents or not does not matter much for the size of spillovers from their home countries. Thus, it is more likely that attention persists because immigrants still have family and friends at the origin, which allows them to maintain attention ties.

intensification of spillovers for issues that were not salient during the Refugee Crisis. Thus, political spillovers are driven by attention spikes at the $issue \times origin \times time$ level, not just the overall attention to specific places[5].

Importantly, these contagion effects have real consequences in terms of voting for right-wing populist parties. Using the coding of European parties provided by the Chapel Hill Election Survey (CHES) and matching parties that respondents support in the ESS data to CHES classifications, I show that 1st and 2nd-generation immigrants eligible to vote in their host countries are more likely to support right-wing populist parties if opposition towards non-European immigrants in their country of origin intensifies during the Crisis. However, these effects are observed only for people who self report to be interested in politics.

Exploring the mechanisms behind these spillovers, I find support for the importance of (i) elevated attention to the origins during the Crisis, (ii) network homophily, and (iii) social media ties to the origins. Using the data from Google Trends on searches for 'refugees' in different languages, I show that immigrants pay disproportionate attention to their countries of origin during the Crisis. Namely, regions with higher population shares from most affected countries (like Alsace in France, which is heavily German-speaking) pay more attention to the Crisis, relative to other regions in the same host country and other population groups.

Elevated attention to one's country of origin stimulates learning from like-minded groups there, as suggested by the homophily effects I find. Namely, when I match respondents to their origin-country 'peers' most similar in terms of political affiliation and education, I find the largest spillover coefficients[6]. Moreover, changes in the origin country averages no longer matter once I account for the dynamics of like-minded subgroups at the origins. Thus, the main results are unlikely to be driven by (i) deep-rooted traits shared by all co-ethnics, or (ii) the re-activation of histories common to all people of a given origin or background, such as in Fouka and Voth (2021). Instead, these results point towards the polarizing effects of network homophily that intensify during the Crisis.

To further stress the importance of network connectedness to countries of origin, I use data on friendship links from Facebook compiled by Bailey et al. (2020) and combine it with the NUTS subnational data on population shares by country of origin from the Eurostat and Alesina et al. (2021). First, I confirm that immigrants tend to maintain strong social

[5]This result is also important as a potential way to distinguish spillovers generated by ethnic identity spikes due to salient events at the origins from spillovers generated by social learning.

[6]Importantly, I account for potential co-movements between political or education subgroups over time irrespective of the origin. In other words, I partial out all the variation at the $group \times time$ level, so the identifying variation comes from $group \times time \times origin$ level.

media ties to their countries of origin: at the NUTS region level, there is almost a one-to-one relationship between population shares by country of origin and friendship links to foreign countries via Facebook. Then I show that immigrants living in regions with stronger Facebook ties to the origins receive significantly stronger spillovers. Together with the evidence on homophily in learning from the origins, these results suggest that in the era of social media, first and second generation immigrants pay disproportionate attention to events and opinions at origins, and update their own attitudes and beliefs based on opinion dynamics in like-minded circles.

Contribution to the Literature

This paper contributes to several strands of research. First, it is the literature on cultural persistence and change[7]. Particularly closely related are the papers employing the so-called *epidemiological approach* to document the importance of origin countries for immigrants' political preferences, values, and beliefs: see Fernández (2007), Luttmer and Singhal (2011), Galor and Özak (2016). The recent paper by Giavazzi et al. (2019) goes beyond persistent effects of origin-country characteristics, and demonstrates that immigrants' preferences and norms converge over generations to that of natives in the US. The speed of convergence differs across traits and across origin countries. For within-country 'movers', it was also shown that their behaviors and preferences resemble what is common at the origins, with a decay over years elapsed since the move, see Atkin (2016) for food choices of migrants within India, and Bronnenberg et al. (2012) for brand preference evolution of movers in the US. This paper adds the 'real time' transmission of political preferences and social norms over immigrants' ethnic networks to the picture. I show that *changes* in opinions at the origin matter for *changes* in opinions and behaviors of immigrants[8].

Second, this paper contributes to a growing literature that explores political and social consequences of migration and refugee inflows. Direct effects of refugee inflows are well explored, see, e.g., Altındağ and Kaushal (2021) on voting in Turkey following the inflow of Syrian refugees, Hangartner et al. (2019) on hostility towards out-groups in Greece during the Refugee Crisis, and Steinmayr (2020) who shows that the type of contact - transitionary vs. more interactive - matters in the context of Austria in 2015. This paper adds an important dimension to the effects of events of this salience: contagion effects operating

[7](Bisin and Verdier (2000, 2001) provide early theoretical input, stressing the tradeoffs between vertical and horizontal socialization processes. This paper advances the idea that horizontal learning from 'peers' matters, but focuses on a specific 'peer group' - co-ethnics in the country of origin.

[8]Importantly, learning from local networks - e.g., people residing in same region - is also important, but does not cancel out spillovers from the origin. I disentangle local vs. origin spillovers in my analysis.

along immigration networks. These contagion effects may have broader implications for understanding the spread of populism, anti-immigration backlash, and related phenomena.

Third, this paper contributes to the recent literature on migration and flows of information and ideas between countries. Barsbai et al. (2017) have shown that immigrants send democratic values back to their home countries in the form of 'cultural remittances'. Rapoport et al. (2020) have documented that cross-country migration induces convergence in cultural values, mostly, again, due to cultural remittances. Tian et al. (2020) document the transmission of information and social distancing behavior from the US to Mexico via immigration networks during the early Covid-19 pandemic. Burchardi et al. (2019) also show that ancestral composition of the US counties affects the direction of the FDI by local firms, again stressing the information transmission channel. What I add is that immigrants retain 'real-time' attention ties to their countries of origin and update their own political preferences and behaviors based on what they observe. This 'learning from the origins' activates during the periods of high issue salience, stressing a previously undetected dimension.

Finally, this paper relates to the literature on networks and polarization. To my knowledge, only a few papers have explored network effects in the formation of culture, e.g., Dohmen et al. (2012) and Ahern et al. (2014), and this is the first paper that focuses on 'peer effects' from origins to immigrants. A closely related research on polarization in social networks also reveals how social learning can be biased and subject to homophily effects: Alcott et al. (2020) provide evidence that social media increases political polarization, and Levy (2021) digs deeper into the mechanisms of these effects by randomizing the exposure to conservative or liberal news of Facebook. Baysan (2021) shows that pre-existing ideological differences can force people to interpret similar information differently, which also increases polarization. This paper builds on these insights and reveals that polarizing events, such as the Refugee Crisis, create contagion effects because immigrants learn from like-minded groups at the origins, likely via social media.

The rest of the paper is organized as follows. Section 2 describes the data and explains the empirical strategy. Section 3 documents some basic regularities about the co-movements of immigrants' attitudes and that of their countries of origin. Section 4 proceeds to the Refugee Crisis case, and demonstrates that shocks to public opinions at the origin during the Crisis spill over to immigrants' opinions and voting behaviors. Section 5 analyses the mechanisms behind these effects, focusing on (i) the dynamics of attention to events at the origins, (ii) network homophily effects, and (iii) social media ties. Section 6 concludes.

2 Data and Empirical Strategy

2.1 Data

Measuring the dynamics of political preferences and social norms

I use two main datasets to measure the dynamics of political preferences and social norms across European countries and among 1st and 2nd generation immigrants from these countries. First, I use eight (biannual) rounds of the European Social Survey (ESS), conducted between 2004 to 2018, that include information on whether respondents and their parents were born in a country of interview (and if not, where they were born), along with a host of questions on political and social attitudes. My main outcome of interest is respondents' attitudes towards immigrants from outside Europe[9]. Moreover, I observe respondents' support for various political parties and match reported parties with the classification by the Chapel Hill Expert Survey (CHES). This allows me to build a measure of political support for right-wing populist parties (as a measure of anti-globalization and anti-immigration stance) across countries and among immigrants from different origins. Figure 1 below illustrates the kind of variation across (origin) countries that I use to document political spillovers from origins to immigrants. It depicts the diverse dynamics of opposition to non-European immigrants for several European countries, showing that the Refugee Crisis was associated with sharp changes in attitudes and led to a higher polarization across countries.

Just as importantly, the Refugee Crisis was a polarizing event within countries. Using the 10-item left-right scale from the ESS, I calculate conditional averages at the $origin \times subgroup \times time$ level to measure how during the Crisis, political attitudes diverge across subgroups within countries of origin. As Figure 2 clearly demonstrates, the Refugee Crisis increased polarization between left- and right-leaning respondents. I exploit this $origin \times group \times time$ variation in political attitudes to demonstrate the role of network homophily in 'learning from the origins': immigrants from a given origin country closely follow the dynamics of political preferences among like-minded groups at the origins.

[9]Namely, the survey question reads "Now, using this card, to what extent do you think [country] should allow people from the poorer countries outside Europe?". The scale is from 1 (allow many) to 4 (allow none). I interpret respondents answers as an individual-level measure of opposition towards non-European immigration. In the Supplementary Appendix, I use additional questions from the ESS on respondents' concerns about economic and cultural impacts of immigration. However, note that since respondents I focus on are themselves 1st or 2nd generation immigrants, questions about 'immigrants in general' are harder to interpret in this context. To document broader patterns of how attitudes and beliefs of immigrants and natives in their countries of origin co-move, I explore a wider set of questions from the ESS.

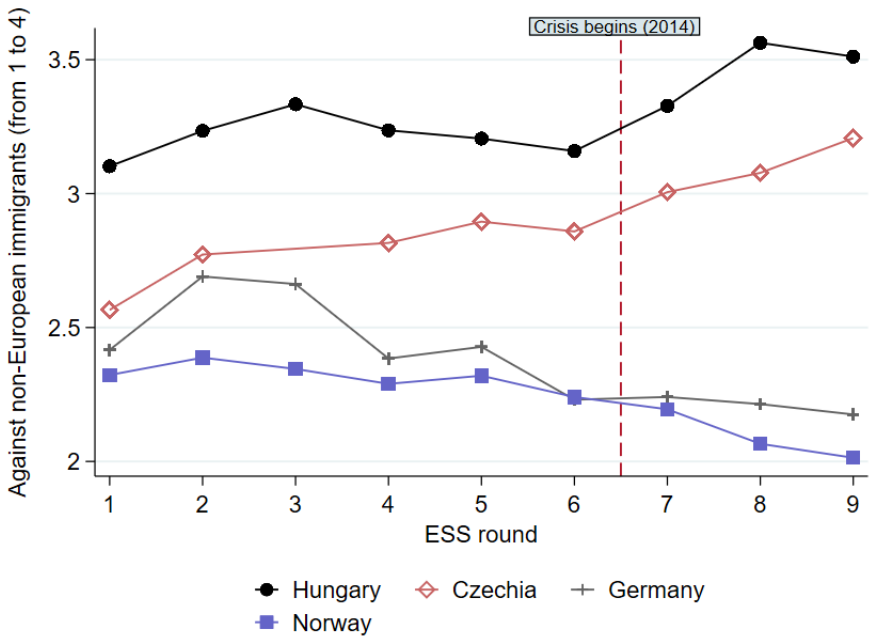


Figure 1: Dynamics of opposition towards non-European immigrants.. Source: ESS.

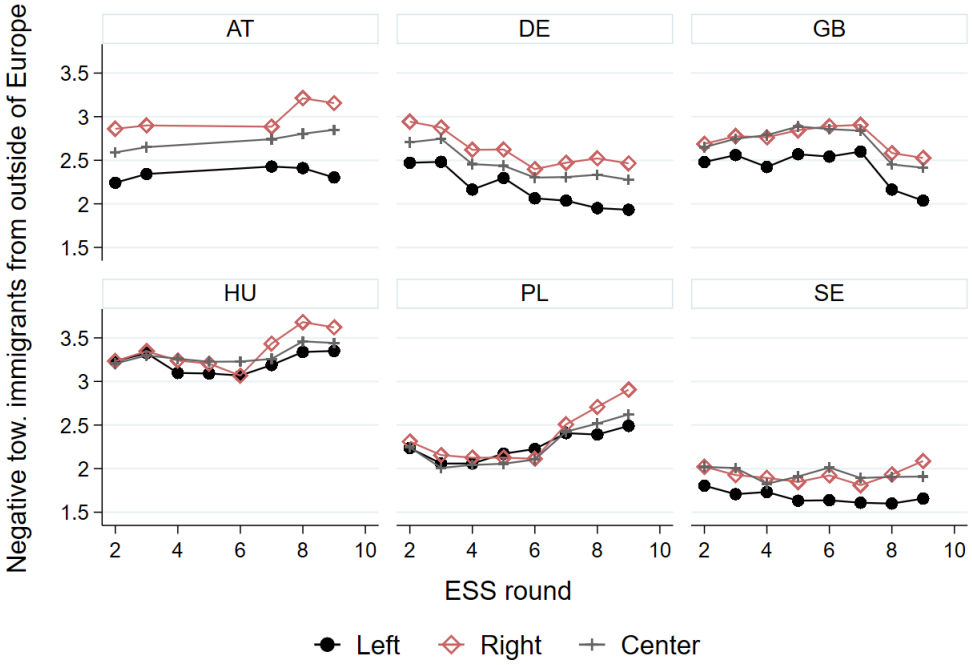


Figure 2: Dynamics of opposition towards non-European immigrants, by political stance. The Refugee Crisis begins between rounds 6 and 7, and intensifies between rounds 7 and 8. Source: ESS, rounds 1-9.

The timing of the ESS rounds was such that round 6 (and earlier rounds) were sampled before the Refugee Crisis, and round 7 was conducted during the early stages of the Crisis in 2014, but before the main events in 2015. Round 8 was conducted entirely after the main events of the Crisis, and after the EU-Turkey deal in March 2016 which decreased the numbers of refugees coming along the Eastern Mediterranean route down to almost zero. Figure 3 below overlays the timing of rounds 6-8 with the overall intensity of new asylum applications in Europe.

There are two issues with the ESS data which I address using the Eurobarometer (EB) dataset. First, in the ESS, the rounds are approximately 2 years apart from one another, and the entire period of most salient events of the Crisis in 2015 falls in between rounds 7 and 8. This makes it harder to explore the events and attitudinal changes within the Refugee Crisis time frame. In contrast, the EB rounds are administered every 6 months, which allows me to look at the dynamics within the Crisis period. Second, the ESS does not allow measuring respondents' perceptions of immigration salience as compared to other economic and political issues. The EB data, in contrast, has a rich set of economic and political issues which respondents code as salient or not in a given round[10]. Issue salience is one of the ways to quantify the extent of public exposure to the Refugee Crisis.

Exposure to the Crisis: refugee inflows, media coverage, and issue salience

I employ three main measures of the extent to which various European countries were 'treated' by the Refugee Crisis: refugee inflows, perceptions of immigration salience, and media attention. The first measure is based on the Eurostat and the UNHCR statistics on refugees and asylum seekers. Figure 3 illustrates the dynamics of monthly asylum applications into the EU, together with the ESS survey dates time windows for rounds 6-8. There was, however, significant variation in the timing and numbers of refugee arrivals by country: see Appendix Figure A4 for monthly time series of asylum applicants' shares in the receiving country population. Countries like Germany, Hungary, and Sweden received the highest numbers of applications per capita. Other countries - e.g., Italy and Malta, - received large inflows of refugees already by the end of 2014. Other countries were only involved later in 2015, when the Eastern Mediterranean Route became the main entry route into Europe. Yet other countries, e.g., Czech Republic, Estonia, Portugal, received very few refugees.

