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Attitudes and Policies toward Refugees

Evidence from Low- and Middle-Income Countries

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Abstract

Exclusionary policies, such as limits on refugees' movement and the right to work, are often justified as reasons to minimize economic and social tensions with host communities. While these policies have a negative effect on refugees' economic outcomes, their ability to mitigate frictions with host communities is unknown. Inclusionary policies, on the other hand, could foster mutual gains and positive relations. This paper builds an extensive dataset of attitudes and economic outcomes, refugee populations, and policies at the sub-national level covering 14 years (2005-2018) and most low- and middle-income countries. Using event study and difference-in-differences methodologies, it assesses the effects of the arrival of large waves of refugees and finds little evidence that large refugee arrivals have a negative effect on average attitudes or economic outcomes in the short-term. There are also no significant differences between places with restrictive and inclusive policies, including de jure access to the labor market and opening camps.

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Attitudes and Policies toward Refugees: Evidence from Low- and Middle-Income Countries

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1 Introduction

Policies for refugees like the right to work and freedom of movement are decided by the governments of host countries. The policies vary widely and change over time (Blair et al. 2021a); for instance, while Tanzania prevents refugees from working even within the strictly-enforced camp boundaries, Colombia has extended the right to work to 1.7 million Venezuelans. Social cohesion is one of the many factors influencing governments' decisions and often used to publicly justify restrictions and containment. Despite anecdotal evidence to the contrary, governments are often worried that more inclusive policies will lead to crowd out of host citizens, reduced social cohesion, and a backlash against the politicians who facilitated refugees' access.[2] Restrictive policies remain despite the significant costs to refugees and, in many cases, the host communities through missed opportunities for exchange and growth.[3]

In this paper, we examine how attitudes toward refugees are affected by the arrival and presence of refugee populations. We first ask how attitudes respond to a large arrival of refugees on average across low- and middle-income countries (LMICs). We then decompose the findings by the characteristics of hosting environments to investigate whether social tension and negative perceptions are reduced in restrictive environments or whether interactions in a more welcoming environment facilitates trust and mutual gains from exchange. We focus on LMICs, where 86% of refugees reside but where relatively little quantitative research has been conducted to date on the determinants of social cohesion (UNHCR 2021b).

We build and combine three main datasets to address our research question. The resulting dataset covers a large proportion of LMICs between 2005 and 2018. The first is a dataset on attitudes. Our main outcome comes from the Gallup World Poll (GWP), due to its extensive spatial and temporal coverage, and we

[2]See Verme and Schuettler (2019) for a review on the minimal evidence on economic effects on host communities.

[3]See Clemens et al. (2018) for a discussion of the literature on the economic effects of policies for both refugees and hosts, and Bahar et al. (2021) for an analysis in Colombia of a recent regularization program.

supplement these data with 12 additional public opinion surveys. The second dataset is on refugee populations at the sub-national level. We obtain preliminary estimates from the United Nations High Commissioner for Refugees (UNHCR), develop a methodology to impute missing totals, and aggregate at the level of sub-national regions as reported in GWP. The third dataset covers policies on camps, which we also obtain from UNHCR, and on *de jure* access to the labor market, which we obtain from the authors of the Developing World Refugee and Asylum-seeker Policy dataset (Blair et al. 2021a) and supplement by coding the additional LMICs in our sample.

In order to causally identify the effect of refugees' presence on attitudes, we use large, sudden arrivals of refugees that create clear before and after time windows at the sub-national level. We examine how attitudes changed within affected regions in our first set of specifications using event study designs. We extend the framework to include regions within the same countries that did not experience a similarly large increase for a difference-in-differences design.

Our preliminary findings suggest that the large arrivals of refugees do not have a negative effect on attitudes in the period we study (up to four years after arrival). The coefficients are positive, small, and statistically insignificant but, importantly, can rule out meaningful negative effects. We then find little evidence that the pattern differs across camp and non-camp settings or across liberal and restrictive right-to-work environments, although the analysis is still at a preliminary stage.

Our strategy allows us to estimate the average effect across contexts, which is arguably the parameter of interest to both policymakers and academics.[4] Studies within a single context have important advantages, but the external validity is always a concern. Meta-analyses may also not produce the true average effect if the set of contexts is systematically biased, perhaps due to data availability or potential publication bias. However, Pottie-Sherman and Wilkes (2017) conduct a meta-analysis of immigration attitudes and group size across 55 studies. Among 487

[4]Our strategy identifies the effect of large waves only. The effects of smaller populations of refugees could evolve differently.

results, they find "more than half of these results show no relationship and the remainder shows both positive and negative relationships". Our results are consistent with this work and extend it to refugee flows in low- and middle-income countries. Our findings also relate to the meta-analysis by Verme and Schuettler (2019) who find little average effect of refugees on hosts' labor market outcomes, which could then influence attitudes.

The paper proceeds as follows. Section 2 reviews the context, and Section 3 outlines literature on the effects of refugee movements both on attitudes and political outcomes. Section 4 describes the data and outlines our empirical approach. Section 5 presents the results after which Section 6 concludes.

2 Context

More than 80 million people were forcibly displaced worldwide at the end of 2020. Over 26 million people crossed international borders as refugees, with 68% of all refugees worldwide coming from only five countries – Afghanistan, Myanmar, South Sudan, Syria, Venezuela – and 73% live in countries neighboring their country of origin (UNHCR 2021b).[5] According to UNHCR, 70% of refugees live in countries where their right to work is restricted, and 66% live in countries where their freedom of movement is restricted (UNHCR 2021a).

One common characteristic of host countries' policies is camps. While some camps restrict movement, others do not, with Uganda and Iraqi Kurdistan as two examples of the more open "settlement" model.[6] We find that countries with more restrictive labor market policies for refugees are also more likely to build camps (Table A11), but we treat camps and restrictive employment policy as distinct in our discussion and analysis.

[5]The three most common countries of asylum hosted people almost exclusively from one single country: Turkey (3.7 million Syrians); Colombia (1.7 million Venezuelans); and Pakistan (1.4 million Afghans) (UNHCR 2021b).

[6]We define camps "planned camp"s in UNHCR's dataset, which includes open camps like in Uganda and Kurdistan.

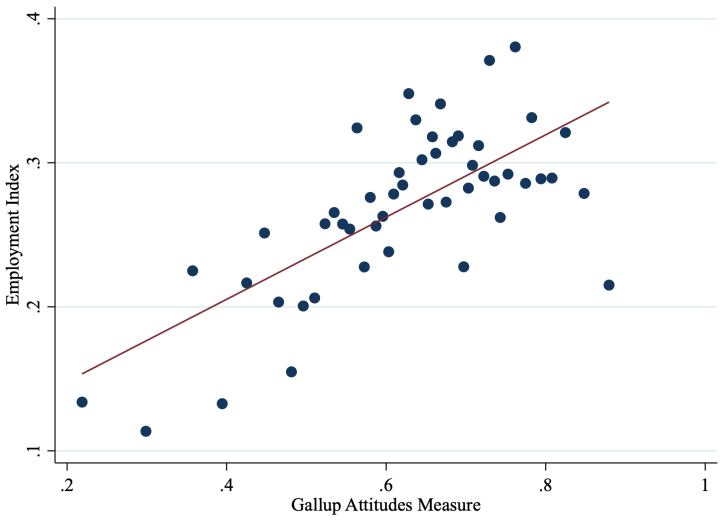
The effects of camps on host communities on different outcomes – which may in turn affect attitudes – have been evaluated in a limited number of studies. Maystadt et al. (2020) investigate the refugee-driven landscape changes in Africa. The authors find that refugees cause a small increase in vegetation condition, while contributing to increased deforestation. In a related study, using satellite data on forest cover and loss, Salemi (2021) shows that refugee camp openings are associated with a small reduction in the extensive margin of forest loss (i.e., land clearing) and a small increase in intensive margin forest loss (i.e., gradual reductions in canopy cover). Using global data from 1990 to 2018 on locations of refugee communities and civil conflict (including but not limited to camps), Zhou and Shaver (2021) find no evidence that hosting refugees increases the likelihood of new violent conflict, prolongs existing conflict, or raises the number of violent events or casualties in the area. Ginn (2021) examines camps in Jordan and Iraqi Kurdistan and argues they could play an important role for both refugee and host communities in expanding the stock of housing, which could be a key driver of social cohesion in displacement settings.

Another important dimension is *de jure* policies. Blair et al. (2021a) significantly advance the study of policies toward refugees in low- and middle-income countries by coding *de jure* policies in more than 90 countries. They show that policies towards refugees are liberalizing over time in LMICS, unlike in high-income countries. They furthermore argue that policy changes have occurred when neighboring states are in civil war, and hence the country is likely to receive refugees. These policy changes are more likely to be liberal (reductions in restrictions) when the political elites are ethnic kin with a victimized group. In related work, the authors argue that more liberal hosting policies attract additional refugees (Blair et al. 2021b).

These *de jure* policies relate to attitudes. Figure 1 plots an index of these data on policies against the Gallup World Poll measure of attitudes towards immigrants. The positive relationship indicates that countries with more positive attitudes also allow refugees more legal access to the labor market. Causal relationships could run

in both directions; policies may affect attitudes, as discussed above and below, and attitudes may influence policies through political pressure. Regression results, along with additional independent variables, are presented in Table A1.

Figure 1: Attitudes and Policies towards Refugees



Notes: Employment Index is a score of the *de jure* policy environment for refugees to access employment, with higher scores denoting more access (fewer restrictions). Gallup Attitudes measure is the main outcome used in the results, which is coded as 1 if the respondent says their area is a good place for immigrants to live, and 0 otherwise. The underlying regressions with additional controls are presented in Table A1.

Alrababa'h et al. (2021) show that the majority of studies on attitudes towards migrants and refugees focus on high-income countries and provide three reasons why attitudes in low- and middle-income countries may differ. First, while there is little evidence that economic concerns about labor market competition drive attitudes towards migrants in high-income countries, lower levels of economic development may lead to different drivers. Second, sociotropic concerns about the overall economy and public services, which have found support in the literature from high-income countries, may be especially relevant in environments with fewer public services. Third, cultural concerns are often important determinants in high-income countries, where migrants are often from different cultures and religions than the dominant groups. In lower income settings, where migrants may share the dominant culture or religion, or the host country is already ethnically diverse, these concerns may carry less weight.

3 Related Literature

Our analysis relates to several literatures. First, we contribute to the literature on social cohesion and interactions with host communities.[7] Alrababa'h et al. (2021) conduct a large-scale representative survey of public attitudes toward migration in Jordan. The authors find that while economic concerns do not drive Jordanians' attitudes toward Syrian refugees, humanitarian and cultural factors matter. In particular, Jordanians who are more exposed to refugees' challenging living conditions and who are less sensitive to cultural threat demonstrate more positive attitudes toward refugees. Ghosn et al. (2019) explores how an individual's contact with refugees influence their attitudes about hosting refugees. They find that attitudes towards refugees are associated with whether individual respondents have had contact with Syrians in Lebanon —those with such interactions are significantly more likely to support hosting refugees, to consider hiring a refugee, or to allow one of their children to marry a refugee.[8] Alan et al. (2021) presents an experimental evidence from an educational program in southeastern Turkey that aims to build social cohesion in schools by developing perspective-taking ability in children. The authors find that the intervention increased the likelihood of forming inter-ethnic friendship ties as well as reducing ethnic segregation in the classroom and lowering victimization in school grounds.[9]

Second, there is a recent literature on the impact of refugee movements and

[7] De Berry and Roberts (2018) argue that several factors mediate social relations in the context of forced displacement. These factors are: (i) perceptions of identity; (ii) pre-existing relationships between displaced and host communities; (iii) capacity/readiness of communities to host displaced people; (iv) duration of displacement; (v) perceived/real disparities between different groups affected by forced displacement; and (vi) patterns of settlement.

[8] In a conjoint survey experiment, Allen et al. (2021) study preferred policy responses of Colombians in response to the large inflow of Venezuelans into their country. They find that those who have less contact with Venezuelans, those who put more weight on economic priorities, and those who see the situation in Venezuela as mainly an economic problem, tend to support policies that are more restrictive.

[9] There is also the literature on the effectiveness of cash transfers in refugee-hosting settings. Valli et al. (2019) examine whether a short-term transfer programme targeted to Colombian refugees and poor Ecuadorians led to changes in social cohesion measures. They find that the programme contributed to reported improvements in social cohesion among Colombian refugees in the hosting community but had no impact on social cohesion among Ecuadorians. See also Devereux et al. (2017) for review article on the targeting effectiveness of social protection programmes.

political polarization. Steinmayr (2021) investigates how exposure to refugees in Upper Austria affected voting for the far right Freedom Party. He finds that while hosting refugees in a municipality lowers the support for the Freedom Party, municipalities that experienced the transit of refugees exhibit the opposite pattern. These findings are in line with the predictions of the intergroup contact theory, which suggests that contact can improve attitudes towards refugees provided certain conditions are met. Hangartner et al. (2019) find that residents of Greek islands that experience large and sudden inflowes of refugees become more hostile toward refugees, immigrants, and Muslim minorities, and are more likely to support and lobby for more restrictive asylum policies than natives in similar islands that receive fewer or no refugees. Dustmann et al. (2019) find that allocation of larger refugee shares between electoral cycles leads to an increase in the vote share for right-leaning parties with an anti-immigration agenda in Denmark.[10] Y. Zhou et al. (2021) find no evidence that proximity to refugee settlements in Uganda is associated with more negative (or positive) attitudes towards migrants or migration policy.[11]

Third, our study relates to work on how policies shape refugees' integration outcomes. Two recent studies focused on the impact of employment bans that prevent asylum seekers from entering the local labor market upon arrival. Fasani et al. (2021) find that exposure to a ban at arrival reduces refugee employment probability in subsequent years by about 15 percent —an impact driven primarily by lower labor market participation. Marbach et al. (2018) leverage a natural experiment in Germany, where a court ruling prompted a reduction in the length of the employment ban. They find that longer employment bans considerably slowed down the economic integration of refugees. Slotwinski et al. (2019) evaluates whether inclusive labor market policies increase the labor market participation of asylum seekers, by exploiting the variation in asylum policies in Swiss cantons to

[10]Several other papers also examine the impact of forced displacement on political outcomes in different contexts. See Rozo and Vargas (2021) for evidence from Colombia, Vertier et al. (2020) for France, Dinas et al. (2019) for Greece, Gessler et al. (2021) for Hungary, Gamalerio (2018) for Italy, and Ajzenman et al. (2020) for transit European countries.

[11]Y. Zhou et al. (2021) also show that after the 2014 arrival of 1 million South Sudanese refugees to Uganda, host communities with the greatest exposure to refugee settlements experienced substantial improvements in local development and public goods provision.

which asylum seekers are randomly allocated. They find that inclusive labor market access regulations substantially increase the employment chances of asylum seekers, in particular if the language distance is short. Zetter and Ruaudel (2018) and Aiyar et al. (2016) argue that, for refugees, the right to work and access to labour markets are key for becoming self-reliant and maximizing their net contribution to the public finances in the longer term.

The literature on the link between policies and public preferences is relatively scarce. Bansak et al. (2016) find that public preferences over asylum seekers are shaped by sociotropic evaluations of their potential economic contributions as well as humanitarian concerns about the deservingness of their claims. Zhou (2018) finds that citizens who live near refugees in their country are substantially more likely to support restrictions on citizenship access compared to fellow citizens farther away. She finds that the effect is stronger for more recent arrivals but does not address whether the effect varies by government and humanitarian policies. Blair et al. (2021a) construct an original dataset of *de jure* asylum and refugee policies covering more than 90 developing countries that are presently excluded from existing indices of migration policy. They find that unlike in the Global North, forced displacement policies in the Global South have become more liberal over time. Betts et al. (2021) explores the role of inter-group interaction in shaping social cohesion between refugees and host communities in East Africa. The authors find mixed results: host community attitudes towards refugees (and vice versa) are likely to be shaped by a combination of intra-group attitude formation at the neighbourhood level, and inter-group interaction, with different mechanisms of interaction likely to be more salient for attitude formation in particular contexts (e.g. urban versus camp-based).

Our data and empirical setting provide some unique advantages that allow us to provide new evidence in several dimensions. First, we use sub-national data on refugee populations covering almost all low- and middle-income countries, which enables us to provide large-scale, cross-country evidence on forced migration and attitudes towards immigrants but at a more local level. Second, we study the role of national-level policies in shaping attitudes towards refugees which is facilitated

by comparisons across multiple contexts.

4 Research Design

4.1 Data

4.1.1 Refugee Populations

We use refugee population data provided by UNHCR's Global Data Service on refugee populations at a sub-national level. These data cover 2001 to 2019 for low- and middle-income countries.[12] We code these locations, which are a mix of regions, cities, camps, and geo-locations, to match the sub-national regions in GWP. We include populations who are displaced outside of their country of birth, which captures people who UNHCR classifies as refugees, asylum-seekers, Venezuelans displaced abroad, and others of concern (all of whom are referred to as "refugees" throughout this paper).[13]

While populations are estimated at the country level for every year and displaced nationality, sub-national data is missing for 33% of the total refugee population in LMICs between 2005 and 2018.[14] We therefore develop a methodology to impute the missing population totals at the region-origin-year level. We use the regional proportions of the population for country-origin-years where at least 70% of the refugee population's location is known and combine this measure with the country-origin-year totals to impute the region-origin's total population over time.[15] This methodology yields a balanced panel of refugee populations by nationality at the sub-national level. For the analysis presented here, refugee populations are aggregated at the region-year level, combining refugees from all countries of origin.

[12] The population totals are as of December of the reporting year.

[13] This excludes internally displaced people, returnees, and stateleses populations who are also under UNHCR's mandate. It also excludes Palestinians who are under the mandate of United Nations Relief and Works Agency.

[14] Sub-national data is also missing for almost all of the high-income countries, which also drives our choice to focus on LMICs here.

[15] Further details are available upon request.

The population totals for 2018 and geographic aggregations are mapped in Figure A2.

4.1.2 Gallup World Polls

Our primary outcome, attitudes towards immigrants, comes from the Gallup World Polls (GWP). We use the GWP because it offers significantly more coverage across locations and time than other opinion polls. The GWP aims to conduct annual, nationally representative surveys of approximately 1,000 individuals in each country on a wide range of topics.[16] We use data from 2005 to 2018. This covers 168 countries with at least one survey, 1,732 survey-years, and 2,017,774 observations in total to select sub-samples for analysis.

Since refugees are often geographically concentrated within a host country, we use the lowest sub-national level that is reported in the GWP data. There are multiple considerations when using the data at this level. First, sub-national locations are not reported for all country-years and the geographic divisions vary by country. For instance, respondents' locations in Kenya are reported at the province level, which divides the country into 47 sub-national units. Locations in Uganda, in contrast, are reported as one of four sub-national regions.[17] Second, the data is not representative of specific sub-national regions, since the multi-stage stratification at the country level may select only a few sampling units within the region. However, analyzing the aggregatate of enough regions (according to their refugee presence and policy) mitigates most concerns about representativeness. Third, some sub-national regions were not included in the GWP. Some were excluded randomly during sampling, while others' exclusion was an intentional decision by Gallup due to security or sparse populations.[18]

[16] We exclude those who were not born in the country of interview from the sample.

[17] The number of reported geographic divisions could affect the statistical power, precision, and accuracy of our estimates. Countries with fewer geographic units likely capture respondents who are further away from the refugee presence. If so, and if effects decline with distance, then the effects we measure are attenuated towards zero by including more respondents in the affected regions who are largely unaffected. We are currently exploring geographic spillovers and levels of aggregation.

[18] The country coverage, sampling strategy, and more details can be found here: https://www.gallup.com/file/services/177797/World_Poll_Dataset_Details_052920.pdf

Measurement of attitudes

Our main outcome is the response to the question "is the city or area where you live a good place to live for immigrants from other countries?". We use this question because it is the only question on immigrants in most GWP (and therefore global) country-years. However, it is not a direct question about perceptions towards immigrants, and the interpretation is potentially ambiguous. We therefore assess our measure with extensive supplementary data.

First, we examine the individual-level correlations between our main outcome and other questions that are asked in a subset of GWP country-years which capture views about immigrants more directly. Table 1 follows the measurement methodology in Asher et al. (2021). It reports coefficients from regressions of the outcome listed in the left column as the dependent variable, our main outcome as the independent variable, and additional fixed effects in some specifications. The results show that respondents who say their area is a good place to live for immigrants are significantly less likely to agree with statements expressing negative views of immigrants. This is consistent across all nine measure and within region-years.

Second, we compare the region-year averages of our main outcome with questions on immigrant perceptions asked in other surveys. We compile 12 additional cross-country surveys repeated over time by reputable organizations.[19] We merge these with GWP and with each other at the lowest possible sub-national level. We then synthesize common questions across different surveys to further populate country-year and region-year measures on attitudes toward immigrants.[20] The synthesized questions and their sources are listed in Table A2.

Table A3 follows the same methodology as Table 1 but uses region-year level averages instead of individual level correlations. The results tell the same story; our main outcome, whether the respondent believes the current area is a good place for

[19]The datasets are the Afrobarometer, Arab Barometer, Asian Barometer, European Election Study, European Social Survey, Eurobarometer, International Social Survey, Latinobarometer, Pew Global Attitudes, Transatlantic Trends, World Bank Country Opinion Survey, and the World Values Survey.

[20]The most common question asked in the different surveys is whether the respondent would be "ok with an immigrant neighbor", for instance.

Table 1: Correlating Main and Additional Outcomes: Individual Level

Outcome	OLS	Year FE	Region FE	Region-Year FE	Obs	Years	Regions
Immigration should be decreased	-0.145***	-0.145***	-0.105***	-0.099***	192,813	11	1,712
	(0.008)	(0.008)	(0.005)	(0.005)			
Immigrants take jobs	-0.048***	-0.047***	-0.025***	-0.025***	135,629	9	1,602
	(0.006)	(0.006)	(0.005)	(0.005)			
Immigrant neighbors is "bad thing"	-0.274***	-0.272***	-0.192***	-0.191***	116,902	3	1,917
	(0.006)	(0.006)	(0.005)	(0.005)			
Immigrants in country is "bad thing"	-0.290***	-0.287***	-0.206***	-0.206***	116,285	2	1,918
	(0.006)	(0.006)	(0.005)	(0.005)			
Immigrant marrying relatives is "bad thing"	-0.261***	-0.258***	-0.168***	-0.168***	114,426	2	1,918
	(0.007)	(0.007)	(0.005)	(0.005)			
Too many immigrants	-0.045***	-0.048***	-0.017*	-0.013	43,346	3	285
	(0.013)	(0.013)	(0.010)	(0.009)			
Oppose citizenship for immigrants	-0.047***	-0.046***	-0.035***	-0.034***	20,047	5	172
	(0.014)	(0.014)	(0.012)	(0.013)			
Immigration is a serious problem	-0.207***	-0.207***	-0.156***	-0.156***	11,247	1	135
	(0.016)	(0.016)	(0.013)	(0.013)			
Oppose taking Syrian refugees	-0.213***	-0.213***	-0.195***	-0.195***	11,152	1	223
	(0.027)	(0.027)	(0.019)	(0.019)			

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. Each cell is a separate regression at the individual level with the binary dependent variable listed in the left-most column and the independent variable is our main outcome: 1 if the respondent answers yes to the question "is the city or area where you live a good place to live for immigrants from other countries?" and 0 otherwise. *Years* refers to the number of survey-years the outcome variable is included in GWP. *Regions* refers to the number of sub-national regions observed in GWP. Results use the Gallup sampling weights and standard errors are clustered at the region (sub-national) level.

immigrants to live, correlates strongly with perceptions toward immigrants. Region-years where more respondents report their area is a good place for immigrants have a smaller percentage of the population reporting that they would not want immigrants as neighbors, believe immigrants take jobs, oppose further immigration, etc. This holds across regions and within-region changes over time.

Based on the strong individual- and regional-level relationships, we argue that our main outcome serves as a useful proxy measure for a general perception toward immigrants and refugees. We believe it is likely that many respondents approximated the question as a version of "are immigrants good or bad". Where possible, however, we support our main findings with the additional related outcomes.