[10]The drawback of the EB data is that questions on attitudes towards immigrants appear on a regular basis only starting November 2014 on. This precludes me from conducting a full-fledged pre- vs. post Crisis analysis on the EB sample. I still explore the variation within the Crisis, however, as well as contrast within-Crisis periods to post-Crisis periods.

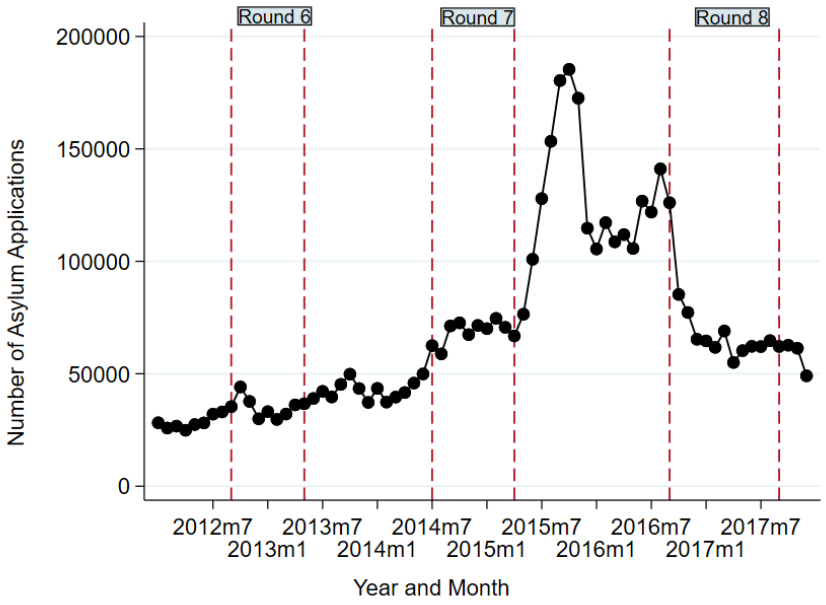


Figure 3: Dynamics of monthly inflows of asylum seekers into the EU, with corresponding ESS survey rounds roll-out. Source: UNHCR, Eurostat, and the ESS.

One important issue with the data on asylum applications, however, is that refugees did not necessarily file asylum applications upon arrival in a given country. Oftentimes, they were just transiting through a country, and this type of exposure to the Crisis will not be adequately measured by the asylum applications figures. The most striking example of this phenomenon is Greece, where, as Figure A4 shows, the share of asylum applications did not change during 2014 and 2015, while in reality, more than a million refugees passed through Greece during the Refugee Crisis. To address this issue I code as 'treated' in the Crisis those countries that either received many applications (like Germany and Sweden) or had refugees transiting through (like Greece or Serbia).

While the number of refugees and asylum seekers entering a country is an important measures of country's involvement in the Crisis, a larger number of refugees relative to a country's population does not necessarily mean that people in a country are particularly concerned about the Refugee Crisis. And yet, for the political spillover effect to occur, either the people or the media in the origin country need to pay sufficient attention to the event. To measure issue salience related to the Crisis at the country-time level, I use two datasets: the Eurobarometer and the GDELT (the Global Database of Events, Language and Tone). The former, as noted above, allows measuring public perceptions of issue salience for a large collection of social and economic issues, including immigration. Measures from GDELT,

on the other hand, allow tracing issue salience in the media (see also Koch et al. (2020) using similar data from GDELT). Figure 4 illustrates the dynamics of public perceptions of immigration salience from the Eurobarometer and the dynamics of media attention for several European countries with various degrees of actual refugee inflows. Importantly, issue salience measured via media coverage and issue salience measured via public perceptions follow very similar trends both across and within countries. In particular, there is a very clear spike in attention/salience in the Fall of 2015, when the intensity of refugee inflows were maximal, and when the most salient events of the Crisis happened[11].

I employ all three types of 'exposure' to the Crisis to show that immigrants receive political and social spillovers from the origins only when the specific issue (of immigration/Refugee Crisis in this case) is particularly salient at the origin.

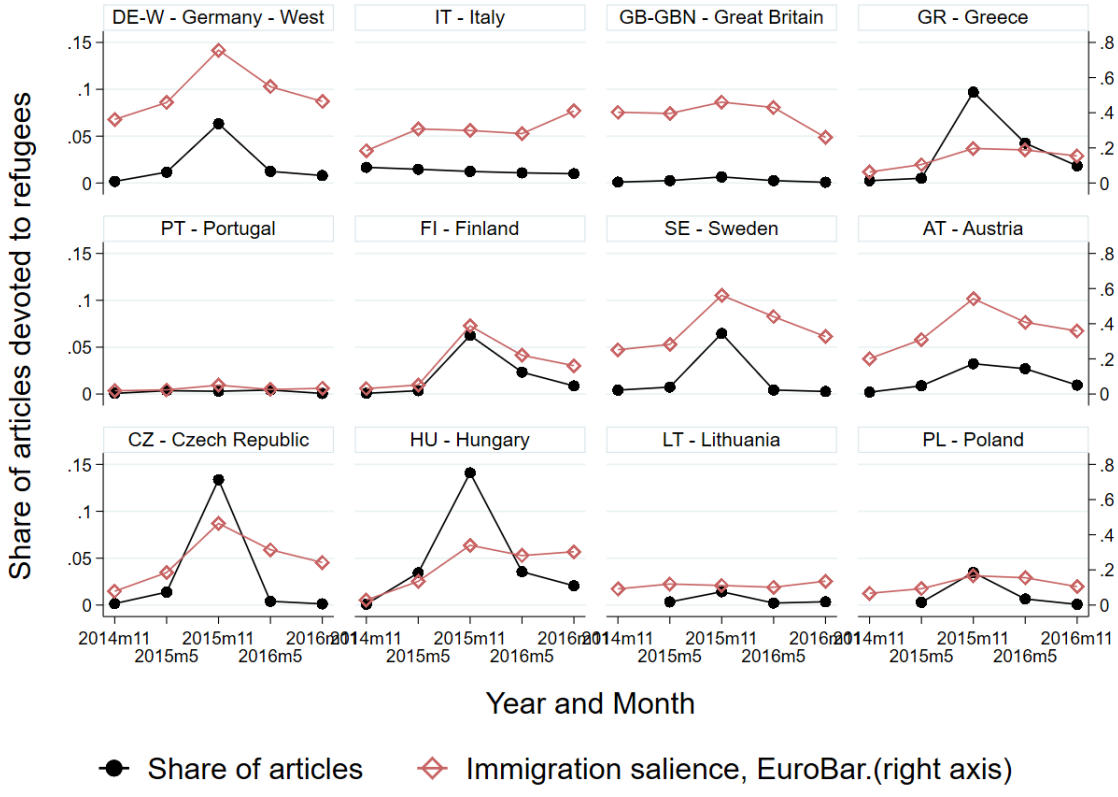


Figure 4: Refugee-related media coverage (GDELT) and immigration salience (Eurobarometer).

[11]The two most salient events of the Crisis that received wide media attention were (i) the death - and publications of pictures of the body - of Alan Kurdi when his family attempted to cross the sea to Greece in September 2015; and (ii) the Paris terrorist attacks in November 2015, which were initially linked to people sneaked into Europe as refugees.

Measuring 'ethnic attention' and immigrants' networks

One of the key necessary mechanisms behind the origins-to-immigrants spillovers that I explore in this paper is that of 'ethnic attention ties'. Namely, to be able to interpret any co-movement in political preferences between immigrants and their co-ethnics at the origins as a network spillover effect, it is necessary that immigrants from origin-country X pay higher attention to events and opinions in X relative to attention that locals or immigrants from other countries pay to X. Measuring attention (i) at the 'ethnic' level, and (ii) to specific events is hard because traditional surveys or other readily available datasets do not have measures of attention to specific countries or events. To circumvent this issue I use the Google Trends (GT) data on search intensity for particular words in different languages.

The main idea is to test whether people tracing their origins to countries heavily affected by the Crisis (e.g., Germany), but living in less affected places (e.g., France), pay disproportionate attention to the Refugee Crisis, as measured by Google searches in languages of most affected countries. Thus, if searches about the refugees in German language that are coming from France during the Refugee Crisis intensify disproportionately more than searches about refugees in French, it supports the idea of 'ethnic attention ties'. The issue is, of course, that we don't have individual-level search data. However, using region-level ancestry shares, it is possible to infer ethnic attention ties from region-level search intensities. In section 5, I explore 'ethnic attention ties' as one of the key mechanisms behind the spillover effects.

To understand the routes along which information and attitudes from the origins can travel, is to measure immigrants' networks to their origins. For this purpose, I use the Facebook's Social Connectedness Index (SCI), introduced in Bailey et al. (2018). The SCI gives a measure of social media connectivity between pairs of geographic regions (i, j) based on the number of Facebook friendship links as a share of maximum possible number of links, given the numbers of Facebook users. Formally, $SCI_{i,j} = \frac{Connections_{i,j}}{Users_i \cdot Users_j}$. This allows me to measure connectedness of European sub-national NUTS-2 regions to each of European countries. To show that region-to-country social media ties correspond to the ancestral composition of regions, I combine the SCI data with the IPUMS-I Census data (for several European countries) and the data from Alesina et al. (2021). Using these datasets, I test whether sub-national regions with a higher share of people reporting j as a country of origin are more closely connected to country j via Facebook. Finding that such correlation is strong may hint at the importance of social media ties as transmitters of shocks and related opinions from countries of origin to immigrants.

2.2 Empirical strategy

To examine the importance of cultural and political spillovers from countries of origin to 1st and 2nd generation immigrants, I estimate a set of Fixed Effects (FE) and Difference-in-difference (DID) models. I begin by documenting some broad regularities about the origin-to-immigrants political spillovers by estimating a simple model with origin, time, and country of residence FEs. The main variable of interest is the time varying average political attitudes in the country of origin. I estimate the following model[12]:

$$Y_{i,o,c,t} = \alpha + \beta \cdot Y_{o,t}^{Orig.Av} + \eta X'_{i,o,c,t} + \phi_o + \tau_{c,t} + \varepsilon_{i,o,c,t} \quad (1)$$

where $Y_{i,o,c,t}$ is a measure of social/political attitudes of (1st or 2nd generation) immigrant i residing in country c, tracing ancestry to country o, interviewed in period t; $Y_{o,t}^{Orig.Av}$ - corresponding origin-country average attitudes in period t, $X'_{i,o,c,t}$ - vector of individual and other controls, ϕ_o - country of origin FEs, $\tau_{c,t}$ - time $\times$ country of residence FEs, and $\varepsilon_{i,c,t,r}$ - an error term clustered at the origin country level. The goal is to estimate coefficient β, which measures the extent to which a *shock* to social/political attitudes in the country of origin spills over to immigrants from this country. In some specifications, instead of $\tau_{c,t}$ fixed effects, I include a measure of local, host-country changes in political attitudes, $Y_{c,t}^{Loc.Av}$, to show that while local political and social dynamics matters for immigrants' own preferences, changes at the origins matter above and beyond any local (and potentially correlated) dynamics.

Note that model (1) does not focus on the Refugee Crisis, but instead describes a general relationship between the changes of political preferences among immigrants and that of their countries of origin. Most importantly, this design accounts for the origin FEs ϕ_o - something that is not usually possible in the traditional 'epidemiological approach' to culture[13]. In (1), the identification of origin-country spillovers comes from the effect of *changes* in the origin political/social preferences on *changes* in the political/social preferences of immigrants.

This research design addresses two additional issues with estimating the so-called 'peer

[12]Earlier works, limited to the US as a single host country, include Nekoei (2013) where the author estimated the effects of origin-country real exchange rate on immigrants' incomes and labor supply. Further work by Akay et al. (2017) focused on Germany and included individual FEs taking advantage of the panel nature of the GSOEP dataset. However, neither political nor cultural contagion effects have been explored before, and neither have been network homophily effects in these spillovers that I estimate in model 2.

[13]When one examines the effect of ancestral culture or other ancestral trait on immigrants' culture or behavior (like in, e.g., Fernández and Fogli (2006), Luttmer and Singhal (2011), Galor and Özak (2016)), there emerges an important concern of whether there are unobserved characteristics at the origin country level that correlate with the ancestral culture and thus makes identification less clear.

effects' (discussed extensively at least since Manski (1993)). First, any correlation in outcomes between 'peers' can easily emerge due to endogenous choice of peers, without any actual social spillovers[14]. The same phenomenon of spurious peer effects may emerge if 'peers' receive common shocks. Note, however, that neither of these issues apply to the basic set-up in this paper. First, I rely on the exogenous 'peer' assignment (country of origin). Second, I account for local shocks in the most flexible way by including the time $\times$ country of residence FEs, $\tau_{c,t}$. These FEs partial out any variation in host-country refugee inflows, media exposure, economic shocks, etc., that can cause correlated changes in attitudes among immigrants and their co-ethnics at the origins[15].

A second important concern for many research questions involving immigration and its political or cultural consequences is the endogenous sorting of immigrants (and refugees) based on the political and cultural traits of natives. In this case, unless there is an exogenous variation in what areas get higher/lower exposure to refugees (see, e.g., Dustmann et al. (2019), Steinmayr (2020), etc.), any non-experimental studies will suffer from issues of selection into treatment. In this paper, however, the main outcomes are at the level of immigrants living outside of their countries of origin, so this issue of selection is much less of a concern. It is unlikely that dynamics among country's expats affects in any way whether refugees want to settle a country, or the local government's policy.

After establishing the existence and significance of political spillovers from the origin, I explore heterogeneity in the strength of these spillover effects based on (i) individual characteristics of immigrant respondents (extent of integration into the host country, such as citizenship and language, etc.), and on (ii) local regional and origin country characteristics, such as bilateral connectivity via social media.

Causal effects of the Refugee Crisis

To advance the identification of the spillover effects, I show that they are 'activated' by a particular event - the Refugee Crisis. In a DID-style strategy, I leverage the dynamics of refugee inflows in each particular country, to test whether immigrants receive stronger spillovers from the origins when a given origin country is affected by the Crisis. A related DID strategy relies on a different measure of 'treatment' in the Crisis - issue salience. Two sources of data allow me to measure issue salience at the level of origin country over time:

[14]For example, better motivated students may tend to select better motivated friends, which creates a correlation between outcomes (say, grades) among peers.

[15]Moreover, these FEs partial out the dynamics of an 'average immigrant' in a given host country over time, thereby ensuring that what I estimate is the political spillover from a given origin X to an immigrant from X, above and beyond any potential spillovers that X sends to other immigrants.

(i) the self-reported issue salience from the Eurobarometer, and (ii) the share of media articles mentioning refugees from the GDELT database. These strategies allow me to define 'treatment' periods and 'treated' origin countries[16], and estimate the following model:

$$Y_{i,o,c,t} = \alpha + \beta_1 \cdot Y_{o,t}^{Orig.Av} \cdot Treated_{o,t} + \beta_2 \cdot Y_{o,t}^{Orig.Av} + \beta_3 \cdot Treated_{o,t} + \eta X'_{i,o,c,t} + \phi_o + \tau_{c,t} + \varepsilon_{i,o,c,t} \quad (2)$$

where $Treated_{o,t}$ is a $\{0, 1\}$ measure of whether a given origin country in a given time period is 'affected' by the Crisis, as measured either via the number of refugees or via the immigration issue salience. The estimate of β_1 gives the additional spillover from treated origins as compared to non-treated.

Importantly, political and cultural co-movements between immigrants and their origin countries may reflect 'cultural remittances' - i.e., immigrants affecting culture and beliefs of their co-ethnics at the origins, see Barsbai et al. (2017) among others. To make sure that I capture spillovers from countries of origin to immigrants, and not remittances, I exploit the fact that immigrants living in certain host countries did not experience the Refugee Crisis themselves, and hence are unlikely to send any spillovers back to the country of origin (which may actually live through the Crisis). In contrast to some of the earlier research, I focus on *shocks* to political attitudes at the origins - not on exposure to a fixed cultural or political environment - which helps to credibly identify 'peer effects' and their direction.

In addition, to examine whether other, less salient issues also get transmitted from countries of origins to immigrants disproportionately during the Crisis, I rely on cross-topic variation in issue salience. I estimate a series of placebo DID models estimating spillovers from origins to immigrants for topics that were not salient during the Crisis. Finding intensification in spillovers across the board of topics may imply that immigrants increase their attention to their origins, irrespective of a particular issue, simply because their origin country is in the news. This may cause attitudes and preferences across all domains to converge to those prevalent at the origins. I do not find such an effect: the only increasingly significant spillover during the Crisis is for the opposition towards non-European migration.

Testing for homophily effects in learning from the origins

To test whether spillovers of political preferences and attitudes come from groups that are more likely to be associated with a given immigrant, I explore network homophily effects

[16]There are several cases in which a given country scored high on one dimension of 'exposure', but low on the other. For example, Italy received significant number of refugees, but respondents there had relatively low perceptions of immigration salience. Czech Republic, in contrast, did not receive many refugees, but reported high perceptions of immigration salience. In most of the cases, however, the actual refugee inflows and issue salience co-move very closely.

with respect to education and political left-right stance. Specifically, I construct conditional averages of origin-country attitudes that vary at the level of $origin \times group \times time$, and estimate the following model:

$$Y_{i,o,g,c,t} = \alpha + \beta \cdot Y_{o,g,t}^{Orig.Av} + \eta X'_{i,o,g,c,t} + \phi_o + \tau_{c,t} + \kappa_{g,t} + \varepsilon_{i,c,t,r,g} \tag{3}$$

where $Y_{o,g,t}^{Orig.Av}$ is a measure of average attitudes in the country of origin for subgroup g in period t. Importantly, I identify β controlling for $\kappa_{g,t}$, the overall dynamics of group g. I also estimate this model within a DID set-up analogous to model (2). I begin the homophily analysis focusing on political ideology (left-center-right) spectrum. However, since political ideology itself can respond to the events and opinions surrounding the Refugee Crisis[17], I verify that similar homophily effects are observed for education-based subgroups (with or without tertiary education). Among the two, however, spillovers based on ideological homophily are stronger, and once I include the latter in the model, spillovers based on educational homophily cease to matter.

3 Spillovers from the origins

This section documents some basic regularities about political and cultural spillovers from origins to immigrants. It emphasizes several dimensions of heterogeneity of such spillovers at the individual, regional, and origin-country level.

3.1 Basic regularities

I begin by documenting the strength and significance of spillovers for my main outcome variable, the opposition towards non-European immigration. Table 1 reveals strong co-movements in this domain between immigrants and their countries of origin for all ESS counties over the period from 2004 (round 2) to early 2020 (round 9). Namely, column (1) reports the most basic estimate of β coefficient from model 1, and demonstrates that a 1-unit increase in the opposition towards non-European immigration at the origin translates into 0.23 units of increase in corresponding opposition among immigrants from this origin country. Column (2) adds basic individual controls without any change to the estimate. Column (3) adds local (host country) changes in attitudes, and confirms that spillovers from the

[17] Although, in a supplementary analysis I show that political ideology in terms of self-reported left-right political stance is less fluid and itself does not spill over from origins to immigrants.

Table 1: Spillovers from the origins: opposition towards non-European immigrants

VARIABLES	(1) FE	(2) FE	(3) FE	(4) FE	(5) FE	(6) FE
	Oppose non-European immigration					
Oppose non-Eur immgr. (origin)	0.231**	0.231**	0.200**	0.144**	0.137*	0.158**
	(0.093)	(0.091)	(0.077)	(0.067)	(0.069)	(0.074)
Oppose non-Eur immgr. (local)			0.585***			
			(0.066)			
Oppose non-Eur immgr. (origin) x 2nd gen.						-0.048
						(0.043)
Observations	20,002	19,751	19,751	19,751	19,751	19,739
Adjusted R-squared	0.113	0.142	0.147	0.149	0.160	0.160
Origin FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Country x round FEs	No	No	No	Yes	Yes	Yes
NUTS FE	No	No	No	No	Yes	Yes
Individual controls	No	Yes	Yes	Yes	Yes	Yes

Notes: Outcome variable is the individual response to a question "to what extent do you think [country] should allow people from the poorer countries outside Europe?", from 1 (allow many) to 4 (allow none). Main treatment variable is the ESS round average answer to the same question in respondent's country of origin. Origin FE and Time FE ensure that the estimates capture the effects of *shocks* in origin attitudes on *shocks* in immigrants' attitudes. In column (3) I add the residence country average attitudes. In column (6) I interact origin attitudes with the generation of respondents immigration (1st or 2nd). Robust standard errors, clustered at the level of origin countries, in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

origin diminish in strength but still matter after accounting for the local dynamics. Column (4) adds country-by-round FEs to partial out any host country shocks that can produce correlated effects between origin and host countries. Column (5) adds local regional NUTS FEs, which is the most restrictive specification, and still delivers a significant spillover effect. Finally column (6) demonstrates that spillover effects are very strong for the 1st-generation immigrants, and only insignificantly weaker for the 2nd-generation immigrants, suggesting that attention to the origins is passed down to children of immigrants.

I re-estimate model (1) for a broader set of political preferences and attitudes, and report the estimates of spillover effects in Table 2. I find significant spillovers for a set of issues that were salient over the period the ESS has data for, 2004-2020. Namely, I find significant co-movement between immigrants and their countries of origins for: opposition towards the EU unification, trust towards the EU parliament, opposition towards the LGBT community. However, for arguably more 'deep' cultural values, such as interpersonal trust, and political ideology, I do not find significant spillovers[18].

[18]In the Supplementary Appendix, I report spillover estimates for the maximum possible set of questions on attitudes, norms and beliefs from the ESS. The main insight remains the same: spillovers are the strongest for issues that were most salient and dynamic during the last decades, and the weakest for more 'deep-rooted' values, such as religiosity and family values.

Table 2: Spillovers from the origins: additional outcomes

VARIABLES	(1) FE TrstEUp	(2) FE EUunif	(3) FE ALGBT	(4) FE GenTrst	(5) FE LRSt
Trust EU Parl. (origin)	0.139**				
	(0.064)				
Supp. EU Unif. (origin)		0.184***			
		(0.052)			
Anti-LGBT (origin)			0.242***		
			(0.064)		
Generalized Trust (origin)				0.137	
				(0.081)	
Left-right Stance (origin)					0.073
					(0.129)
Observations	18,011	15,866	19,774	20,526	17,649
Adjusted R-squared	0.084	0.068	0.288	0.104	0.046
Origin FE	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes
Country x round FEs	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes

Cluster-robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

3.2 Strength of spillovers: individual, regional, and origin factors

A natural question concerning spillover/contagion effects is who is most susceptible to contagion. To answer this question, I examine which individual characteristics of immigrants make them more likely to receive stronger spillovers from their origins. Focusing on the opposition towards non-European immigrants, Figure 5 reveals that various measures of social integration are crucial for the strength of origin spillovers. Higher levels of social integration - as measured by citizenship, length of residence, and local language use at home - all decrease attention to the origin and the strength of spillover effects. Unemployment also weakens spillover effects, potentially because of conflicting attention when there is a pressing need of finding a job. Interestingly, higher importance of family and traditions weakens spillover effects - potentially because of the trade-off between inter-generational (vertical) and real-time learning, see Bisin and Verdier (2001) and Giuliano and Nunn (2021).

Turning to the characteristics of immigrants' regions of residence, I show that local co-ethnic 'diasporas' affect the strength of spillover effects from the origins. Using the data on subnational (NUTS-2) population shares of various European origins adapted from Alesina et al. (2021), I construct a measure of the size of co-ethnic diaspora at the NUTS-origin pair level. As shown on Figure 6, immigrants living in regions with relatively large shares of

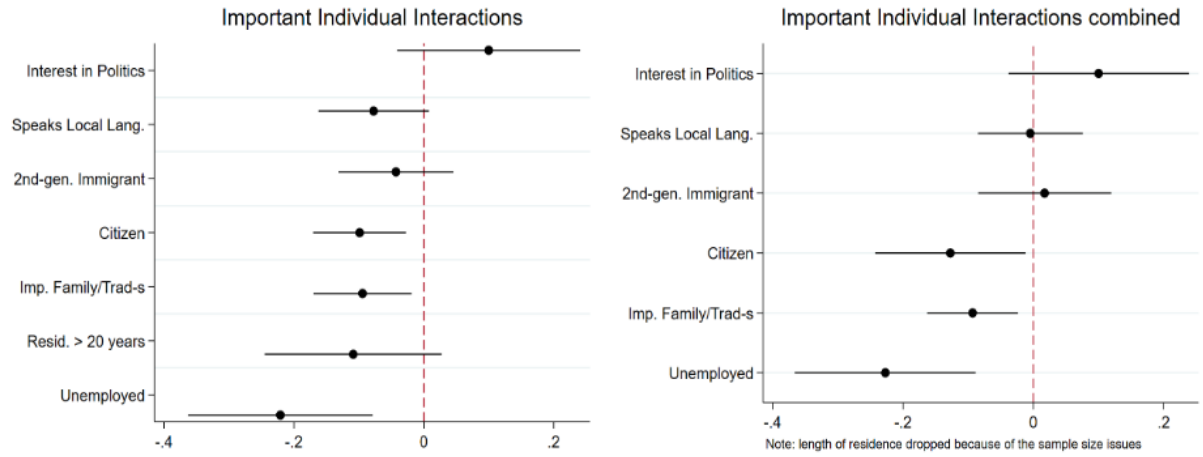


Figure 5: Important individual-level interactions. Role of immigrants' integration into their host societies

co-ethnics receive strong spillovers, while immigrants living in regions with smaller diasporas do not respond to the dynamics of political attitudes at the origins. This finding may suggest either or both of the two mechanisms: that (i) immigrants with a stronger attachment to the origins choose to settle in regions with higher shares of co-ethnics, and/or that (ii) larger share of co-ethnics in the vicinity increases the supply of information and ideas/attitudes from the origins[19]. In the Supplementary Appendix, I show that indeed, immigrants who speak their origin-country language at home, who are less educated, and who migrated more recently - all are more likely to live in NUTS-2 regions with a higher share of co-ethnics, suggesting that selection can be part of the story. More detailed data on local interactions between immigrants is needed, however, to measure the importance of the information story.

Overall, the evidence presented in this section reveals significant round-to-round spillover effects from countries of origin to 1st and 2nd generation immigrants. Such spillovers are present for a wide range of salient issues. Importantly, and quite logically, immigrants who are less socially integrated into their host communities receive stronger spillovers, suggesting that the lack of social integration of immigrants creates the potential for political contagion effects. Moreover, evidence from the subregional ethnic settlement patterns ('diasporas') suggests that immigrants living in NUTS regions disproportionately populated with co-ethnics receive stronger spillovers from their origins.

[19]In principle, for any given level of information acquisition from the origins, presence of co-ethnics may also increase the salience and persuasiveness of such information, which can also contribute to a higher spillover effect.

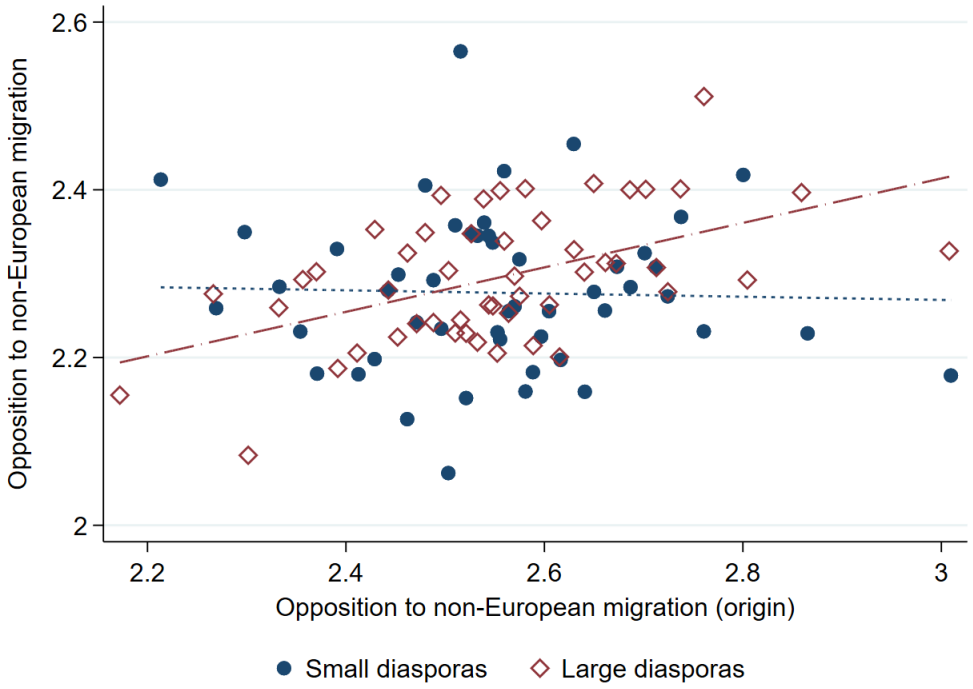


Figure 6: Size of the co-ethnic diaspora and the strength of spillover effects.

4 Main results: Refugee Crisis and the opposition towards non-European immigrants

In this section, I focus on the European Refugee Crisis as an event that triggers attention to origin countries and generates spillovers of (i) opposition towards non-European immigrants and (ii) voting for right-wing populist parties. The timing of the arrival of asylum seekers and a growing salience of immigration, together with vast variation in the extent to which different countries were exposed to the Refugee Crisis, allows me to clearly identify political spillover effects.