4.1.3 Policies

For data on refugees' right to work, we utilize the data and methodology from the Developing World Refugee and Asylum-Seeker Policy (DWRAP) dataset by Blair

et al. (2021a). This index lists five questions on the laws related to the employment of refugees at the country-year level:[21]

1. Does the law or policy contain a provision guaranteeing the right to work?
2. Does the law or policy contain a provision guaranteeing the right to self-employment and/or to start a business?
3. Does the law or policy contain a provision guaranteeing the right to work in professional fields provided an individual holds the requisite training or certification?
4. Does the law or policy oblige individuals to hold a work permit?
5. Does the law or policy place additional restrictions on individuals in terms of work, including restrictions on which industries they may work in, or where they may work?

We are grateful to the DWRAP authors for sharing these data for their sample in Africa and much of Asia. We supplement these data by coding laws in 2005-2018 for 33 additional LMIC countries that are not present in the original DWRAP dataset but have GWP data on attitudes. These laws are listed in Table A4, which complements Table A1 in Blair et al. (2021a). We follow the DWRAP methodology and create a 0 to 1 index that combines the five measures according to Anderson (2008). Higher DWRAP indices indicate laws that afford refugees more access to the labor market.

While the *de jure* environment is important, it does not provide the complete picture. Laws, both liberal and restrictive, are sometimes ignored in practice. Our hypotheses are based on de facto access – what the refugees and host populations actually experience. We are therefore working to create an additional dataset, the

[21] Questions 1-3 are assigned 0 if no; 1 if yes, only for recognized individuals; 2 if yes, for all individuals. Question 4 is coded 0 if yes, and permits cost a fee; 1 if yes, but permits are free; 2 if no, work permits are not required. Question 5 is coded 0 if yes, at least two work restrictions are in place, in addition to any work permit requirement; 1 if yes, at least one work restriction is in place, in addition to any work permit requirement; 2 if no work restrictions are in place, in addition to any work permit requirement.

Refugee and Asylum-seeker Work Rights dataset (RAWR), with partners at Asylum Access, a non-profit focused on refugees' work rights.[22] The goal is to measure de facto labor market access, along with freedom of movement, access to public services, and the extent to which host communities benefit from refugee response programming, through a structured survey of practitioners in each country. Data collection is ongoing.

The other policy we evaluate is the existence of camps. These data come from the same UNHCR database as the sub-national populations, described above. We code camp presence in a region-year if there is the existence of a planned camp in the UNHCR data.[23] We again impute across unexplained discontinuities in camp existence and check the data against secondary sources. We measure camp presence as a binary variable, as we do not have a reliable measure of the proportion of the refugee population within a region-year living in the camps.

4.1.4 Additional Data

We further supplement the main datasets with region-year variables from AidData's GeoQuery (population, GDP based on nightlights, distance to the border and urban centers, and ACLED conflict data), country-year data from the World Bank (income ranking and population), and country-year data from the Polity5 project on institutions (Systemic Peace 2018).

4.2 Empirical Strategy

Our overall question is how the arrival and presence of refugees affect host community attitudes. First, we address how refugees affect attitudes on average across locations. Then we examine the heterogeneity of the effects by host country policy, in terms of the *de jure* right to work and the existence of camps.

[22]This project builds on Asylum Access' earlier efforts to create global scorecards for refugees' work rights, available here: https://www.refugeeworkrights.org/scorecard/.

[23]This excludes self-settled camps, transit centers, and collective centers, which are either temporary or not initated by policymakers

There are multiple challenges to identifying the causal effects of the refugee presence on host community attitudes. First, refugees do not randomly select locations; they may settle – or stay longer – in places with more favorable attitudes. The host governments also may select the locations where refugees are required to live that are less costly politically for the host government. Overall, the areas where refugees live potentially differ from areas where refugees do not live within each country. We therefore adopt strategies that examine changes in attitudes *within* a region over time. These region-level fixed effects capture characteristics that are fixed over time like distance to the border and the presence of major cities.

Second, attitudes towards refugees, and factors that potentially affect attitudes like income and education levels, likely change over time, independent of the presence of refugees. Therefore, even within regions, relating the change in the number of refugees with changes in attitudes could capture pre-existing trends that would have happened independently of the refugee presence.

To identify the effects of the refugee presence, we therefore exploit large waves of refugee arrivals to a region over a short period of time. These shocks define "pre" and "post" periods within regions, and the assumption is that the timing of the shocks are indepedent of region-level trends. The specifications capture the immediate and short-term effects under additional assumptions which vary by specification and are discussed below. However, although displacement is often a long-term situation, we find signifcant variation in the duration of refugee presence by regions.[24] We therefore limit the time windows to four years before and after the events.

We define an "event" in multiple ways. Our main definition is an increase of at least 10,000 refugees in one calendar year. We vary the 10,000 cutoff in alternative specifications. We further explore percentage increases (i.e. a 50% increase that represents an absolute gain of at least 5,000 refugees) and gains in

[24]The length of displacement is potentially affected by attitudes and policies. This threatens the validity of a two-way fixed effects model that includes all regions and years and further motivates our event design. We are currently exploring how pre-existing attitudes, policies, and other characteristics relate to the duration of displacement situations to evaluate this further.

per capita measures (i.e. an increase of 100 refugees per 100,000 residents). We look at the largest increase within eight-year windows. Therefore, if a region has consecutive years of growth of at least 10,000 refugees, we select the year with largest absolute change as the event.[25] Since we study a period of 14 years, a few regions are included twice that have events more than four years apart. The empirical strategy is therefore at the region-event level.

We present multiple specifications that allow for different threats to identification. Our first model compares the periods before and after events, within regions with an event. We report the specification that pools the four years in the post period (which mirrors a regression discontinuity design) in the tables and the event study specification that includes binary variables for leads and lags (each of the years until or since the event) in the figures. In most specifications we include year fixed effects that control for trends across the sample.[26] Formally, we estimate the following equation using only eventually-treated regions:

$$Attitudes_{irt} = \beta_1 Wave_{rt} + R'_{rt}\theta + X'_{irt}\lambda + \gamma_r + \tau_t + \epsilon_{irt} \quad (1)$$

where i denotes individuals, r sub-national regions, and t years. Our outcome, $Attitudes_{irt}$, comes from questions asked of all GWP respondents about their views on whether *"the city or area where they live a good place or not a good place to live for immigrants from other countries"*. Responses are coded as dummy variables, with one representing a positive answer and zero otherwise.

$Wave_{rt}$ denotes our treatment variable, which takes a value of 1 if the region r received a large wave of refugees in period t or at any earlier period as discussed above. R_{rt} is a vector containing two control variables at the region-year level: the Inverse Hyperbolic Sine (IHS) transformed total population of region r at period t, and the IHS transformed refugee population in the same region and period. X_{irt}

[25] We are working on additional definitions, including examining the first event in a window, as well as defining an event across consecutive years, to better accurately capture the pre-post spirit of the idea.

[26] We also include specifications without year fixed effects given the recent concerns raised by De Chaisemartin and d'Haultfoeuille (2020) and others.

includes individual-level control variables: age, age squared, and indicator variables indicating whether the respondent is male, has completed secondary or tertiary education, and lives in a small town, suburb, or a large city. Finally, γ_r is a sub-national region fixed effect, which controls for time-invariant variation in the outcome variable caused by factors that vary cross-sub-national regions. Year fixed effects, τ_t, capture the impact of global shocks that affect all sub-national regions simultaneously. Our standard errors, in this specification and the ones below, are clustered at the region-event level, to account for correlation over time.

Our second model adds the regions that did not experience an event in order to potentially control for country-level trends. We take the sample of country-years from the first specification - regions with events, and the eight-year windows around those events - and add the regions that did not experience an event. When including year or country by year fixed effects (along with the region-event fixed effects present in all regressions), this respresents a difference-in-differences design, when the years after the event are pooled into one binary variable, or an event study design with controls, when each lead and lag year in treated regions is assigned an indicator variable. The identifying assumption is that attitudes in the regions with an event would be on parallel trends with regions that never have an event if refugees had not arrived. However, this specification requires the assumption that events in one region of the country did not affect attitudes in regions without events. If respondents in other parts of the country also change their attitudes based on the events in other regions, this specification - which compares treated and untreated regions at a given point in time - would not capture those country-level changes.[27] This difference-in-differences specification is very similar to the one above, but includes never-treated regions from countries with at least one treated region. This leads to the following specification:

$$Attitudes_{irt} = \beta_1 Wave_{rt} + R'_{rt}\theta + X'_{irt}\lambda + \gamma_r + \tau_t * \phi_c + \epsilon_{irt} \quad (2)$$

[27]We are working on specifications at the country-level that also introduce countries without events as controls.

where i denotes individuals, r sub-national regions, and t years as noted above. Other covariates are identical to the ones reported for equation 1. In addition, c denotes countries. $\tau_t * \phi_c$ is a country-by-year fixed effect, which controls for all potentially omitted variables that can vary across countries and years.

These models report the average effects across all treated regions. We then examine the heterogeneity of the effects according to our two dimensions of interest: the *de jure* right to work policy index (scaled to 0-1) and an indicator for the existence of camps. The question is whether refugee waves in places with camps (or restrictive laws) have the same average effect as places without camps (or liberal laws). This specification now compares across locations, instead of the within-region comparisons across time for the average effects. Places that implement restrictive laws likely differ from places with liberal laws in more dimensions than refugee policy, and these differences could instead explain any differences in the evolution of attitudes across settings. We begin to assess the comparability, as well as scope for reverse causality (i.e. places that had or anticipated more negative effects opened camps), in the results section, with more analysis to follow.

Heterogeneity results are based on the following equations, identical to the ones above but including an interaction term of between our treatment variable and the variable of interest in each case:

$$Attitudes_{irt} = \beta_1 Wave_{rt} + \beta_2 Policy_r * Wave_{rt} + R'_{rt}\theta + X'_{irt}\lambda + \gamma_r + \tau_t + \epsilon_{irt} \quad (3)$$

$$Attitudes_{irt} = \beta_1 Wave_{rt} + \beta_2 Policy_r * Wave_{rt} + R'_{rt}\theta + X'_{irt}\lambda + \gamma_r + \tau_t * \phi_c + \epsilon_{irt} \quad (4)$$

where, as before, equation (3) uses only treated regions, while specification (4) includes never-treated regions from countries with at least one treated region.

$Policy_r$ is either an indicator variable equal to 1 if there was a refugee camp present in region r at any moment in the event window around a large wave of refugees at that region (and 0 if not or if that region is untreated), or the value of the employment policy index from the DWRAP dataset. The policy variable itself

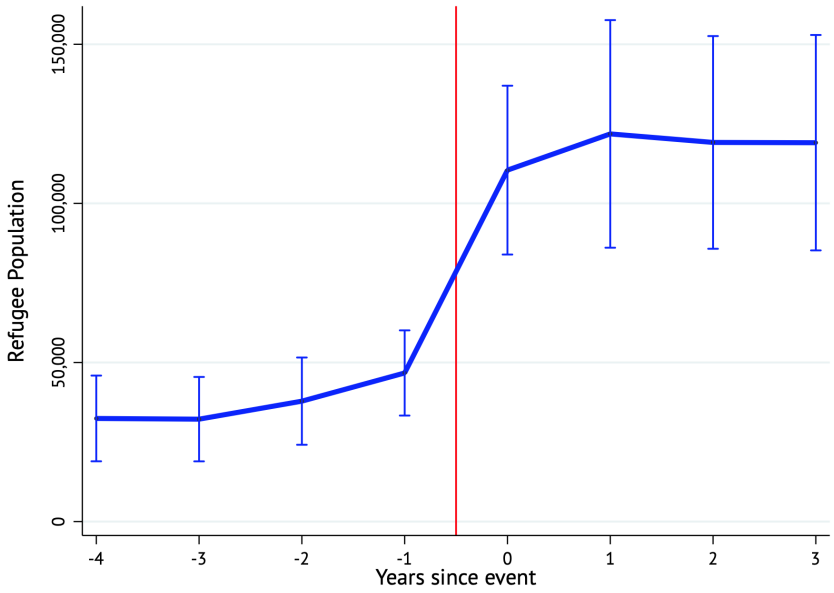
is absorbed by sub-national region fixed effect.

5 Results

5.1 Average Effects

Our main specification and selection criteria yields a sample of 101 region-events, with an event defined as an increase of at least 10,000 refugees in one year, that have at least one year of GWP data in both the four years preceding and following the event. Tables A5 to A8 list basic information about the events in the sample. Table A9 lists basic descriptive statistics of the sample at the region-event level decomposed by the region's refugee population.[28]

Figure 2: Refugee Population Trends



Notes: Coefficients of regressing the inverse hyperbolic sine transformation of refugee population against dummies for years since event, with 95% confidence intervals and using event FE. The sample includes regions with at least one event. An event is defined as a region with an increase of at least 10,000 refugees in a calendar year.

Figure 2 presents the "first stage" of the empirical strategy. It shows the average refugee population by the time relative to the event. It shows the total

[28]For comparison, Table A10 lists the same descriptive statistics for all regions in LMICs in 2018 in countries with at least 5,000 refugees.

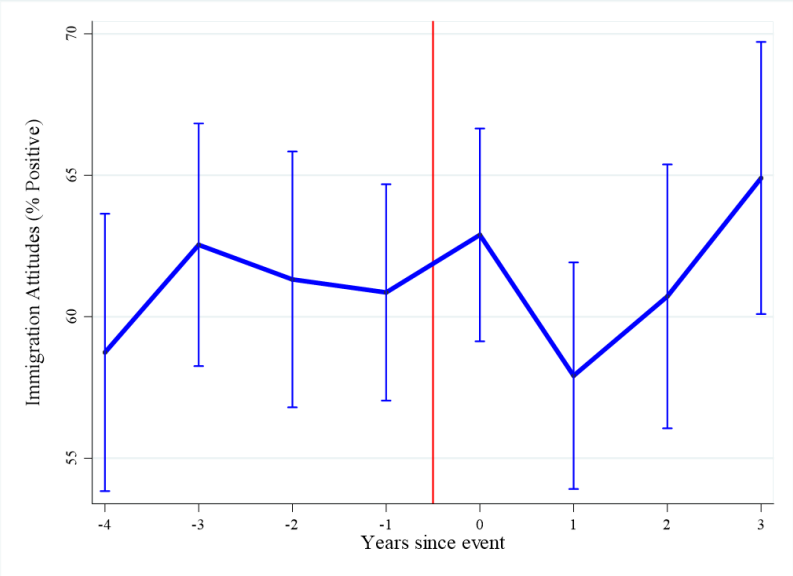
refugee population was increasing in the window preceding the event, then the jump in the year of the event (year 0), and then a slight increase in the year after the event on average.

Figure 3 shows the evolution of attitudes in the same sample (i.e., regions with at least one event in the window around the event) in multiple ways. The top panel shows evolution of attitudes in levels where an event is defined in absolute levels as "10,000 increase or more", and the bottom panel shows trends in attitudes in terms of percentage changes where the event is defined as "100 per cent increase or more" in the number of refugees. Neither figure shows evidence of a trend in average attitudes before the event. None of the four years is statistically different from 0.

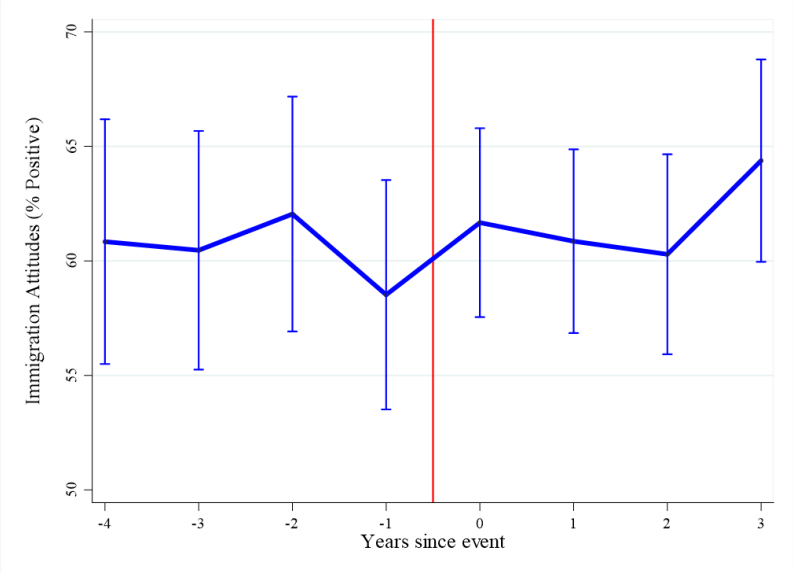
Table 2 provides the regression form of the results. The first three columns, which look only at the regions with events, also reflect the positive effect. Column 1 shows the results only with region-event fixed effects. Column 2 adds controls for region-level characteristics, including the inverse hyperbolic sine of the refugee population and the regional population, and individual-level variables like age, gender, education, and urban or rural location. Column 3 adds year fixed effects to account for trends across these regions. Columns 4 and 5, however, add the regions without events from the sample of 34 countries, in the same year windows. The coefficient on the indicator variable for the post-period is insignificant and very close to 0 in column 4, which adds year fixed effects that control for trends in the full sample of countries, and column 5, which adds country by year fixed effects that control specifically for country-level time effects. Columns 4 and 5 suggest that the small, insignificant before and after change measured in columns 1-3 is also occurring in the regions without events, so the net effect – the difference between the regions with events and without events, controlling for pre-existing differences – is close to 0. The results importantly provide no evidence for negative effects of refugee arrivals over the time horizon we analyze.

Figure 3: Event Study of Attitudes

(a) Absolute levels - 10,000 increase or more



(b) Percentage changes - 100% increase or more



Notes: Both panels plot the main outcome measure on attitudes from Gallup on the vertical axis. The top panel uses our main event definition, an absolute increase of at least 10,000 refugees. The bottom panel instead defines the event as percent change in the refugee population from the previous year. The sample includes regions with at least one event.

An alternative to two-way fixed effects estimators

Two-way fixed effect (TWFE) models are suitable for estimating average treatment effects on the treated in the case of homogeneous and non-dynamic treatment effects. By decomposing the TWFE estimator under various assumptions, however,

Table 2: Refugee Waves and Attitudes Toward Immigrants

VARIABLES	(1) Event FE only	(2) + Controls	(3) + Year FE	(4) + Never treated regions	(5) Country*Year FE
Post-event: ≥ 10,000 increase	0.008	0.014	0.031	-0.005	0.004
	(0.016)	(0.023)	(0.025)	(0.020)	(0.020)
IHS refugee population		-0.001	-0.003	0.006	0.002
		(0.005)	(0.005)	(0.004)	(0.004)
IHS region population		-0.045	0.016	-0.030	-0.004
		(0.209)	(0.266)	(0.128)	(0.176)
Age		0.001	0.001	0.000	0.001
		(0.001)	(0.001)	(0.001)	(0.001)
Age^2		-0.000	-0.000	-0.000	-0.000
		(0.000)	(0.000)	(0.000)	(0.000)
Male		0.016**	0.017**	0.004	0.004
		(0.007)	(0.007)	(0.005)	(0.005)
Completed secondary education		0.021**	0.020**	0.019***	0.017***
		(0.010)	(0.010)	(0.007)	(0.006)
Completed college education		0.060***	0.059***	0.050***	0.048***
		(0.013)	(0.013)	(0.011)	(0.011)
Lives in small town		0.017	0.013	0.044***	0.044***
		(0.015)	(0.014)	(0.011)	(0.010)
Lives in suburb of large city		0.066***	0.067***	0.084***	0.081***
		(0.017)	(0.017)	(0.015)	(0.014)
Lives in large city		0.063***	0.065***	0.069***	0.067***
		(0.016)	(0.016)	(0.011)	(0.011)
Constant	0.605***	1.214	0.297	0.968	0.610
	(0.007)	(3.193)	(4.100)	(1.896)	(2.611)
Observations	71,313	71,313	71,313	216,051	216,051
R-squared	0.092	0.095	0.098	0.130	0.142
Event FE	Yes	Yes	Yes	Yes	Yes
Year FE	No	No	Yes	Yes	No
Country*Year FE	No	No	No	No	Yes
Never treated Regions	No	No	No	Yes	Yes
Dep Var Mean	0.609	0.609	0.609	0.614	0.614
Events	113	113	113	113	113
Years	12	12	12	12	12
Regions	101	101	101	600	600
Countries	35	35	35	35	35

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. The dependent variable is the attitudes towards immigrants question, equal to 1 if the respondent answers yes to the question "is the city or area where you live a good place to live for immigrants from other countries?", 0 for disagreement, and missing for blanks or refusals. Regional controls for the inverse hyperbolic sine transformation of region population and refugee population at the year of the event, and individual controls for age, age squared, sex, educational level and city size were used. The sample includes individual respondents to the Gallup World Poll in region-years (columns 1, 2, and 3) and country-years (columns 4 and 5) who were surveyed within 4 years before or after an event. An event is defined as a region with an increase of at least 10,000 refugees in a calendar year. Results use the Gallup sampling weights and standard errors are clustered at the event level.

a recent literature has shown that the TWFE estimator problematic in the pres-

ence of heterogeneous[29] and dynamic[30] treatment effects (Sun and Abraham 2021; Borusyak et al. 2021; Goodman-Bacon 2021; De Chaisemartin and d'Haultfoeuille 2020; Callaway and Sant'Anna 2021).

We examine the validity of the pre-trends assumption and the properties of our TWFE regressions as the impact of refugee inflow is likely to vary across sub-national regions and over time in Figure A1. In line with the result presented in Figure 3, none of the results reported in all panels of Figure A1 provide evidence of pre-trends.

Refugee waves and attitudes toward immigrants

Table 3 replicates the specification from columns 3 and 5 in Table 2 for different definitions of events. Columns 1 and 2 lower the cutoff to 5,000 refugees in one year, while columns 3 and 4 raises the cutoff to 50,000 refugees per year. Columns 5 and 6 define the event as an increase of at least 100%, representing an absolute change of at least 5,000 refugees in the year, and set the population to 10 in region-years before the event with zero refugees in order for the percentage to be defined. The results are mostly consistent with the results in Table 2, with region-only samples showing positive, insignificant coefficients at multiple cutoffs and the all-region samples showing effects close to 0, except for column 4. Columns 3 and 4 together suggest large waves (more than 50,000 refugees) led to more positive attitudes in the receiving region (column 3), but grew by 4.5 percentage points less on average than the other regions that did not receive the largest wave within the country. This is likely due to the binary nature of the event definition, as other

[29] In the case of heterogeneous treatment effects, the problem arises because the estimated $\hat{\beta}_{TWFE}$ is a weighted average of group time-level average treatment effects, where the weights are unequal over groups and time, and may be negative. In a general design, weights are more likely to be negative for periods in which many groups are treated and to groups treated for many periods (De Chaisemartin and d'Haultfoeuille 2020). In a staggered adoption design (a setting where units can move into, but not out, of a binary treatment with heterogeneous timing between groups), this implies that weights on later time periods are more probable to be negative (Borusyak et al. 2021).

[30] When considering a setting with two time periods and one treatment (treatment status changes by one unit) and one control group (treatment status is unchanged), the possibility of dynamic effects requires one to account for the prior path of treatment and control group. Intuitively, a TWFE difference in differences regression does not control for past treatment history, and is thus not robust to dynamic effects. Similarly, Sun and Abraham (2021) show that the pre- and post-event effect estimates in the canonical event study setting may mix, leading to incorrect estimates of pre-event trends, as well as the instantaneous and dynamic effect of treatment.

regions in these countries likely also increased their refugee populations at the same time, but by less than the 50,000 cutoff; we are exploring this and other hypotheses. We use the absolute increase of 10,000 refugees as the main event definition to balance the sample size, in terms of number of region-events and countries, and the potential magnitude of the effects.