4.1 DID estimates: Opposition towards non-European immigration

While the results of Table 1 are indicative of significant spillovers from origins to immigrants, it is hard to tell where these effects are coming from, and whether there is a causal interpretation to them. To identify spillover effects 'activated' by a particular event - the Refugee Crisis - I employ two DID strategies outlined in section 2. First, as a sanity check, I estimate a series of two-period DID models, and report the results on Figure 7. As one

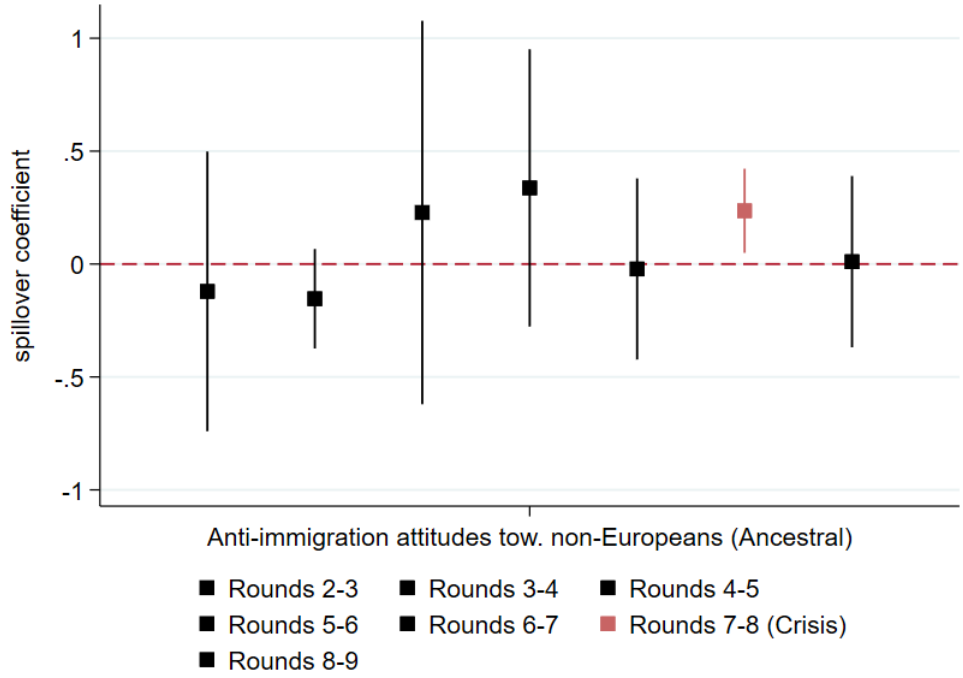


Figure 7: Spillover effects for consecutive pairs of ESS rounds (DID coefficients).

can see, only for rounds 7 and 8 (right before and right after the main events of the Refugee Crisis) such DID estimation yields significant spillover effects from countries of origin to immigrants living elsewhere. While this is suggestive of the importance of the Crisis as a trigger of attention and learning from the origins, such an approach assumes that all origin countries were 'treated' to a similar degree and only in 2015 (between rounds 7 and 8).

To advance the identification of the spillover effect produced by the Crisis I leverage two dimensions of the Refugee Crisis. First, the salience of immigration has started to increase in 2013 (see Appendix Figures A3 and A2), and remained very high until at least 2018 (round 9 of the ESS). Second, certain countries - like Greece, Hungary, Italy, Germany, Sweden, and some others - were significantly involved in the Crisis, while other countries, - like Portugal, Ireland, Poland, or Russia, - were not directly involved to any comparable margin[20], see Appendix Figure A4. Thus, I estimate the FE-DID type of a model described earlier in (3), and report my results below.

Table 3 estimates political spillovers from origin countries taking into account that immigration was not a salient issue before 2013, and that certain countries were 'affected' by the

[20]In the Supplementary Appendix, I provide additional checks showing that the results are robust to the one by one exclusion of separate countries from treated and control groups.

Table 3: DID estimates of political spillovers during the Refugee Crisis

VARIABLES	(1) FE-DID	(2) FE-DID	(3) FE-DID	(4) FE-DID
	Oppose non-European immigration			
Oppose non-Eur. immigr. (origin)	0.120	-0.011	-0.006	-0.102
	(0.156)	(0.053)	(0.045)	(0.085)
Oppose non-Eur. immigr. (origin) x Post-2013			-0.016	-0.070
			(0.054)	(0.080)
Oppose non-Eur. immigr. (origin) x Origin Affected	0.075	0.409***	0.148*	0.307***
	(0.177)	(0.123)	(0.078)	(0.101)
Oppose non-Eur. immigr. (origin) x Post-2013 x Origin Affected			0.213***	0.186**
			(0.060)	(0.086)
Observations	6,844	11,870	18,714	14,338
Adjusted R-squared	0.163	0.141	0.150	0.144
Origin FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Country_x_round FEs	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes
Sample	Pre-2013	Post-2013	Full	Host NT

Cluster-robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Crisis, while others were not. Column (1) demonstrates that there is no significant spillover effect of opposition towards non-European immigrants before 2013. Moreover, there is no difference between countries to be affected by the Crisis and those not to be affected. Column (2) estimates the same model on the post-2013 period, and shows that there is a very strong and significant spillover from origin countries involved in the Crisis, while there is nothing for non-affected origins. Column (3) reports estimates from a full-fledged DID model and reveals that, indeed, heavily affected countries during the period of high immigration salience are those that produce contagion effects, while other countries outside of the Crisis period do not. Note that the size of the spillover coefficient outside of the salient period is zero, and in the post-2013 period, the coefficient increases to approximately 0.2. The strength of this effect is significantly larger than the cross-country and time average spillover estimated in Table 1. Finally, column (4) reproduces the results of column (3) on a sample of residence countries not directly involved in the Crisis. This insures against the potential risks of correlated exposure effects. Namely, correlated changes in attitudes among immigrants and their origin countries can emerge because immigrants' residence countries and their origin countries are experiencing similar shocks. Results in column (4) address this concern and still find highly significant and strong spillover effects.

While there are relatively few observations for immigrants at the origin-survey year level, it is still possible to extend the DID analysis from Table 3 to a finer, year-by-year level.

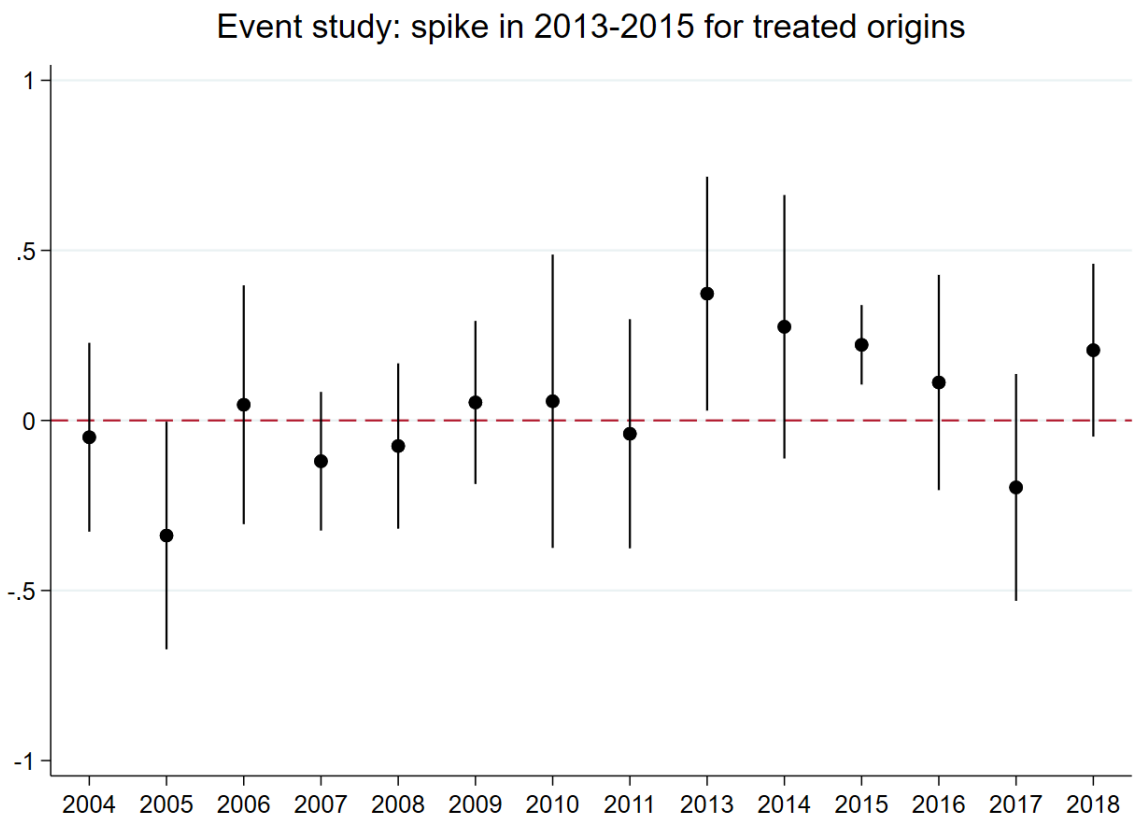


Figure 8: DID spillover coefficients for each survey year, as compared to 2012, the last pre-Crisis year. Treated origin countries.

Figure 8 shows an event-study graph where year 2012 is set as the last pre-Crisis year. The Figure reports estimates of the interactions $Y_{o,t}^{Orig.Av} \cdot Year_t$, comparing spillover coefficients in each year to that in 2012 (the baseline spillover in the year 2012 is 0.14, and is not significant). One can see from Figure 8 that before 2013, there are no strong spillovers of opposition to non-European immigration. However, starting in 2013 and 2014, there is a clear intensification of spillovers from the origins, and this intensification becomes most significant and pronounced in 2015, the peak of the Refugee Crisis. In the Appendix, Figure A5 shows that there is no intensification of spillovers for non-treated origins.

To further demonstrate the importance of issue salience in generating cross-border spillovers of political preferences, I conduct a series of falsification exercises by estimating spillover coefficients similar to those in Table 3 column (3), but for a broader set of issues and preferences, such as trust in parliament, anti-LGBT attitudes, etc. If the origin-to-immigrants spillover of the opposition towards refugees emerges because of the increased salience of non-

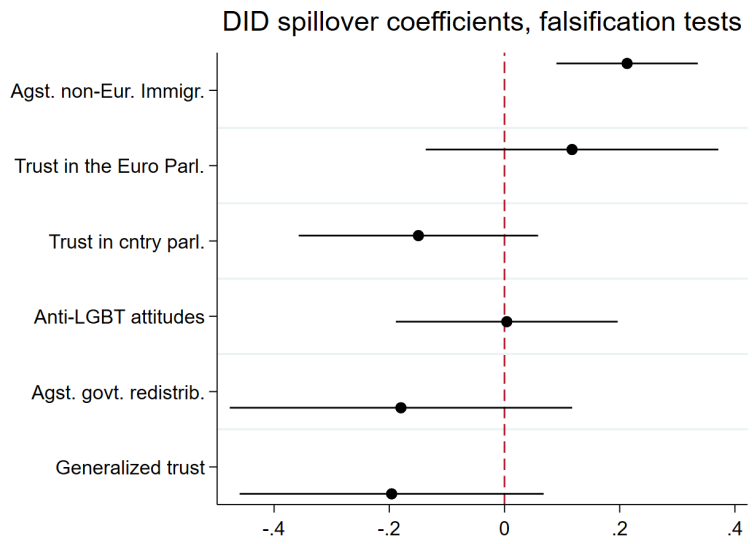


Figure 9: DID spillover coefficients for a broader set of political preferences and social norms.

European migration at the origin post-2013, one would not expect any significant increase in spillovers of any other (less salient) preferences or social norms. However, if what happens is an increase in attention to the origin country overall, irrespective of specific topics and issues, then one would expect all preferences and social norms of immigrants to converge to that of the origin country. Figure 9 reports estimates of DID spillover coefficients for a broader set of issues, and clearly shows that the only positive and significant spillover during the Refugee Crisis from the most affected countries is for the opposition to non-European immigration. Moreover, for issues such as trust and government redistribution there is a somewhat negative estimate, suggesting that during the Crisis, spillovers for these issues become weaker than usual. One potential explanation for this decrease in the strength of spillovers for other issues is the 'limited attention' effect: when a set of issues is more salient, immigrants respond more to origin-country dynamics related to these salient topics, while at the same time responding less to other, less salient changes. The Eurobarometer data allows digging deeper into how issue salience across origin countries is itself transmitted to immigrants.

4.2 Issue salience: spikes at the origins and among immigrants

One of the key assumptions behind the interpretation of the results above as actual spillovers from origins to immigrants is that immigrants pay attention to opinions and attitudes at the origins. One important advantage of the Eurobarometer (EB) is that it has questions

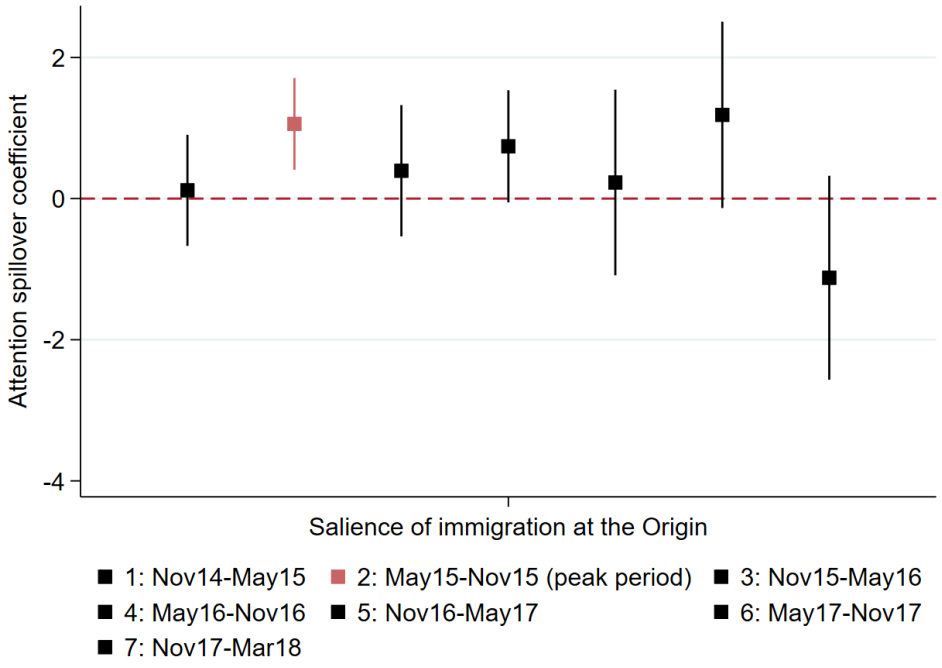


Figure 10: Co-movements in the perceptions of issue salience among immigrants and their co-ethnics at the origins.

on the perceived salience of a collection of issues, including immigration. In this subsection I show that immigrants indeed monitor public perceptions of issue salience at the origins, and adopt similar perceptions themselves.

This result in its most basic form is illustrated on Figure 10, which shows the collection of DID estimates of how origin-country salience of immigration spills over to immigrants from this origin living in other European countries. One can clearly see that there is a positive and significant estimate during the peak of the Crisis (Summer to Fall 2015), while no significant 'attention spillovers' in other periods. In the Appendix, Figures A6 and A7 estimate similar DID models separately for 'treated' and 'non-treated' origin countries, based on the numbers of refugees they received. Importantly, immigrants do not react to perceptions of salience at the origin country if the origin was not actually experiencing a significant inflow of refugees. Thus, the whole 'salience spillover' effect documented on Figure 10 comes entirely from origin countries that actually received many refugees.