Table 3: Varying the Definition of an Event

	(1)	(2)	(3)	(4)	(5)	(6)
	Attitudes	Attitudes	Attitudes	Attitudes	Attitudes	Attitudes
VARIABLES	Event Regions	All Regions	Event Regions	All Regions	Event Regions	All Regions
Post-event: $\geq$ 5,000 increase	0.015	-0.033*				
	(0.022)	(0.018)				
Post-event: $\geq$ 50,000 increase			0.080**	0.029		
			(0.039)	(0.044)		
Post-event: $\geq$ 100% increase					0.051*	-0.017
					(0.030)	(0.025)
IHS refugee population	-0.002	0.002	-0.002	0.006	-0.011**	-0.002
	(0.004)	(0.004)	(0.008)	(0.008)	(0.005)	(0.005)
IHS region population	0.090	0.063	-0.830**	-0.630**	-0.028	0.096
	(0.175)	(0.117)	(0.375)	(0.246)	(0.203)	(0.139)
Observations	90,496	268,390	28,540	87,366	60,654	195,809
R-squared	0.102	0.133	0.099	0.163	0.102	0.147
Event FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	No	Yes	Yes
Country*Year FE	No	Yes	No	Yes	No	No
Never treated Regions	No	Yes	No	Yes	No	No
Dep Var Mean	0.611	0.611	0.597	0.596	0.612	0.618
Events	150	150	37	37	108	108
Years	12	12	12	12	12	12
Regions	132	697	34	232	104	529
Countries	41	41	18	18	35	35

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. The dependent variable is the attitudes towards immigrants question, equal to 1 if the respondent answers yes to the question "is the city or area where you live a good place to live for immigrants from other countries?", 0 for disagreement, and missing for blanks or refusals. Regional controls for the inverse hyperbolic sine transformation of region population and refugee population at the year of the event, and individual controls for age, age squared, sex, educational level and city size were used. The sample includes individual respondents to the Gallup World Poll in region-years (columns 1, 3, and 5) and country-years (columns 2 and 6) who were surveyed within 4 years before or after an event. An event is defined as a region with an increase of at least 5,000 refugees (row 1), 10,000 refugees (row 2) or 50,000 refugees (row 3) in a calendar year. Results use the Gallup sampling weights and standard errors are clustered at the event level.

Table 4: Refugee Waves on Other Outcomes

VARIABLES	(1) IHS Income Event Regions	(2) IHS Income All Regions	(3) Divers Index Event Regions	(4) Divers Index All Regions	(5) Satisfaction Event Regions	(6) Satisfaction All Regions
Post-event: $\geq$ 10,000 increase	-0.063	-0.044	3.106	0.955	0.010	-0.009
	(0.103)	(0.064)	(2.249)	(1.708)	(0.021)	(0.016)
IHS refugee population	-0.005	-0.003	-0.365	0.156	-0.001	-0.000
	(0.019)	(0.012)	(0.302)	(0.324)	(0.005)	(0.004)
IHS region population	-0.166	0.318	4.006	14.189	-0.076	-0.089
	(0.901)	(0.638)	(18.036)	(11.865)	(0.220)	(0.137)
Age	0.012***	0.013***	-0.043	0.056	0.001	-0.001**
	(0.004)	(0.003)	(0.081)	(0.047)	(0.001)	(0.001)
Age^2	-0.000**	-0.000***	0.001	-0.001	0.000	0.000***
	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)
Male	0.109***	0.187***	0.746	0.733**	-0.015**	-0.009**
	(0.023)	(0.017)	(0.455)	(0.332)	(0.007)	(0.004)
Completed secondary education	0.462***	0.509***	1.445**	1.802***	-0.001	-0.007
	(0.026)	(0.021)	(0.644)	(0.438)	(0.009)	(0.007)
Completed college education	0.954***	1.032***	5.318***	6.002***	-0.011	-0.021**
	(0.045)	(0.047)	(1.053)	(0.865)	(0.016)	(0.011)
Lives in small town	0.053	0.162***	0.735	3.200***	0.007	0.019**
	(0.056)	(0.030)	(1.076)	(0.774)	(0.014)	(0.008)
Lives in suburb of large city	0.121*	0.281***	4.189***	5.045***	-0.007	0.007
	(0.068)	(0.042)	(1.207)	(1.023)	(0.020)	(0.014)
Lives in large city	0.271***	0.357***	3.515***	4.749***	0.012	0.028***
	(0.065)	(0.032)	(1.246)	(0.847)	(0.018)	(0.010)
Constant	9.619	1.917	-14.012	-168.128	1.820	2.006
	(13.964)	(9.561)	(278.139)	(177.102)	(3.408)	(2.035)
Observations	68,008	228,701	53,375	191,628	70,764	230,140
R-squared	0.420	0.372	0.146	0.208	0.075	0.108
Event FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	No	Yes	No
Country*Year FE	No	Yes	No	Yes	No	Yes
Never treated Regions	No	Yes	No	Yes	No	Yes
Dep Var Mean	7.690	7.449	47.72	49.17	0.686	0.695
Events	110	110	107	107	113	113
Years	10	10	12	12	12	12
Regions	98	584	96	561	101	601
Countries	34	34	33	33	35	35

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. The dependent variables are the inverse hyperbolic transformation of per capita annual household income in international dollars (columns 1 and 2), diversity index (columns 3 and 4), and a satisfaction question (columns 5 and 6), equal to 1 if the respondant is satisfied with the city or area where he lives, 0 if not, and blank or missing otherwise. Regional controls for the inverse hyperbolic sine transformation of region population and refugee population at the year of the event, and individual controls for age, age squared, sex, educational level and city size were used. The sample includes individual respondents to the Gallup World Poll in region-years (columns 1, 3, and 5) and country-years (columns 2, 4 and 6) who were surveyed within 4 years before or after an event. An event is defined as a region with an increase of at least 10,000 refugees in a calendar year. Results use the Gallup sampling weights and standard errors are clustered at the event level.

Refugee waves and other outcomes

Table 4 looks at three additional GWP outcomes using the same specifications and the main definition of an event. Columns 1 and 2 examine individual-level responses to per capita annual income in international dollars. After transforming using the inverse hyperbolic sine, we find insignificant coefficients in both specifica-

tions. In columns 3 and 4, we examine Gallup's Diversity Index, which was designed to measure attitudes towards people from different racial, ethnic, or cultural groups. Consistent with Table 2, we find positive but insignificant effects using the event-regions-only specification, which flip to negative and still statistically insignificant when adding regions without an event. Columns 5 and 6 examine responses to the question "are you satisfied or dissatisfied with the city or area where you live?", a companion question to our main measure on immigrants. Again neither specification is statistically significant.

5.2 Heterogeneity by Employment Policies and Camps

The section above argues that there is little effect on attitudes towards immigrants in the periods immediately following a large wave of refugees on average across affected regions in LMICs with available data. This averages across significant variations in hosting policies, which we hypothesize could affect social cohesion and other outcomes for host communities.

We next decompose the average effects by variations in the policy index and the presence of camps. Instead of looking at changes within regions, this exercise involves comparing effects across different hosting situations. Policies are not randomly assigned and could be endogenous to attitudes in the host region; the estimates can be interpreted as causal under the assumption that attitudes would have evolved similarly if policies had been the same.[31]

In order to gauge the similarities across regions, Table 5 looks at a set of observable characterics compiled from many of the sources listed in Section 4, including GWP, UNHCR, DWRAP, and AidData.[32] Regions may still differ on a number of unobservables, but the observables provide a starting point to assess

[31]In the DWRAP dataset, out of 113 events, we identified 30 cases where there were changes in employment policy towards refugees in the event window. For events with a single change, 9 of them registered a "positive" change and 5 of them a "negative" one. There are 16 events (15 from Turkey and 1 from Rwanda) that experience both a positive and a negative change in their event window. Our main results are robust to dropping these events.

[32]For comparison, Table A11 lists the same descriptive statistics for all regions in LMICs in 2018 in countries with at least 5,000 refugees.

Table 5: Summary Statistics by Employment Policies and Camp Presence

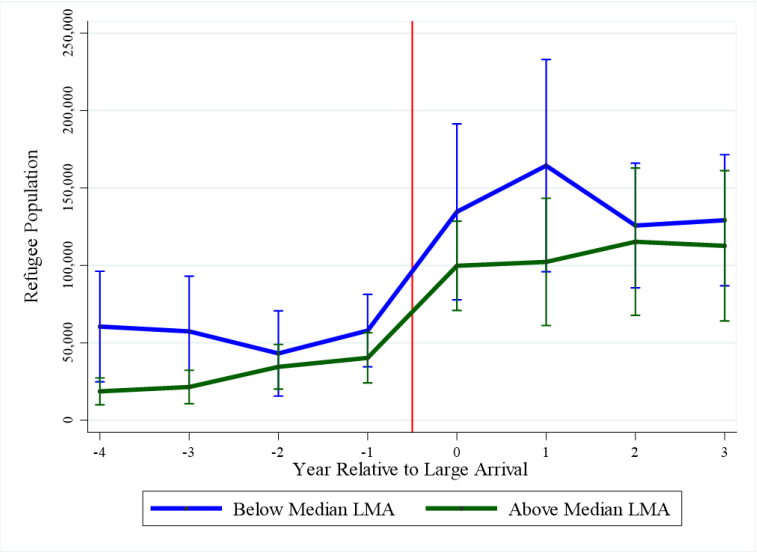
	Camp presence			Median Index		
	No	Yes	Difference	Below	Above	Difference
Good Place for Immigrants (Main Outcome)	0.614	0.608	-0.006	0.602	0.629	0.027
	(0.180)	(0.228)	(0.903)	(0.210)	(0.183)	(0.559)
Refugee population	94,344	101,401	7,056	99,825	92,845	-6,980
	(109,769.017)	(130,601.280)	(0.797)	(101,545.086)	(146,151.220)	(0.820)
Total Population	4,840,615	3,393,306	-1,447,310	3,357,098	5,839,565	2,482,467
	(7,352,056.533)	(5,010,991.585)	(0.296)	(4,487,745.424)	(8,959,934.481)	(0.177)
GDP per capita (USD PPP)	8,891	3,407	-5,485	6,651	6,276	-375
	(5,573.259)	(4,858.658)	(0.000)	(5,200.356)	(7,173.631)	(0.808)
Elementary education (%)	38.4	57.4	19.0	44.8	49.5	4.8
	(18.658)	(24.189)	(0.000)	(20.553)	(27.078)	(0.423)
More than elementary education (%)	61.6	42.6	-19.0	55.2	50.5	-4.8
	(18.658)	(24.189)	(0.000)	(20.553)	(27.078)	(0.423)
Rural (%)	12.3	37.9	25.6	23.6	22.4	-1.2
	(23.037)	(35.782)	(0.001)	(34.799)	(25.416)	(0.863)
Small town (%)	27.9	34.2	6.4	30.1	31.5	1.4
	(27.690)	(31.610)	(0.359)	(29.950)	(28.860)	(0.836)
Suburbs or large city (%)	59.8	27.9	-32.0	46.4	46.1	-0.3
	(32.926)	(34.962)	(0.000)	(35.998)	(39.795)	(0.978)
Minimum distance to border (km)	16	9	-7	13	12	-2
	(43.180)	(26.389)	(0.345)	(32.135)	(45.091)	(0.843)
Travel time to a major city	175	192	17	173	200	27
	(349.218)	(149.347)	(0.765)	(275.153)	(291.992)	(0.689)
Population density	1,103	173	-930	710	684	-26
	(3,425.058)	(395.252)	(0.074)	(3,089.883)	(1,413.398)	(0.959)
Camp presence (%)	0.0	100.0	100.0	45.3	37.9	-7.4
	(0.000)	(0.000)		(50.253)	(49.380)	(0.524)
Employment index	0.3	0.2	-0.1	0.2	0.4	0.2
	(0.265)	(0.066)	(0.004)	(0.056)	(0.298)	(0.000)
Polity index	1.8	1.3	-0.5	0.5	3.5	3.0
	(4.805)	(4.345)	(0.631)	(4.227)	(4.702)	(0.007)
N	47	35	82	53	29	82

Notes: Observations are at the region-event level. The sample consists of the events in the the main specifications for waves of at least 10,000 refugees in a year. Time-varying variables are reported at the year of the event. The first variable is the main dependent variable from GWP in specifications like Table 2, equal to 1 if the respondent answers yes to the question "is the city or area where you live a good place to live for immigrants from other countries?", 0 for disagreement. "Refugee population" is the region-level refugee population described in Section 4.1. "Total population" is the region-level population figure based on the UN Gridded Population Data of the World, version 4. GDP per capita comes from the GWP. Minimum distance to the border, travel time to a major city, and population density are provided by AidData and spatially merged to the boundaries in GWP. "Camp presence" is the percentage of region-events with camps, with the data described in Section 4. The Employment index corresponds to *de jure* policies for labor market access from the DWRAP data and supplemented by the authors. It is scaled from 0 to 1, with 1 representing no legal barriers to employment. The polity index is the polity2 scores from the Polity Project, scaled from -10 to 10, with 10 representing democracy and -10 representing autocracy.

the necessary assumption and comparability. Encouragingly, the levels of the main outcome on attitudes from GWP is similar across regions with and without camps, and in regions above and below the median of the employment index within the

sample of events.[33] However, the regions predictably differ on other dimensions; regions with camps have larger refugee populations and are more rural, with lower GDP per capita and population density. Similarly, regions below the median policy index have larger refugee populations and higher GDP per capita, but otherwise look fairly similar on observables.

Figure 4: Refugee Population Trends - Heterogeneity by *de jure* Policies



Notes: This figure plots mean sub-national refugee population level for four pre-event and the four post-event years, for sub-national regions above and below the median value of the policy index , with 95% confidence intervals. The sample includes regions with at least one event. An event is defined as a region with an increase of at least 10,000 refugees in a calendar year.

We next compare the evolution of the refugee population totals over time by policies. Figure 4 plots mean refugee population levels for four pre-event and four post-event years, for sub-national regions above and below the median value of the policy index.[34] The sample includes regions with events. The blue line represents the trends in below-median regions, and the green line represents the trends in the regions with above median policy. Figure 4 shows no evidence of a pre-trend in the areas with below-median policy, and then a significant jump as expected in the year of the event, with no statistically distinguishable trends in the three years after the event.

[33]For time-varying outcomes like attitudes, the table uses the year of the event.

[34]The index is calculated across all country-years in the sample, but the median is taken within the sample of events used in the specification. If policies changed during the relevant window, the values at the end of the time period are used.

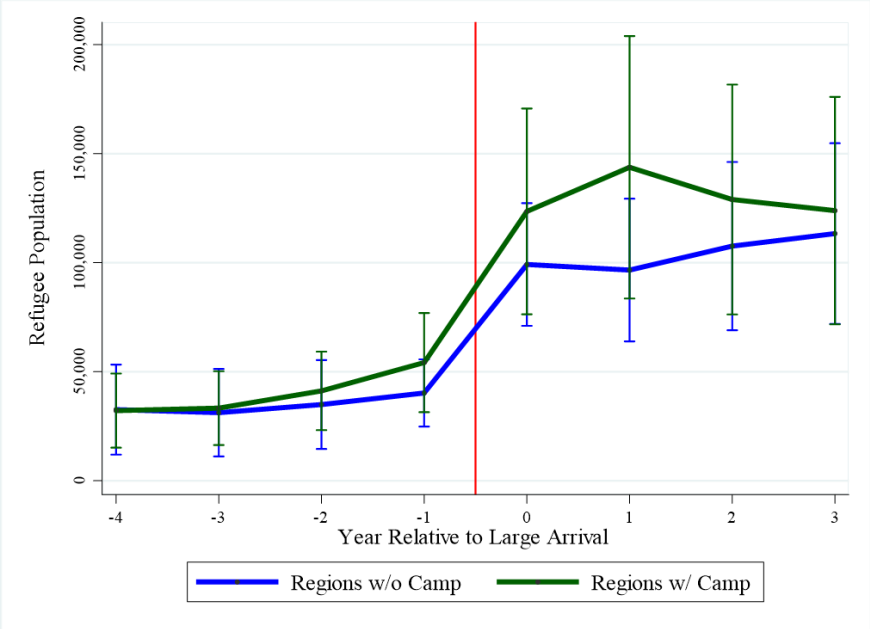
Figure 5 plots the mean refugee population levels for four pre-event and four post-event years, for sub-national regions with and without camps.[35] It shows that refugee populations in regions without camps (the blue line) and regions that will get camps in the window (the green line) before the event, followed by the expected jump at the time of the event. The increases in regions with camps is slightly larger than regions without camps in the two years after the event, though not statistically different. Overall, regions with and without camps were roughly on similar population trends both before and after the events.

Figure 6 plots the evolution of attitudes by the *de jure* policy environment, again in levels, within the sample of regions with events only. Neither the blue line (regions with below median labor market access) or the green line (regions with above median policies) show no significant pre-trends. Overall, the patterns indicate similar pre-trends, which provide suggestive evidence for the identifying assumption. It furthermore shows no evidence that attitudes in regions with above median policy evolve differently than regions with below median policy.

Table 6 shows the regressions, combining post-event time periods into a single indicator. Column 1 shows the specification with only event regions and region-event and year fixed effects, analogous to the average specification in Table 2, Column 3. It reflects the positive but insignificant coefficient on attitudes after the event and finds no statistical difference in the interaction, which represents the difference in the above-median regions from the below-median regions. Column 2 of Table 6 adds the regions without events, analogous to Table 2 Column 5, with region-event and country-year fixed effects. These specifications, as in the Table 2 regressions, show no evidence of a main effect, but also no effect of a differential effect in above-median regions. Column 3 looks at one of the secondary outcomes, the inverse hyperbolic sine of per capita income. Columns 4 through 6 examine the same specifications and change the definition of an event to an increase in 5,000 refugees in a calendar year. The columns are consistent and suggest a preliminary main finding that attitudes and incomes in regions with more inclusive *de jure* policy evolve similarly in regions

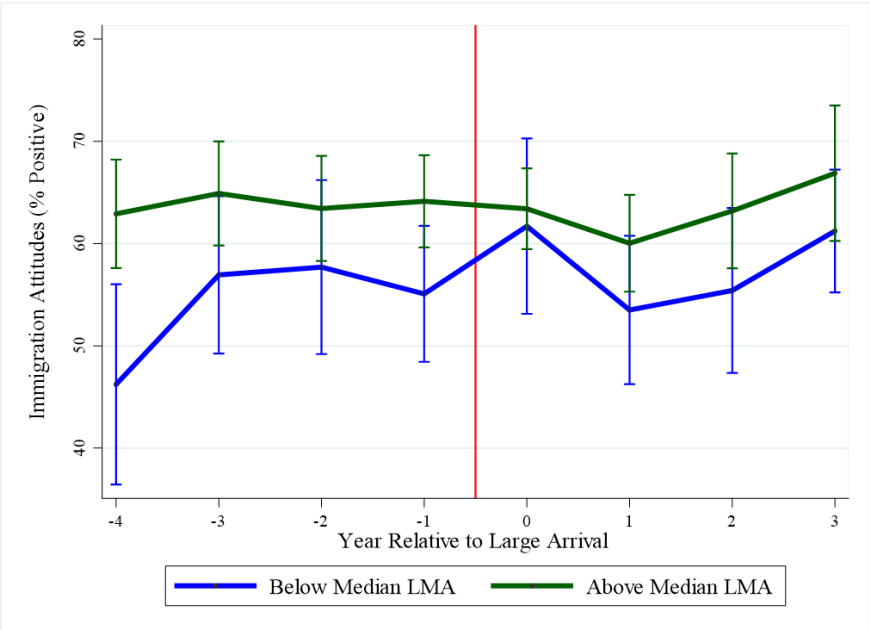
[35]Regions are assigned a 1 if there is a camp in the region at any point in the sample window.

Figure 5: Refugee Population Trends - Heterogeneity by Presence of Camps



Notes: Means of regional refugee population level for four pre-event and the four post-event years, for regions with and without refugee camps, with 95% confidence intervals. The sample includes regions with at least one event. An event is defined as a region with an increase of at least 10,000 refugees in a calendar year.

Figure 6: Attitudes - Heterogeneity by Labor Market Policy



Notes: Mean value of the attitudes towards immigrants variable (expressed as percentages) for four pre-event and the four post-event years, for regions above and below the median value of the policy index , with 95% confidence intervals. The sample includes regions with at least one event. An event is defined as a region with an increase of at least 10,000 refugees in a calendar year.

with less inclusive policies.

Table 6: Heterogeneity on Attitudes Response by *de jure* Policies

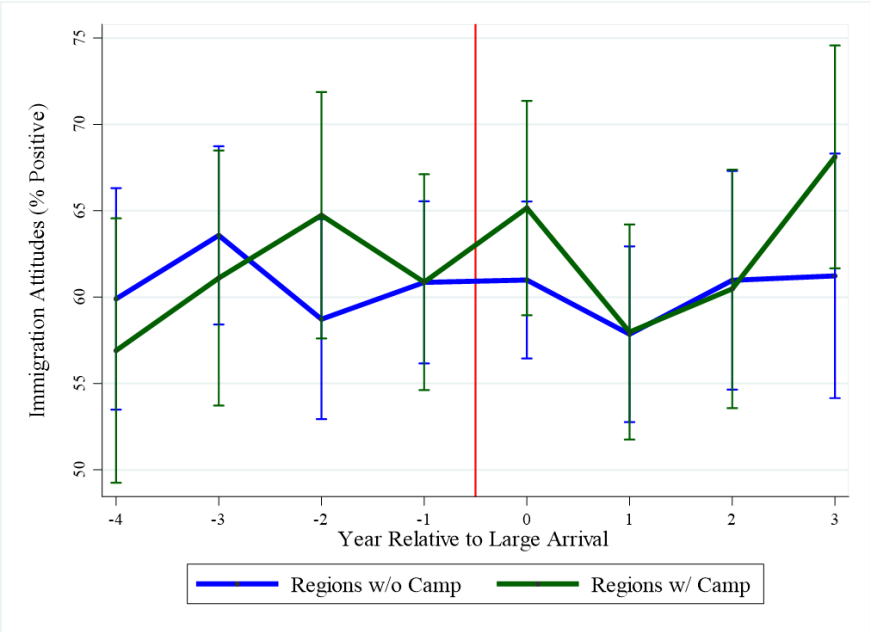
VARIABLES	(1) Attitudes Event Regions	(2) Attitudes All Regions	(3) IHS Income All Regions	(4) Attitudes Event Regions	(5) Attitudes All Regions	(6) IHS Income All Regions
Post-event: ≥ 10,000 increase	0.035	0.005	-0.072			
	(0.030)	(0.031)	(0.093)			
Post-event: ≥ 10,000 increase* Median Policy	-0.035	-0.002	0.009			
	(0.036)	(0.037)	(0.129)			
Post-event: ≥ 5,000 increase				0.021	-0.030	-0.074
				(0.025)	(0.026)	(0.073)
Post-event: ≥ 5,000 increase* Median Policy				-0.041	-0.020	-0.093
				(0.031)	(0.034)	(0.117)
IHS refugee population	-0.002	0.000	-0.003	-0.001	0.002	0.002
	(0.005)	(0.005)	(0.014)	(0.005)	(0.004)	(0.012)
IHS region population	0.053	0.001	0.485	0.130	0.077	0.294
	(0.279)	(0.185)	(0.716)	(0.180)	(0.120)	(0.322)
Observations	67,391	186,505	188,663	86,217	238,487	258,194
R-squared	0.092	0.129	0.368	0.100	0.122	0.382
Event FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	No	Yes	No	No
Country*Year FE	No	Yes	Yes	No	Yes	Yes
Never treated Regions	No	Yes	Yes	No	Yes	Yes
Dep Var Mean	0.620	0.631	7.357	0.619	0.624	7.283
Events	106	106	102	143	143	141
Years	12	12	10	12	12	10
Regions	97	547	531	128	644	628
Countries	33	33	32	39	39	38

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. The dependent variables are the attitudes towards immigrants question (columns 1, 2, 4 and 5), equal to 1 if the respondent answers yes to the question "is the city or area where you live a good place to live for immigrants from other countries?", 0 for disagreement, and missing for blanks or refusals, and inverse hyperbolic transformation of per capita annual household income in international dollars (columns 3 and 5). Regional controls for the inverse hyperbolic sine transformation of region population and refugee population at the year of the event, and individual controls for age, age squared, sex, educational level and city size were used. The sample includes individual respondents to the Gallup World Poll in region-years (columns 1 and 4) and country-years (columns 2, 3, 5 and 6) who were surveyed within 4 years before or after an event. An event is defined as a region with an increase of at least 10,000 refugees (rows 1 and 2) or 5,000 refugees (rows 3 and 4) in a calendar year. Results use the Gallup sampling weights and standard errors are clustered at the event level.