Appendix Figure A8 illustrates this idea country by country, and allows one to see both dimensions (time of salience and place of salience) playing a role. Clearly, there is a very close co-movement between the perceptions of immigration salience between expats and co-

ethnics at the origins. Moreover, during the EB rounds 1 to 4 (correspond to Nov 2014, May 2015, Nov 2015 and May 2016) the co-movement in issue salience is the closest. In the subsequent periods, once the Crisis is over, immigrants do not agree with the perceptions of issue salience prevalent at the origin that much. Moreover, it is evident that for less-affected places - like Czech Republic, Estonia, Ireland, Lithuania, etc. - the co-movement is much weaker overall. This evidence supports the key assumption we need to interpret the results we get in terms of network spillovers: that during the periods of increased issue salience, immigrants pay attention to attitudes and concerns of their co-ethnics at the origins, and perceive similar issues as salient.

An additional benefit of the Eurobarometer data is that it rounds are sampled at a much higher frequency of about 6 months in between rounds. The downside, however, is that questions about the actual attitudes towards non-European immigrants began to appear consistently only from November 2014 on - a time periods already well into the Refugee Crisis. For this reason, it is hard to conduct a clear pre- and post-Crisis analysis in the spirit of Table 3. Nonetheless, in the Appendix Table B1, I report basic results from estimating model (1) on the EB data, focusing again on opposition towards immigration from outside of the EU. Columns (1) to (7) replicate some of the main specifications estimated above with less frequent data from the ESS, and find very similar results, confirming the existence and significant of political spillovers from the origins. Moreover, columns (8) and (9) use lagged attitudes at the origin to insure against the reverse direction of spillovers, still showing very strong and significant results. Overall, it is reassuring to find similar (quantitatively even stronger) results from a completely different dataset.

4.3 Political spillovers affect behavior: Right-wing populist voting

While the fact that opposition towards non-European immigrants spills over from origins to immigrants during the Refugee Crisis is a novel and important mechanism behind attitudinal change and 'contagion' of populism, it is not clear whether it maps into actual behavioral outcomes. To test this, I explore whether the increased opposition to non-European immigration at the origins affects voting behavior among expats form these origins. Namely, I test whether 1st and 2nd generation immigrants increase their support for far-right populist parties if their origin country becomes more conservative.

I use data from the Chapel Hill Election Survey (CHES) to classify European political parties by (i) right-wing populist vs. not, and (ii) anti-immigration/anti-Islamic vs not. Then, I match parties from the ESS (respondents specify party preferences and voting last

elections) to CHES classifications, and test whether opposition towards non-European immigration at the origin makes eligible immigrants support far-right parties in their countries of residence. As a sanity check, I first test whether among 1st and 2nd generation immigrants, there is an association between the opposition towards non-European immigration and support for far-right populist parties. Figure 11 illustrates the conditional correlation, accounting for all the FEs and individual controls from model (1), and demonstrates a very close match between the two phenomena, even among immigrants.

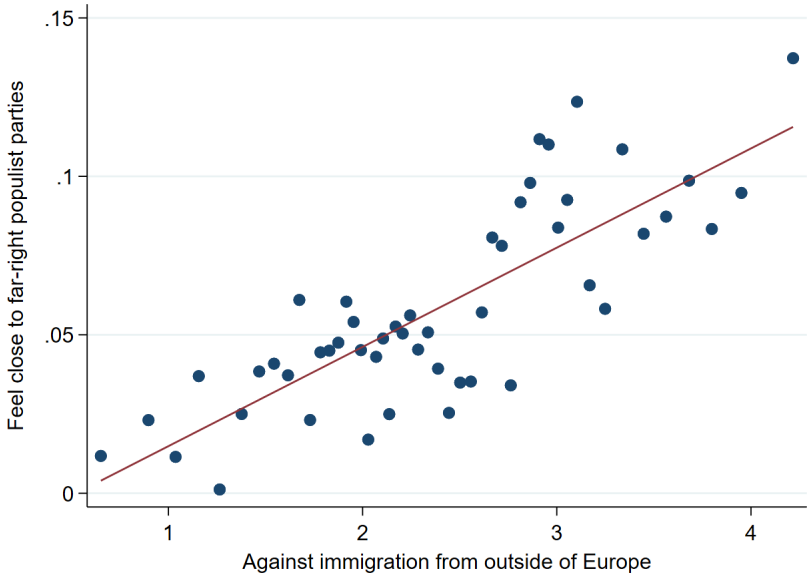


Figure 11: Binscatter: opposition to immigration from outside of Europe and voting for far-right parties among eligible European immigrants, controlling for all FEs and individual characteristics.

To demonstrate that there are significant spillovers from the political attitudes at the origins to actual voting among immigrants, I report the basic DID estimates in Table 4 below. Importantly, I take into account two additional dimensions at the individual level: (i) how interested respondents are in politics, and (ii) I look at only those immigrants who are eligible to vote in their country of residence.

As one can see from Table 4, column (1), during the period of high salience of immigration issues, people interested in politics increase their support for far-right populist parties in response to a growing opposition to non-European immigrants and refugees at the origin. For 1st or 2nd generation immigrants who report not being interested in politics, there is no effect. Columns (2) verifies that there is no spillover to voting behavior outside of the period of high issue salience. Columns (3) and (4) further verify that within the post-2013

Table 4: From opposition to non-European immigration to far-right voting

VARIABLES	(1) FE	(2) FE	(3) FE	(4) FE
	Support right-wing populist party			
Oppose non-Eur. immigr. (origin)	-0.019	0.005	-0.011	-0.043
	(0.027)	(0.037)	(0.069)	(0.024)
Interest politics	-0.205***	-0.000	-0.176***	-0.286
	(0.063)	(0.051)	(0.045)	(0.181)
Oppose non-Eur. immigr. (origin) x Interest politics	0.091***	0.007	0.079***	0.122
	(0.026)	(0.019)	(0.019)	(0.073)
Observations	2,953	4,280	2,037	916
Adjusted R-squared	0.052	0.080	0.048	0.065
Origin FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Host x Time FE	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes
Sample	Post-2013	Pre-2013	Post-2013, treated	Post-2013, not treated

Cluster-robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

period, there are spillovers only from those countries of origin that were heavily involved in the Crisis.

Overall, this section credibly demonstrates that the dynamics of political preference sand social norms at the origin affects the corresponding dynamics of immigrants tracing their roots to these countries, but living elsewhere. Spillovers of antagonism towards non-European immigrants intensify during the periods of issue salience (during the Refugee Crisis), and only come from countries heavily involved in the Crisis. Moreover, these spillovers also have meaningful political consequences: growing conservatism at the origin during the Refugee Crisis increases voting for far-right populist parties among immigrants living in other countries. Taken together, this provides new evidence on how populist and anti-immigration sentiment spreads across the world. Next section explores several of the potential mechanisms behind these contagion effects.

5 Mechanisms: attention, network homophily, and social media ties

This section explores the mechanisms behind the observed spillovers of political preferences and social norms from countries of origin to immigrants. First, I document that the 'necessary

condition' required for any social spillover is satisfied: that during the period of issue salience, immigrants from heavily affected origins pay disproportionately high attention to the Refugee Crisis. Second, I show that network homophily matters in the process of learning from the origins. Namely, the strongest political spillovers come from like-minded groups at the origins, suggesting that learning from origins is likely 'naive', driven by reiteration of the same ideas within like-minded groups. Finally, I present some evidence for the importance of social media (Facebook) ties as transmitters of political preferences from countries of origin.

5.1 Google Trends and attention to the Refugee Crisis from abroad

A necessary condition behind the existence of political spillovers from origins to immigrants is that immigrants pay disproportionately high attention to events and opinions at the origin. To demonstrate that this is the case, I leverage data on search intensity in different languages from Google Trends (GT). Searches for 'Refugees' in different languages are used as a proxy for the interest in the Refugee Crisis by speakers of these languages. Thus, if I can measure searches in non-local languages, this can serve as a proxy for immigrants' interest in a given topic. While individual-level search data is not accessible, GT supplies region-level aggregates of search volumes, which together with the ancestry composition of countries and regions allows me to infer the extent of immigrants' attention to the Refugee Crisis.

To fix ideas, let's consider a simple model of attention to a given event. Individual immigrant's attention to an event (the Refugee Crisis) or a topic (Refugees), $AttentionToCrisis_{i,o,t}$, has a common, time variant component - whether an event/topic is salient at a given point in time, $Crisis_t$. Moreover, immigrants from certain origin countries may be more concerned about certain topics at any point in time, due to historical or other societal characteristics. Finally, immigrants may pay additional attention to an event if their country of origin is more heavily involved in the event, $Treated_o$.

Google Trends returns aggregate search volumes at the regional level, which can be represented as $AttentionToCrisis_{r,o,t} = \sum_{i \in r} AttentionToCrisis_{i,o,t}$ in region r. Given the fact that countries and regions differ in their ancestral composition of population, to make search volumes comparable, it is necessary to adjust them by the size of population speaking a given language in each region. The resulting population-adjusted Google Trends index is given by

$$AttetionToCrisis_{r,o,t}^{Pop-adj} = \frac{AttentionToCrisis_{r,o,t}}{S_{r,o} / \max\{S_{r,o}\}} \tag{4}$$

Where $S_{r,o}$ is the number of people speaking language o in region r[21]. The adjustment increases search volume index for origins that are represented by fewer people in a given region, indicating that at the individual level, these immigrants must be more interested in a topic, other things equal. To sum up, we can model the attention to the Refugee Crisis of immigrants' from origin country o living in region r in period t in the following way:

$$AttetionToCrisis_{r,o,t}^{Pop-adj} = \alpha + \beta \cdot Crisis_t \cdot Treated_o + \psi_r + \phi_o + \tau_t + \varepsilon_{r,o,t} \qquad (5)$$

where coefficient β is the main parameter of interest and gives the amount of additional attention to the Crisis that immigrants from heavily affected origins pay, above and beyond an overall spike in attention during the Crisis. Positive and significant estimate of β would lend support to the hypothesis that immigrants from more heavily affected origins pay higher attention to the Crisis. Note that linear terms $Treated_o$ and $Crisis_t$ are subsumed by the time and origin FEs.

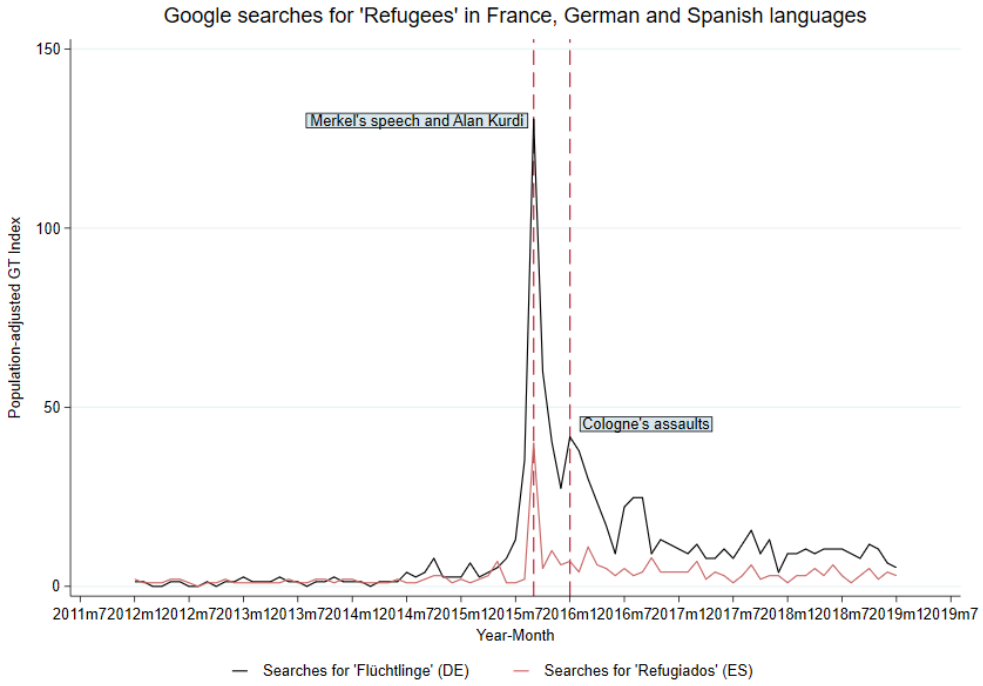


Figure 12: Google Trends search intensity of Flüchtlinge (DE) and Refugiados (ES) in France (adjusted for differences in population shares of German- and Spanish-speakers in France).

To illustrate this approach Figure 12 compares population-adjusted search volumes for

[21]Implicitly, we assume here that origin-country population shares across regions remain unchanged. What is important, however, is that they certainly do not change as fast as attention does, which makes the assumption reasonably light.

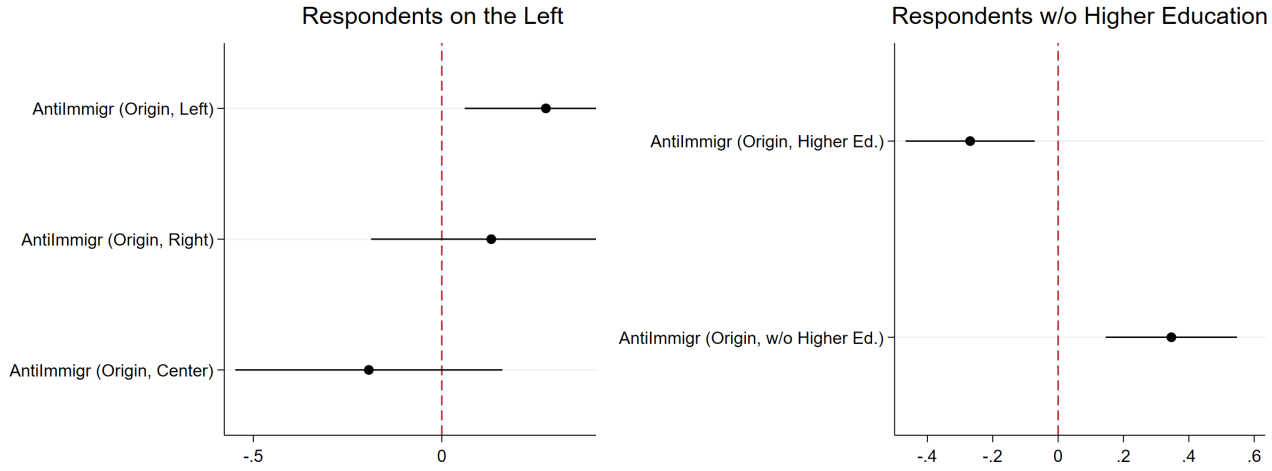
term "Refugees" in German ("Flüchtlinge") and in Spanish ("Refugiados") coming from France. It is clear from the Figure that Spanish- and German-speakers in France are no different in terms of their interest in "Refugees" before the actual Refugee Crisis begins to unfold in 2014. Once the Crisis begins, German-speakers in France pay disproportionately more attention to the Crisis as compared to Spanish-speakers in France, which culminates in more than a 3-fold difference at the peak of the Crisis in September 2015 - the month with one of the biggest numbers of refugee inflows into Europe, and two salient events that attracted massive attention. Publications of pictures of Alan Kurdi's dead body on the shores of Turkey when he and his family attempted crossing the sea to Greece, and Angela Merkel's speech with the famous "Wir schaffen das" ("We can do it") welcoming refugees to Germany. While Spanish-speakers in France also become an order of magnitude more interested in refugees, the relative increase of German-speakers is much larger, lending support to the theory of origin-specific attention spikes (i.e., positive and significant estimate of β). An even clearer difference in attention is observed in January 2016, when following the Cologne's New Year's Eve sexual assaults, attention of German-speakers spikes, while there is no reaction from Spanish-speakers. Overall, we see that German-speakers living outside of Germany (heavily affected country) pay disproportionately high attention to the Crisis, relative to Spanish-speakers living outside of Spain (much less affected country).

While Figure 12 demonstrates that immigrants from more affected origin countries pay more attention to the Crisis than immigrants from less affected origins, we can also compare how attention of immigrants compares to that of natives in their host countries. In the Appendix, Figure A9 illustrates that German-speakers in Alsace - French region known to be heavily German-speaking - increase their attention to the Crisis disproportionately more as compared to natives (French-speakers). For this figure I use population-unadjusted GT Index, so one can see how before the Crisis, the ratio of German to French searches resembles the population shares ratio. During the Crisis period, however, 'attention-ratio' no longer resembles population ratio, indicating that German-speakers increase their attention to the Refugee Crisis much more than their French-speaking same-region neighbors.

5.2 Network homophily: learning from like-minded groups

Results in sections 3 and 4 demonstrated that changes in ancestral attitudes have significant spillovers on the attitudes of immigrants living elsewhere. So far, the paper used unconditional average attitudes in the origin countries. However, there are reasons to believe that immigrants might be particularly attentive to and persuaded by origin-country population

subgroups to which they feel closer to. In particular, Figure 13 shows that the coefficient on the basic ancestral spillover effect for people identifying as left-leaning politically is very strong for ancestral averages for left-leaning people, but insignificant for other political subgroups (this distinction is also there for local-region attitudes). Same type of homophily effect is observed for education: for people without tertiary education, ancestral spillovers are strong for ancestral averages over people without tertiary education, but absent for people with tertiary education. These network homophily results are especially important given the increasing polarization and, in particular, diverging attitudes towards non-European immigrants, refugees, and the EU integration observed during and after the Refugee Crisis period, see Figure 2. This figure makes it clear that reactions to the Crisis were very different across groups with different political preferences, so, given the importance of network homophily, one should expect that immigrants will react especially strong to the attitudes of like-minded co-ethnics.



(a) Immigrants on the political left

(b) Less educated immigrants

Figure 13: Homophily effects examples: Spillover coefficients by groups of immigrants and groups of natives in origin countries

Guided by these observations of network homophily effects, I construct a new measure of origin country attitudes, where for each immigrant I define the 'origin x social' group, where social groups can be various combinations of political and educational divisions from above (i.e., left-leaning without tertiary education, centrist with tertiary education, etc.). Starting with the simple case of political-only subgroups, Table 5 below reports the results of such analysis, with columns (1)-(4) mirroring those from Table 1. As is clearly seen from these estimates, spillover coefficients are much stronger from these like-minded groups,

Table 5: Origin country spillovers from similar groups

VARIABLES	(1) FE	(2) FE	(3) FE	(4) FE	(5) DID	(6) DID
	Oppose non-European immigration					
Oppose non-Eur. immigr. (origin|group)	0.286***	0.263***	0.211***	0.203***	0.379***	0.445**
	(0.083)	(0.077)	(0.071)	(0.074)	(0.127)	(0.162)
Oppose non-Eur. immigr. (origin)						-0.208
						(0.167)
Observations	17,299	17,112	17,112	17,112	3,661	3,661
Adjusted R-squared	0.136	0.167	0.174	0.186	0.227	0.227
Origin FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Country x round FEs	No	No	Yes	Yes	Yes	Yes
Individual controls	No	Yes	Yes	Yes	Yes	Yes
NUTS FE	No	No	No	Yes	Yes	Yes
Group x round FE	Yes	Yes	Yes	Yes	Yes	Yes
Sample	Full	Full	Full	Full	**R7-R8**	**R7-R8**

Cluster-robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

as compared to spillovers from the average respondent at the origin. Importantly, all the regressions account for group-specific time FEs, which takes care of any shocks in attitudes that, for example, all respondents identifying as right-wing may be experiencing. Column (5) reports estimates from a simple DID analysis around the main events of the Crisis in 2015, similar to 7, and also finds a much stronger spillover than before. Finally, column (6) runs a horse race between average attitudes at the origin and that of respondents' like-minded subgroup at the origin, revealing that the whole effect of the average disappears once we acknowledge that attention and learning tends to happen in like-minded groups.

These results may be indicative of either or both of the two stories. First, people with similar pre-existing characteristics are exposed to similar information sources and react in similar ways to the information they get. This would mean that, for example, German Americans and Germans on the political left read same newspapers and, after getting same information, adjust their attitudes in a similar way. A second possibility is that more similar people are more likely to interact with each other, and, if they do, are more easily persuaded. I work on discriminating between these two stories in my context.

5.3 Social media ties to the origins

To further underpin the idea that immigrants' attitudes and behaviors may be affected 'real-time' by changes in political preferences at the origin, I show that social media networks between sub-national regions (NUTS-2) and European countries are strongly reflective of

origin country composition of these sub-national regions[22]. Once I establish that, quite intuitively, higher social media friendship links are strongly reflective of migration histories at the regional level, I show that spillover effects are stronger between subnational region-(origin)country pairs that are more strongly connected via Facebook.

I use data from Facebook's Social Connectedness Index (SCI) to measure bilateral social media ties between locations. Data on population shares by country of origin in European NUTS regions comes from the European Census (IPUMS-I) and Alesina et al. (2021). I test whether regional population shares by country of origin map into the strength of region-to-country social media ties.

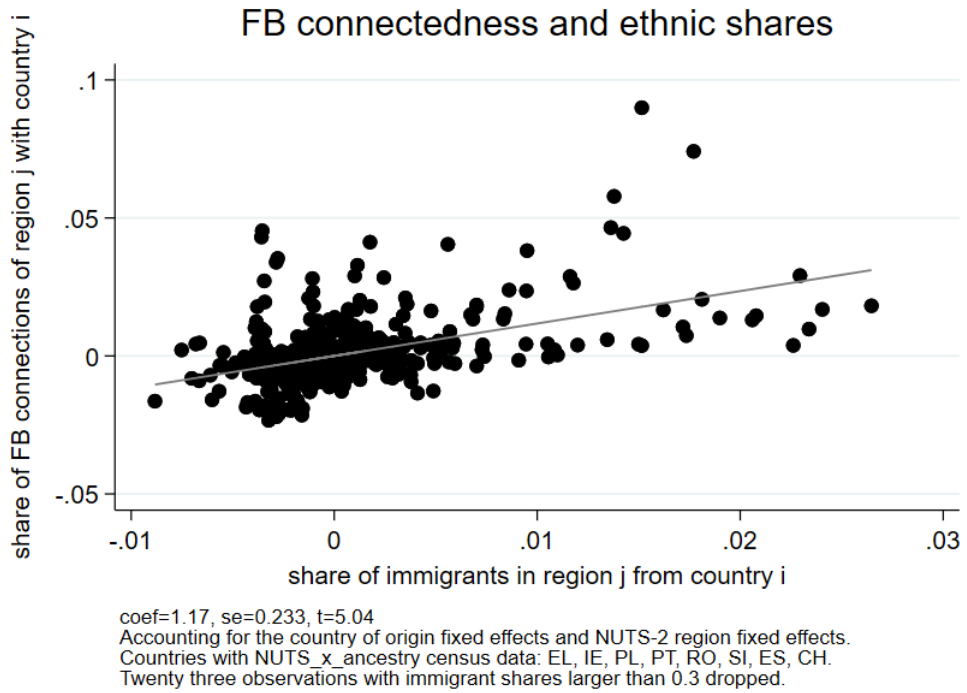


Figure 14: Ethnic shares and Facebook connectivity, 8 European countries, NUTS-2 level, w/o outliers

Figure 14 shows the correlation between the share of Facebook friendships that users in NUTS region j have with users in country i and the share of population in region j

[22]This has been done in the US context in the seminal paper by Bailey et al. (2018), but this has not been shown for Europe due to difficulties obtaining data on ethnic/country of origin population shares at the sub-national level. While Bailey et al. (2020) and the authors' previous papers discuss the possibility that Facebook friendship links may actually explain who migrates where, I suggest that a reverse effect may be even stronger: ethnic origins of local populations explain where they have social media ties.

Table 6: Social media ties with the origins and the strength of spillover effects

VARIABLES	(1) FE	(2) FE	(3) FE	(4) FE
	Opposition towards non-European immigrants			
Oppose non-Eur. immigr. (origin)	0.094	-0.036	-0.041	0.094
	(0.102)	(0.105)	(0.109)	(0.089)
Oppose non-Eur. immigr. (origin) x Pop share origin	2.253*		-3.968	
	(1.129)		(2.508)	
Oppose non-Eur. immigr. (origin) x FB share origin		3.351***	6.068**	
		(1.187)	(2.487)	
Oppose non-Eur. immigr. (origin) x FB over-repres.				4.547**
				(2.105)
Observations	10,992	8,707	8,359	8,359
Adjusted R-squared	0.139	0.156	0.157	0.157
Origin FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Host x Time FE	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes
Country-pair FE	Yes	Yes	Yes	Yes

The mean value of origin-country population shares across all origins and regions is 0.02 (i.e., 2% of the region's population), while the median is 0.01 (1% of the region's population). The range is from 0 to about 10%, and a standard deviation is about 4%. Thus, in column (1), going from zero co-ethnics in a region to 4% co-ethnics in a region increases the spillover coefficient two-fold, from 0.09 to 0.18. The standard deviation of Facebook friendships in a given origin country is about 5%, so in column (2), going from zero Facebook ties to the origin to a region with 5% Facebook ties to the origin increases the spillover from -0.03 to 0.14 – an even larger effect. Cluster-robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

that are immigrants from country i. The strong, positive correlation suggests that sub-national regions in Europe that have a higher share of immigrants from a certain European ancestry also tend to have a significantly higher Facebook connectivity with people from that European country[23]. Thus, immigrants tend to be disproportionately connected to their origin countries via social media. Given the importance of network homophily effects documented in section 5.2, this lends additional support for the hypothesis that social media networks, known for their echo chambers, may be behind the spillover effects observed during the Refugee Crisis.

To provide further evidence supporting the role of social media as a channel though which attitudes and preferences flow from origins to immigrants, I show that stronger Facebook friendship links with immigrants' origin countries increase spillover effects from the origins. Importantly, social media ties with the origins matter even after I account for the aforementioned correlation between local ethnic composition and social media ties to the origins. In other words, immigrants residing in NUTS regions that have disproportionately high social

[23]Appendix Figure A10 shows the same correlation with a few outliers, which, however, do not affect neither the slope, not the significance. If anything, with these outliers, the results are even stronger.

media ties to their origin country relative to the share of local population from that origin country, receive stronger spillovers from the origins.

The estimates are presented in Table 6. Column (1) echoes the evidence presented on Figure 6, but with a continuous measure of region's population share from a given origin country. It shows that spillovers from the origins are significantly higher for immigrants residing in regions with larger 'diasporas'. In particular, moving from a region with close to zero co-ethnics to a region with about 4% co-ethnics (one standard deviation change) increases the size of a spillover coefficient two-fold, from 0.09 to 0.18. Column (2) provides similar evidence for the importance of Facebook ties between a given region and a given origin country - stronger region-to-origin social ties increase the strength of spillover effects. For immigrants living in regions less tied to origin countries, spillover effects are zero. However, specification in column (2) does not take into account that a higher Facebook connectedness between a region and a country may simply reflect a higher share of regional population tracing roots to that country. Column (3) shows that the effect of social media ties are stronger than the simple local diaspora effects. Namely, when Facebook friendship shares are included, the size of local diaspora looses significance. For column (4), I construct the measure of disproportionality of Facebook connectedness between a region and a country based on the regional population shares: I run a regression of Facebook friendship shares on local population shares and collect the residuals. The meaning of this measure can be easily seen from Figure 14: region-origin pairs above the fit line are those where Facebook ties are stronger than predicted by population shares alone. Column (4) confirms that regions with stronger Facebook ties to a given origin country than would be expected based on local ethnic shares receive stronger spillovers.

These findings align well with the results on homophily in learning from the origins reported in section 5.2. As was shown in many recent papers, including Alcott et al. (2020), Levy (2021) and others, social media exhibits a high degree of segregation based on political and social views. Thus, the fact that the bulk of the origin-country spillover comes from like-minded groups, and the fact that spillover effects are close to zero for regions not well-connected to the origins via social media, together suggest that social media is likely to be the key mode of transmission of political preferences and social norms from origins to immigrants. Further work on this direction is needed, however, to establish that the dynamics of social media penetration and an increasing opportunity to stay in touch with the origin-country networks contributes to the spread of certain ideologies across the world and potentially prevents integration of immigrants into their host communities.

6 Conclusion

This paper suggest that there is a large and mostly unexplored dimension of political and social change: 'real time' spillovers of political preferences and social norms from countries of origin to 1st and 2ng generation immigrants. In particular, this paper documents significant contagion of (i) opposition towards non-European immigration and (ii) support for far-right populist parties during the European Refugee Crisis of 2014-2016, when issues of non-European immigration were most salient. The broad picture emerging from this paper suggests that salient events attract attention of co-ethnics from abroad who then 'learn from the origins': immigrants update their political and social attitudes based on the dynamics of public opinion at the origins.

Importantly, this paper demonstrates that 'learning from the origins' is especially strong (i) for immigrants who lack social integration into their host societies; and (ii) between like-minded groups of people (network homophily effect). Given the additional evidence presented in the paper on the importance of social media ties as potential carriers of political attitudes from abroad, these results suggest that in the era of social media, when maintaining attention to origin-country events is virtually cost-less, immigrants update their political attitudes based on the opinion dynamics among like-minded groups at the origin. As indicted by the results on immigrants' voting behavior, this spread of ideas from the origins may create fertile ground for populist contagion and related phenomena.

This paper also underscores the importance of immigrants' social and political integration into their host countries, as contagion effects are observed only for poorly integrated immigrants. In a related paper, I explore whether the rise of social media and other cheap communication tools allows immigrants to substitute their local, host-country ties with their previous origin-country ties, and thus hurts the prospects of social integration.

Further research needs to shed more light on the mechanisms behind these cultural and political cross-border spillovers: how much of such effects are attributed to family ties vs. media attention? Do people in the age of modern ICTs learn from distant places as actively as they do from places and events nearby? These and related questions may enrich the research on socialization, cultural and political change, and integration of immigrants.