Figure 7 and Table 7 show heterogeneity on attitudes by the existence of camps. Figure 7 again shows the average attitudes in blue, with nearly flat pre-trends. The green line shows the attitudes in regions with camps with similar levels and lack of pre-trends. After the event, attitudes evolve similarly in regions with and without camps. This result is mirrored in Table 7, where the insignificant average positive effect again manifests in Columns 1 and 4 (for events of 10,000 and 5,000 refugee increases, respectively) with no statistically significant differential effect between regions with and without camps. Including less-affected regions and examining

income as the outcome variable (Columns 2, 3, 5, and 6) similarly provides little evidence that regions with camps see attitudes evolve differently than attitudes without camps.

Figure 7: Attitudes - Heterogeneity by Presence of Camp



Notes: Mean value of the attitudes towards immigrants variable (expressed as percentages) for four pre-event and the four post-event years, for regions with and without refugee camps, with 95% confidence intervals. The sample includes regions with at least one event. An event is defined as a region with an increase of at least 10,000 refugees in a calendar year.

5.3 Robustness Checks, Discussion and Next Steps

We also conducted additional robustness checks, including (i) excluding Turkey; (ii) using only first event (i.e. first refugee inflow as an event); (iii) using only regions with few refugees in 2005; (iv) using only first event for regions with few refugees in 2005; and (v) defining events in terms of per capita increases in refugee population (reported in Appendix A13). Our results are robust to these checks and are available upon request.

It is important to emphasize that null results, like the ones presented often in this paper, are not equivalent to a finding of "no effect". However, the confidence

Table 7: Heterogeneity on Attitudes Response by Refugee Camp Presence

VARIABLES	(1) Attitudes Event Regions	(2) Attitudes All Regions	(3) IHS income All Regions	(4) Attitudes Event Regions	(5) Attitudes All Regions	(6) IHS Income All Regions
Post-event: $\geq$ 10,000 increase	0.039	-0.010	-0.006			
	(0.031)	(0.025)	(0.058)			
Post-event: $\geq$ 10,000 increase*Camp	-0.015	0.028	-0.074			
	(0.032)	(0.033)	(0.092)			
Post-event: $\geq$ 5,000 increase				0.006	-0.057**	-0.069
				(0.028)	(0.023)	(0.054)
Post-event: $\geq$ 5,000 increase*Camp				0.019	0.050*	-0.040
				(0.028)	(0.030)	(0.088)
IHS refugee population	-0.003	0.002	-0.003	-0.002	0.002	0.002
	(0.005)	(0.004)	(0.012)	(0.004)	(0.004)	(0.011)
IHS region population	0.022	-0.002	0.323	0.089	0.073	0.215
	(0.265)	(0.177)	(0.639)	(0.178)	(0.119)	(0.308)
Observations	71,313	216,051	228,701	90,496	268,390	300,547
R-squared	0.098	0.142	0.372	0.102	0.133	0.386
Event FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	Yes	No	No
Country*Year FE	No	Yes	No	No	Yes	Yes
Never treated Regions	No	Yes	No	No	Yes	Yes
Dep Var Mean	0.609	0.614	7.449	0.611	0.611	7.363
Events	113	113	110	150	150	147
Years	12	12	10	12	12	10
Regions	101	600	584	132	697	680
Countries	35	35	34	41	41	40

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. The dependent variables are the attitudes towards immigrants question (columns 1, 2, 4 and 5), equal to 1 if the respondent answers yes to the question "is the city or area where you live a good place to live for immigrants from other countries?", 0 for disagreement, and missing for blanks or refusals, and inverse hyperbolic transformation of per capita annual household income in international dollars (columns 3 and 5). Regional controls for the inverse hyperbolic sine transformation of region population and refugee population at the year of the event, and individual controls for age, age squared, sex, educational level and city size were used. The sample includes individual respondents to the Gallup World Poll in region-years (columns 1 and 4) and country-years (columns 2, 3, 5 and 6) who were surveyed within 4 years before or after an event. An event is defined as a region with an increase of at least 10,000 refugees (rows 1 and 2) or 5,000 refugees (rows 3 and 4) in a calendar year. Results use the Gallup sampling weights and standard errors are clustered at the event level.

intervals on our estimates are reasonably precise and do allow for the refutation of some important possible effect sizes.

One reason for the null results, and potential for bias overall, is the measurement of our main dependent variable.[36] First, the Gallup World Poll survey question asks about immigrants instead of refugees, and those attitudes likely differ in some cases. However, in the large events we study in heavily impacted regions, refugees are likely to be a large share of the immigrant population and potentially the main

[36]The measures of other variables could also attenuate our results. The region-level data on populations also likely contains measurement error, which could generate events in the data that do not correspond to the setting. We are working to verify these data and the events under study.

association with a survey question on "immigrants".[37]

Furthermore, while the responses correlate strongly with mutliple dimensions of attitudes toward immigrants, the literal interpretation of the question could yield a different interpretation of our results. Respondents answering whether it is a good area *for immigrants* could explain, for example, column 1 of Table A1; places that have more rights for immigrants are likely better places for them to live, all else equal. However, this would not explain columns 3 and 5 of this table showing the same relationship using more precise measures on attitudes. Overall, we believe the measure, although imperfect, would be able to detect substantial shifts in attitudes based on the evidence presented in Section 4.1.

These results are preliminary and further work could amend these findings. We are exploring additional specifications that may provide better identification, for instance defining events across multiple years (instead of choosing the largest event) and evaluating spillovers explicitly at the country level and in neighboring regions to events. We are also working on a number of robustness checks, including to survey timing, weighting, aggregation, other outcomes, clustering of standard errors, outliers, and imputation methods, as well as more summary statistics to better describe the data.

6 Policy and Program Implications

The mass arrival of refugees has been a major concern for a set of low- and middle-income countries. In this paper, we conduct an analysis of the impact of large-scale refugee arrivals on attitudes in these settings and discuss the role of policies on social cohesion and other outcomes for the host communities. Our preliminary findings are two fold: (i) on average across all regions with large, sudden flows, we find statistically insignificant effects on attitudes, but precise enough to rule out most

[37] At the country-level, refugees make up 32% of the immigrants in the countries in our main specification in 2010, when country-level data on immigrant populations is available (United Nations 2019). This share will be substantially higher in the specific years and regions we study.

negative responses; (ii) across different hosting situations, we do not find differences between regions with more or less restrictive labor market policies and regions with and without a camp. We additionally find similar minimal differences on income across policy regimes. Overall, while restrictive policies are often justified to benefit the host communities, we find little evidence to support the argument.

Combined with complementary research that demonstrates the harm exclusionary policies have on refugees and hosts, our study adds further evidence that integration of refugees is likely positive-sum in most settings.[38] Couttenier et al. (2019), for instance, show that offering labor market access to asylum seekers and fostering social integration is able to mitigate the detrimental effect of past conflict exposure on criminality. Granting certainty about longer-term legal status, secure living conditions and access to economic opportunities also offers incentives for the displaced to make human capital investmemts (Schuettler 2021).

Our findings also suggest a middle ground in debates over camps, which are restrictive in some settings but not all. The positive and negative effects of concentration on the host communities appear to balance on average. Instead, the design of the camps or settlements, including resources provided to refugees and shared with host communities, is likely key to determining the aggregate benefits.[39]

[38] See Clemens et al. (2018) for an overview and Bahar et al. (2021) for a recent example.
[39] See Y. Zhou et al. (2021) and Ginn (2021) for discussions and other references.

References

Aiyar, Shekhar, Barkbu Bergljot, Batini Nicoletta, Berger Helge, Detragiache Enrica, Dizioli Allan, Ebeke Christian, Lin Huidan, Kaltani Linda, Sosa Sebastian, Spilimbergo Antonio, and Topalova Petia (2016), "The Refugee Surge in Europe: Economic Challenges", *IMF Staff Discussion Note* (16(2)).

Ajzenman, Nicolas, Cevat Giray Aksoy, and Sergei Guriev (2020), "Exposure to transit migration, public attitudes and entrepreneurship", *CEPR Discussion Paper No. DP14605*.

Alan, Sule, Ceren Baysan, Mert Gumren, and Elif Kubilay (2021), "Building Social Cohesion in Ethnically Mixed Schools: An Intervention on Perspective Taking", *Quarterly Journal of Economics* (Forthcoming).

Allen, William, Isabel Ruiz, and Carlos Vargas-Silva (2021), "Policy Preferences in Response to Large Migration Inflow", *Working Paper*.

Alrababa'h, Ala', Andrea Dillon, Scott Williamson, Jens Hainmueller, Dominik Hangartner, and Jeremy Weinstein (2021), "Attitudes toward migrants in a highly impacted economy: Evidence from the Syrian refugee crisis in Jordan", *Comparative Political Studies* 54 (1), pp. 33–76.

Anderson, Michael L. (2008), "Multiple Inference and Gender Differences in the Effects of Early Intervention: A Reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects", *Journal of the American statistical Association* (484: 1481-1495).

Asher, Sam, Tobias Lunt, Ryu Matsuura, and Paul Novosad (2021), *Development Research at High Geographic Resolution: An Analysis of Night Lights, Firms, and Poverty in India Using the SHRUG Open Data Platform*, tech. rep.

Bahar, Dany, Ana Marıa Ibáñez, and Sandra V Rozo (2021), "Give me your tired and your poor: Impact of a large-scale amnesty program for undocumented refugees", *Journal of Development Economics* 151, p. 102652.

Bank, World (2020), *Total population by country, 1960-2019*, World Development Indicators, World Bank.

Bank, World (2021), *Country Classifications by Income: FY 2021-2022*, World Development Indicators, World Bank.

Bansak, Kirk, Jens Hainmueller, and Dominik Hangartner (2016), "How Economic, Humanitarian, and Religious Concerns Shape European Attitudes toward Asylum Seekers", *Science* (354(6309), 217-222).

BenYishay, Ariel, Renee Rotberg, Jessica Wells, Zhonghui Lv, Seth Goodman, Lidia Kovacevic, and Dan Runfola (2017), *Geocoding Afrobarometer Rounds 1-6: Methodology Data Quality. AidData. Available online at: http://docs.aiddata.org/ad4/pdfs/geocodingafrobarometer.pdf*.

Betts, Alexander, Maria Flinder Stierna, Naohiko Omata, and Olivier Sterck (2021), "Social Cohesion and Refugee-Host Interactions: Evidence from East Africa", *Working Paper*.

Blair, Christopher, Guy Grossman, and Jeremy Weinstein (2021a), "Forced Displacement and Asylum Policy in the Developing World", *IPL Working Paper Series*.

Blair, Christopher, Guy Grossman, and Jeremy Weinstein (2021b), "Liberal Displacement Policies Attract Forced Migrants in the Global South", *American Political Science Review*, pp. 1–8.

Borusyak, Kirill, Xavier Jaravel, and Jann Spiess (2021), "Revisiting event study designs: Robust and efficient estimation", *arXiv preprint arXiv:2108.12419*.

Callaway, Brantly and Pedro HC Sant'Anna (2021), "Difference-in-differences with multiple time periods", *Journal of Econometrics* 225 (2), pp. 200–230.

Clemens, Michael, Cindy Huang, Jimmy Graham, et al. (2018), "The economic and fiscal effects of granting refugees formal labor market access", *Center for Global Development Working Paper* 496.

Couttenier, Mathieu, Veronica Petrencu, Dominic Rohner, and Mathias Thoenig (2019), "The Violent Legacy of Victimization: Post-conflict Evidence on Asylum Seekers, Crimes and Public Policy in Switzerland", *American Economic Review* (109(12):4378-4425).

Data, Afrobarometer (2019), "All Countries, Rounds 6 and 7, 2015 and 2018", *available at: http://www.afrobarometer.org*.

Data, Arab Barometer (2020), "All Countries, Rounds 4 and 5, 2017 and 2019", *available at: https://arabbarometer.org*.