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Appendix

A. Figures

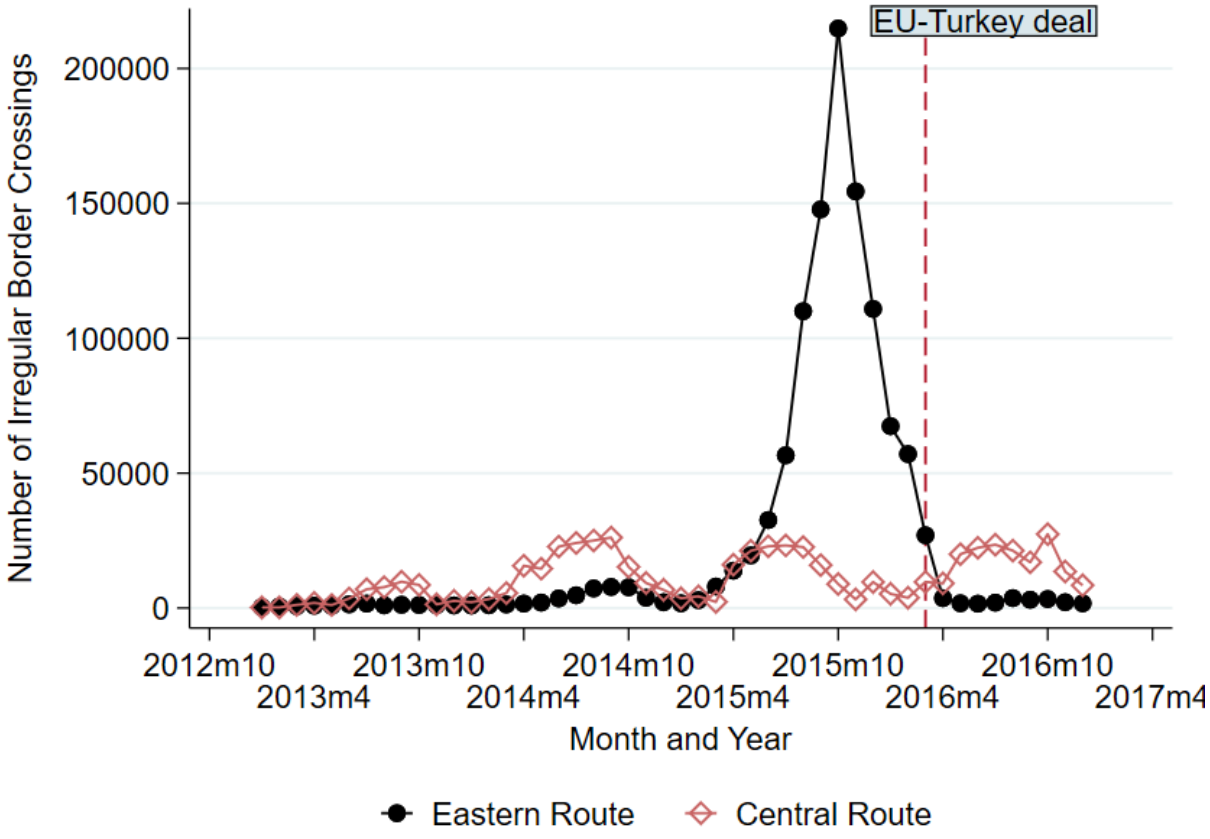

Figure A1: Irregular border crossings along the Eastern Mediterranean sea route. Source: Frontex

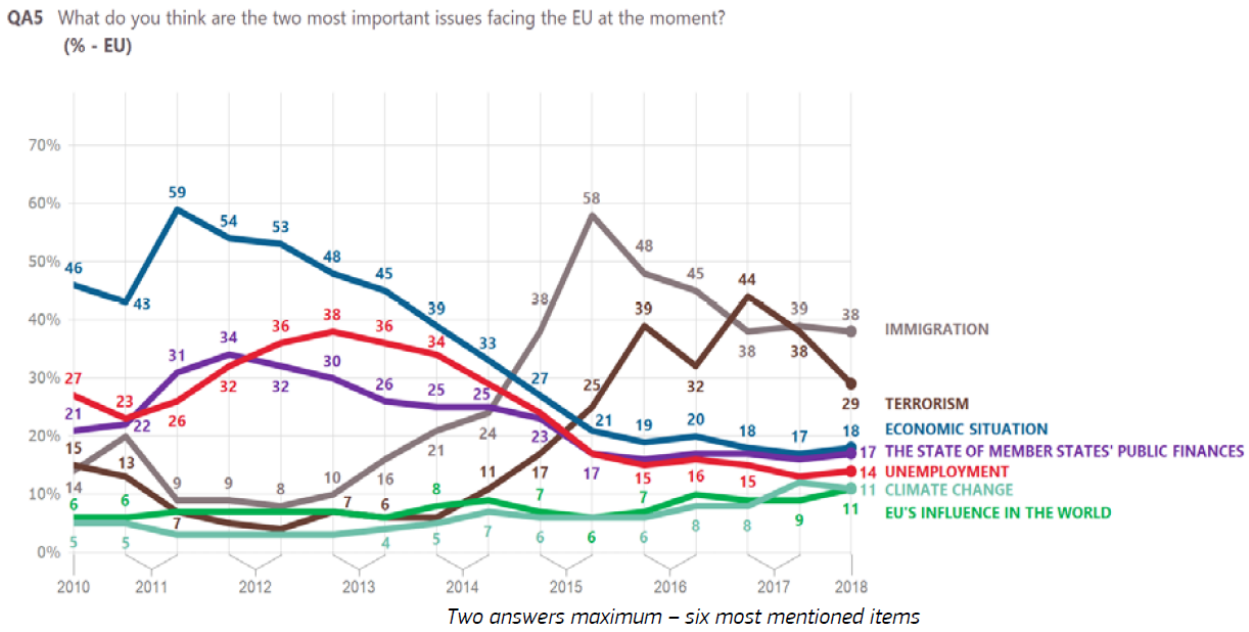

Figure A2: Most important issues facing the EU, average across respondents in all EU countries. Source: Eurobarometer Report 2018

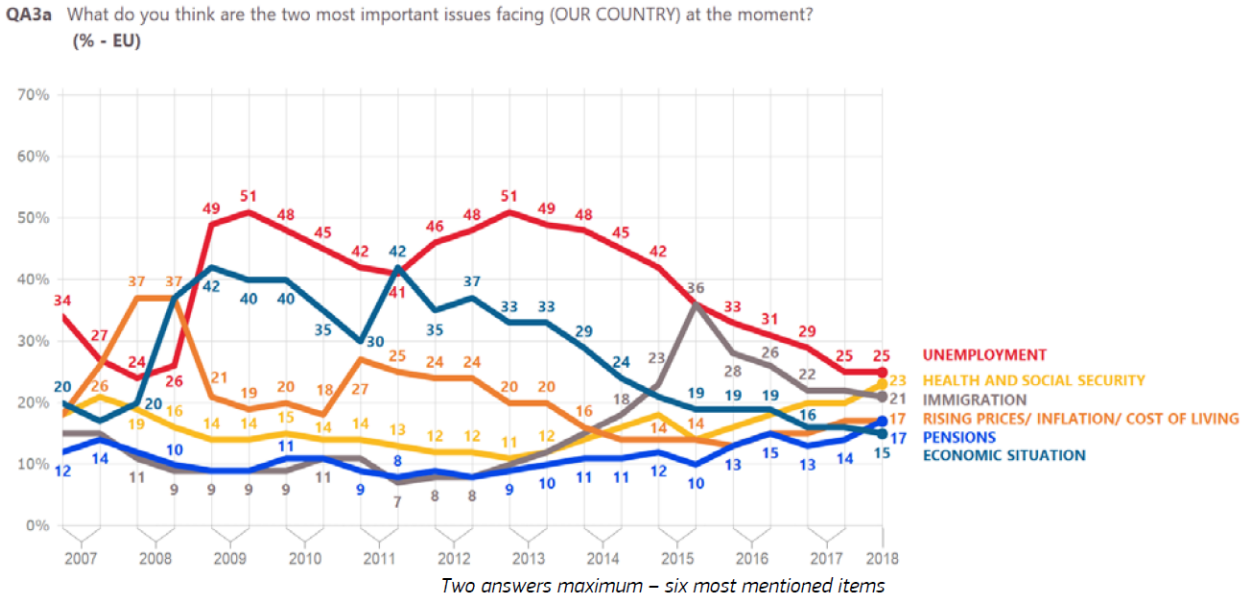

Figure A3: Most important issues facing respondents' country, average across respondents in all EU countries. Source: Eurobarometer Report 2018

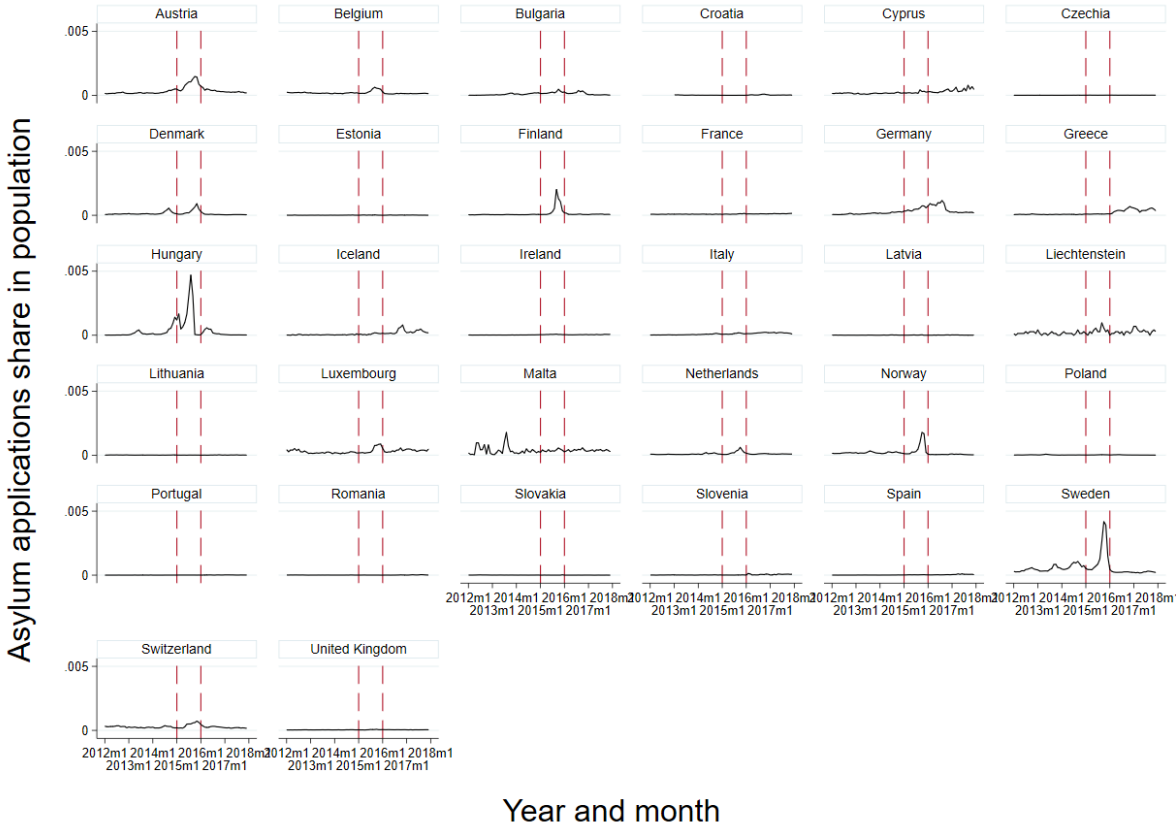

Figure A4: Asylum seekers share in population by country of asylum and month. Year 2015 is enclosed between two vertical red lines for comprehension purposes.

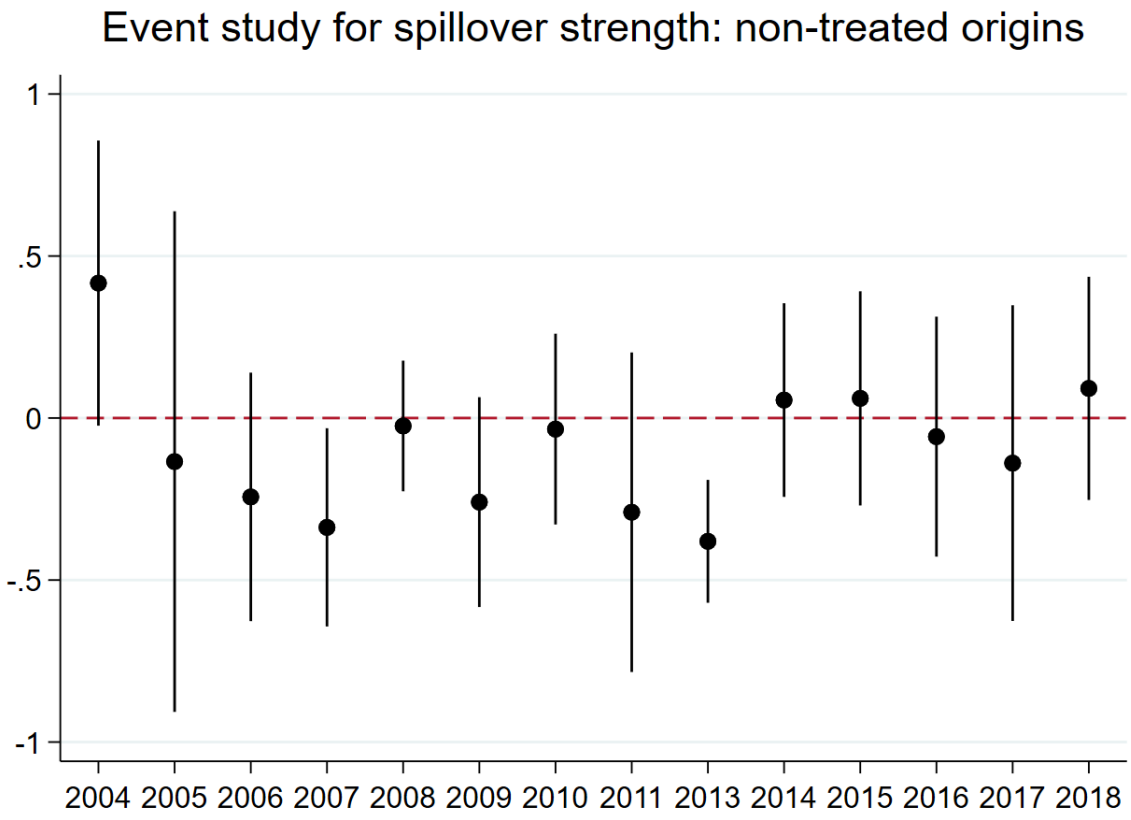

Figure A5: DID spillover coefficients for each survey year, as compared to 2012, the last pre-Crisis year. Non-treated origin countries.

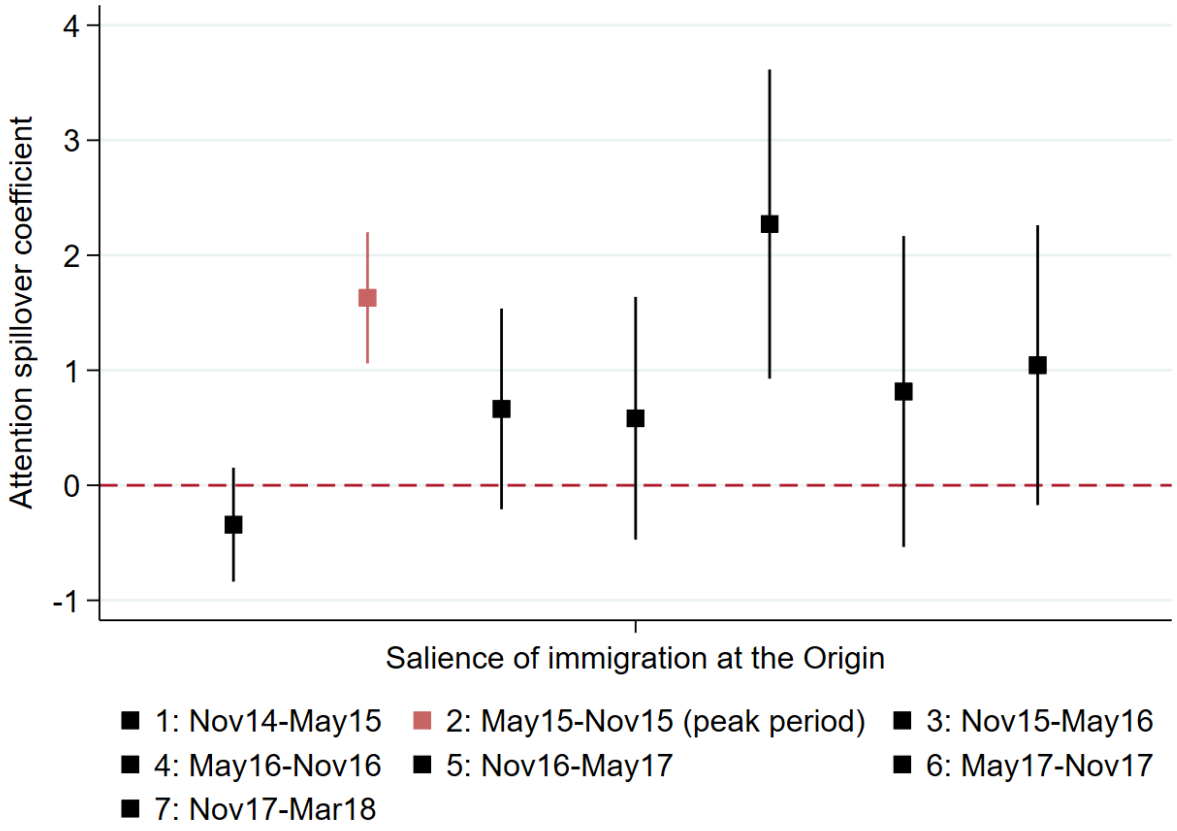

Figure A6: Co-movements in the perceptions of issue salience among immigrants and their co-ethnics at the origins. Origins with high refugee inflows.

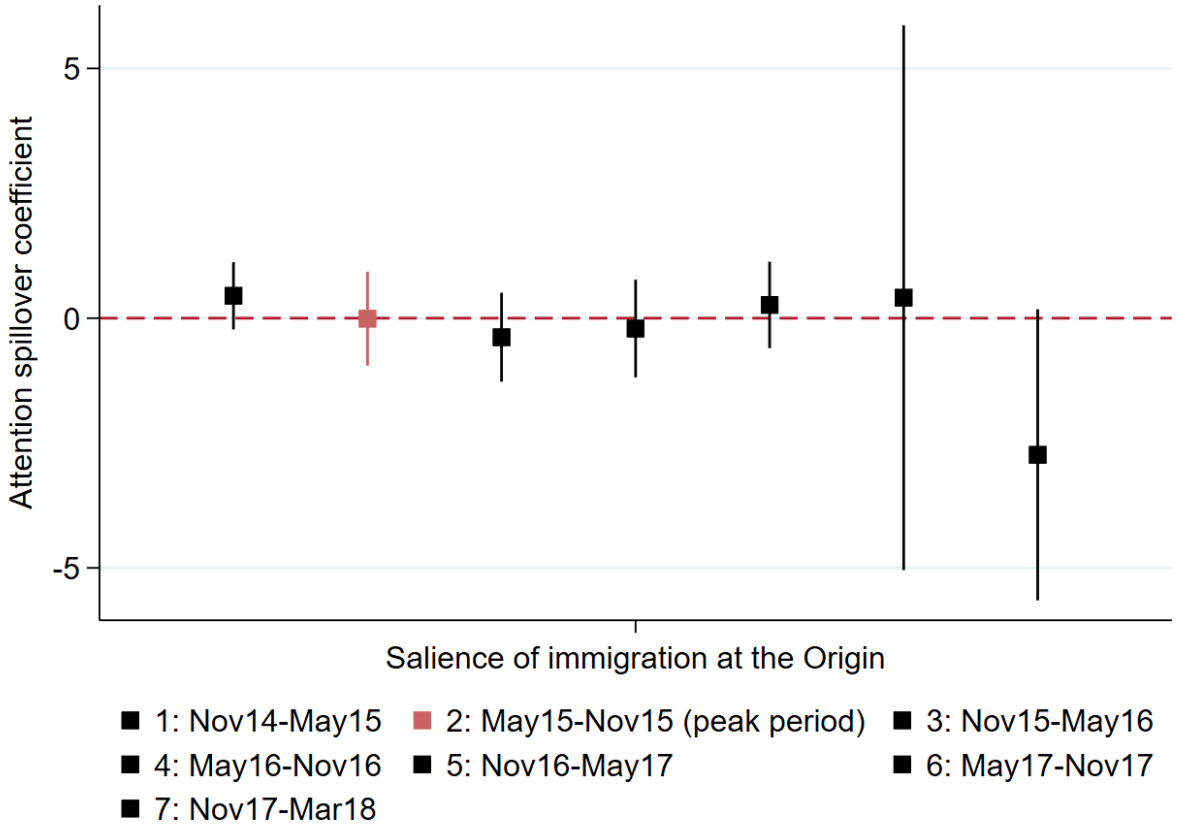

Figure A7: Co-movements in the perceptions of issue salience among immigrants and their co-ethnics at the origins. Origins with low refugee inflows.

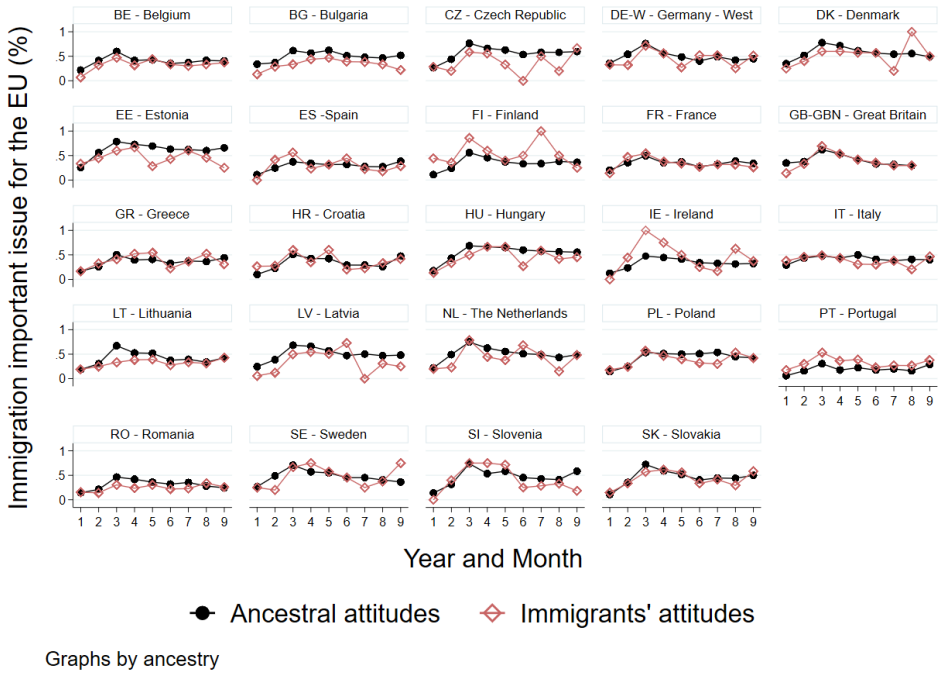

Figure A8: Co-movement of the attitudes of immigrants and their countries of origin (whether immigration into the EU is a major issue).

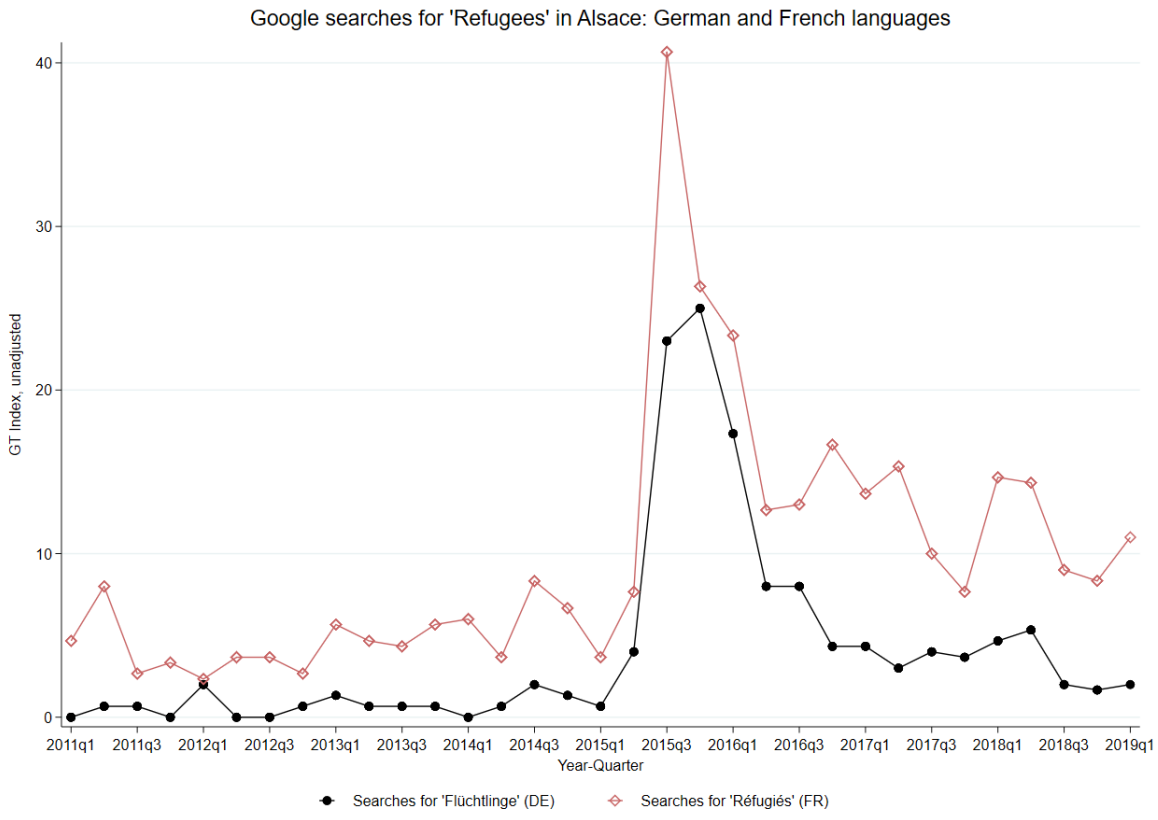

Figure A9: Relative search intensity of Flüchtlinge (DE) vs. Réfugiés (FR) in Alsace, France. Population share of German-speakers in Alsace is approximately 20%, which corresponds to the pre-Crisis ratio of search volumes.

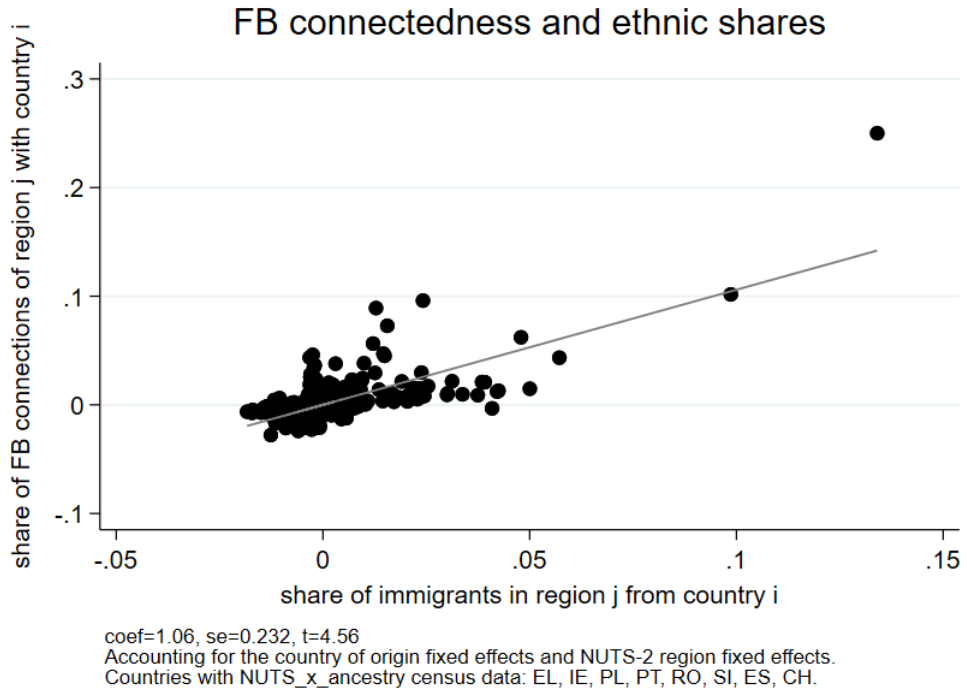

Figure A10: Ethnic shares and Facebook connectivity, 8 European countries, NUTS-2 level

B. Tables

Table B1: Eurobarometer: spillovers of opposition towards non-EU immigrants

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Attitudes towards immigrants from outside of the EU								
Immigr. Outs EU (ancest)	0.476***	0.478***	0.458***	0.490***	0.298**	0.548**	0.547*		
	(0.094)	(0.096)	(0.106)	(0.137)	(0.128)	(0.228)	(0.285)		
Immigr. Outs EU (host)			0.442*	0.431*					
			(0.222)	(0.215)					
(lag 1) Immigr. Outs EU (ancest)								0.309**	0.407**
								(0.139)	(0.180)
Observations	5,420	5,366	5,366	5,366	5,366	1,562	1,156	4,738	1,351
Adjusted R-squared	0.084	0.101	0.102	0.123	0.130	0.191	0.106	0.108	0.199
Ancestral FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Host Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NUTS FE	No	No	No	Yes	Yes	Yes	No	No	Yes
Host_x_round FE	No	No	No	No	Yes	Yes	Yes	No	Yes
Sample definition	Full	Full	Full	Full	Full	Host not treated	May15-May16	Full (lag)	Host not treated (lag)

Cluster-robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

C. Description of variables and sources of data

Forthcoming ...