Data, Asian Barometer (2017), "All Countries,Rounds 3 and 4, 2012 and 2016", *available at: https://asianbarometer.org*.

Data, Eurobarometer (2020), "All Countries, Rounds 63-91, 2005-2019", *available at: https://europa.eu/eurobarometer*.

Data, European Election Study (2020), "All Countries, Rounds 6, 7 and 8, 2009, 2014 and 2019", *available at: http://europeanelectionstudies.net*.

Data, European Social Survey (2020), "All Countries, Rounds 3-9, 2006-2020", *available at: https://www.europeansocialsurvey.org*.

Data, International Social Survey Programme (2016), "All Countries, Round 3, 2012-2015", *available at: http://w.issp.org*.

Data, Latinobarometer (2019), "All Countries, Rounds 10-21, 2005-2011 and 2015-2018", *available at: https://www.latinobarometro.org*.

Data, Pew Global Attitudes (2019), "All Countries, Rounds 5-7 and 14-18, 2005-2007 and 2014-2018", *available at: https://www.pewresearch.org/global/database*.

Data, Transatlantic Trends Survey (2014), "All Countries, Rounds 6-11, 2008-2013", *available at: https://www.gmfus.org*.

Data, World Bank Country Opinion Survey (2020), "Round 3, 2017-2019", *available at: https://countrysurveys.worldbank.org*.

Data, World Value Survey (2020), "All Countries, Rounds 5-7, 2004-2020", *available at: https://www.worldvaluessurvey.org*.

De Chaisemartin, Clément and Xavier D'Haultfoeuille (2020), "Difference-in-differences estimators of intertemporal treatment effects", *arXiv preprint arXiv:2007.04267*.

De Chaisemartin, Clément and Xavier d'Haultfoeuille (2020), "Two-way fixed effects estimators with heterogeneous treatment effects", *American Economic Review* 110 (9), pp. 2964–96.

Defourny, Pierre (2017), "ESA Land Cover Climate Change Initiative (Land_Cover_cci): Land Cover Maps, v2.0.7", *Centre for Environmental Data Analysis*.

Devereux, Stephen, Edoardo Masset, Sabates-Wheeler Rachel, Samson Michael, Rivas Althea-Maria, and Lintelo Dolf te (2017), "The Targeting Effectiveness of Social Transfers", *Journal of Development Effectiveness* 9 (2), pp. 162–211.

Dinas, Elias, Konstantinos Matakos, Dimitrios Xefteris, and Dominik Hangartner (2019), "Waking up the Golden Dawn: Does Exposure to the Refugee Crisis Increase Support for Extreme-right Parties?", *Political Analysis* (27(2):244-54).

Dustmann, Christian, Kristine Vasiljeva, and Anna Piil Damm (2019), "Refugee Migration and Election Outcomes", *The Review of Economic Studies* (86(5):2035–2091).

Fasani, Francesco, Tommaso Frattini, and Luigi Minale (2021), "Lift the Ban? Initial Employment Restrictions and Refugee Labour Market Outcomes", *Journal of European Economic Association* (Forthcoming).

GADM (2021), *Global Administrative Areas (GADM)*.

Gamalerio, Matteo (2018), "Not Welcome Anymore: The Effect of Electoral Incentives on the Reception of Refugees", *CESifo Working Papers* (7212).

Gessler, Theresa, Gergő Tóth, and Johannes Wachs (2021), "No Country for Asylum Seekers? How Short-term Exposure to Refugees Influences Attitudes and Voting Behavior in Hungary", *Political Behavior* (Forthcoming).

Ghosh, Tilottama, Rebecca L Powell, Christopher D Elvidge, Kimberly E Baugh, Paul C Sutton, and Sharolyn Anderson (2010), "Shedding light on the global distribution of economic activity", *The Open Geography Journal* 3 (1).

Ghosn, Faten, Alex Braithwaite, and Tiffany S. Chu (2019), "Violence, Displacement, Contact, and Attitudes toward Hosting Refugees", *Journal of Peace Research* (56(1)).

Ginn, Thomas (2021), "Prison or Sanctuary? An Evaluation of Camps for Syrian Refugees".

Goodman-Bacon, Andrew (2021), "Difference-in-differences with variation in treatment timing", *Journal of Econometrics* 225 (2), pp. 254–277.

Hangartner, Dominik, Moritz Marbach Elias Dinas, Konstantinos Matakos, and Dimitrios Xefteris (2019), "Does Exposure to the Refugee Crisis Make Natives More Hostile?", *American Political Science Review* (113(2):442-55).

International Earth Science Information Network - CIESIN - Columbia University, Center for (2016a), *Gridded Population of the World, Version 4 (GPWv4): Population Count Adjusted to Match 2015 Revision of UN WPP Country Totals*, NASA Socioeconomic Data and Applications Center (SEDAC).

International Earth Science Information Network - CIESIN - Columbia University, Center for (2016b), *Gridded Population of the World, Version 4 (GPWv4): Population Density Adjusted to Match 2015 Revision UN WPP Country Totals*, NASA Socioeconomic Data and Applications Center (SEDAC).

Marbach, Moritz, Dominik Hangartner, and Jens Hainmueller (2018), "The Long-term Impact of Employment Bans on the Economic Integration of Refugees", *Science Advances* 4 (9), pp. 1–6.

Maystadt, Jean-François, Mueller Valerie, Jamon Van Den Hoek, and Stijn vanWeeze (2020), "Vegetation Changes Attributable to Refugees in Africa Coincide with Agricultural Deforestation", *Environmental Research Letters* (15(4): 044008).

Pottie-Sherman, Yolande and Rima Wilkes (2017), "Does size really matter? On the relationship between immigrant group size and anti-immigrant prejudice", *International Migration Review* 51 (1), pp. 218–250.

Raleigh, Clionadh, Andrew Linke, Håvard Hegre, and Joakim Karlsen (2010), "Introducing ACLED: an armed conflict location and event dataset: special data feature", *Journal of peace research* 47 (5), pp. 651–660.

Rozo, Sandra and Juan F. Vargas (2021), "Brothers or Invaders? How Crisis-driven Migrants Shape Voting Behavior", *Journal of Development Economics* (150:102636).

Salemi, Colette (2021), "Refugee Camps and Deforestation in Sub-Saharan Africa", *Journal of Development Economics* (102682).

Schuettler, Kirsten (2021), "Labor market integration of refugees and internally displaced persons: The behavioral and socio-emotional side", *Available at: https://blogs.worldbank.org/jobs/labor-market-integration-refugees-and-internally-displaced-persons-behavioral-and-socio*.

Slotwinski, Michaela, Alois Stutzer, and Roman Uhlig (2019), "Are Asylum Seekers More Likely to Work with More Inclusive Labor Market Access Regulations?", *Swiss Journal of Economics and Statistics* (155:1-15).

Steinmayr, Andreas (2021), "Contact versus Exposure: Refugee Presence and Voting for the Far-Right", *The Review of Economics and Statistics* (103(2): 310–327).

Sun, Liyang and Sarah Abraham (2021), "Estimating dynamic treatment effects in event studies with heterogeneous treatment effects", *Journal of Econometrics* 225 (2), pp. 175–199.

Systemic Peace, Center for (2018), "Polity5 Annual Time-Series (1946-2018)", *available at: https://www.systemicpeace.org/inscrdata.html*.

UNHCR (2021a), *Livelihoods and Economic Inclusion*, https://www.unhcr.org/en-us/livelihoods.html.

UNHCR (2021b), *UNHCR Global Trends 2020*, https://www.unhcr.org/60b638e37/unhcr-global-trends-2020.

United Nations, . (2019), *International Migrant Stock: Documentation*.

Valli, Elsa, Amber Peterman, and Melissa Hidrobo (2019), "Economic Transfers and Social Cohesion in a Refugee-Hosting Setting", *The Journal of Development Studies* 55 (1), pp. 128–146.

Verme, Paolo and Kirsten Schuettler (2019), "The Impact of Forced Displacement on Host Communities", *World Bank Policy Research Working Paper* (8727).

Vertier, Paul, Max Viskanic, and Matteo Gamalerio (2020), "Dismantling the'Jungle': Relocation and Extreme Voting in France", *Sciences Po Working Papers* (110).

Weiss, D J, Andy Nelson, HS Gibson, W Temperley, Stephen Peedell, A Lieber, M Hancher, Eduardo Poyart, Simão Belchior, Nancy Fullman, et al. (2018), "A global map of travel time to cities to assess inequalities in accessibility in 2015", *Nature* 553 (7688), pp. 333–336.

Zetter, Roger and Héloïse Ruaudel (2018), "Refugees' Right to Work and Access to Labour Markets: Constraints, Challenges and Ways Forward", *Forced Migration Review* (58:4-7).

Zhou (2018), "Refugee Proximity and Support for Citizenship Exclusion in Africa", *SSRN Working Paper. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2454409*.

Zhou and Andrew Shaver (2021), "Reexamining the effect of refugees on civil conflict: a global subnational analysis", *American Political Science Review* 115 (4), pp. 1175–1196.

Zhou, Yang, Grossman Guy, and Shuning Ge (2021), "When Refugee Exposure Improves Local Development and Public Goods Provision: Evidence from Uganda", *Working Paper*.

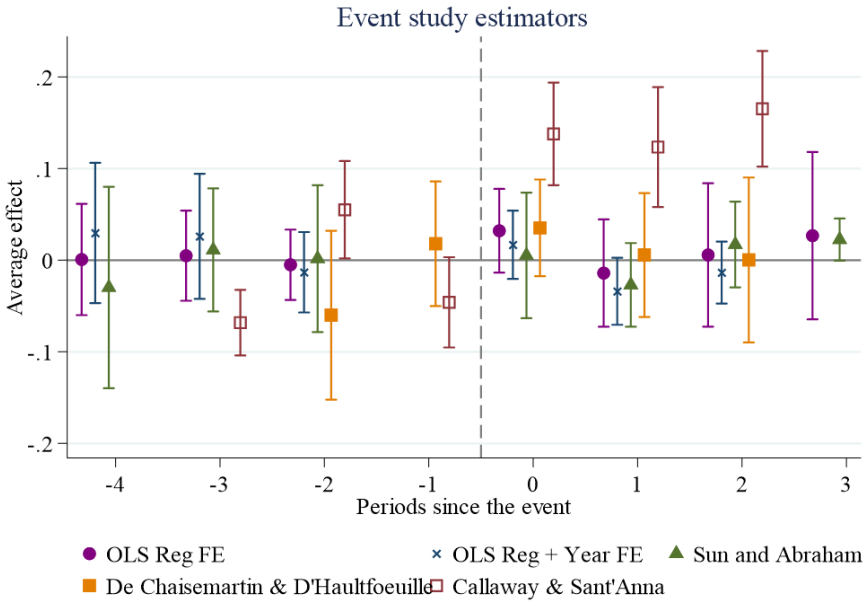
Appendix Table A1: Predictors of Employment Policy Index

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Employment Policy Index					
Good Place for Immigrants (Main Outcome)	0.191*	0.147				
	(0.104)	(0.101)				
Good Place X Polity2		0.019				
		(0.017)				
Not Opposed to Immigrant Neighbors			0.544***	0.365***		
			(0.147)	(0.124)		
Immigrant Neighbors X Polity2				0.054**		
				(0.023)		
Opposed to Restrictive Immigration Policy					0.310*	0.325*
					(0.164)	(0.193)
Immigration Policy X Polity2						-0.004
						(0.023)
Polity2 Score	0.005	-0.007	0.002	-0.039**	0.006	0.008
	(0.003)	(0.011)	(0.004)	(0.017)	(0.005)	(0.012)
Refugee Population (Inv Hyp Sin)	-0.013*	-0.013*	0.008	0.008	-0.004	-0.004
	(0.007)	(0.007)	(0.007)	(0.007)	(0.011)	(0.011)
Constant	0.264***	0.297***	-0.234	-0.104	0.179	0.171
	(0.100)	(0.100)	(0.153)	(0.146)	(0.158)	(0.171)
Observations	910	910	151	151	113	113
R-squared	0.091	0.095	0.320	0.346	0.228	0.228
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Dep Var Mean	0.493	0.493	0.570	0.570	0.637	0.637
Countries	93	93	73	73	64	64
Years	13	13	10	10	11	11

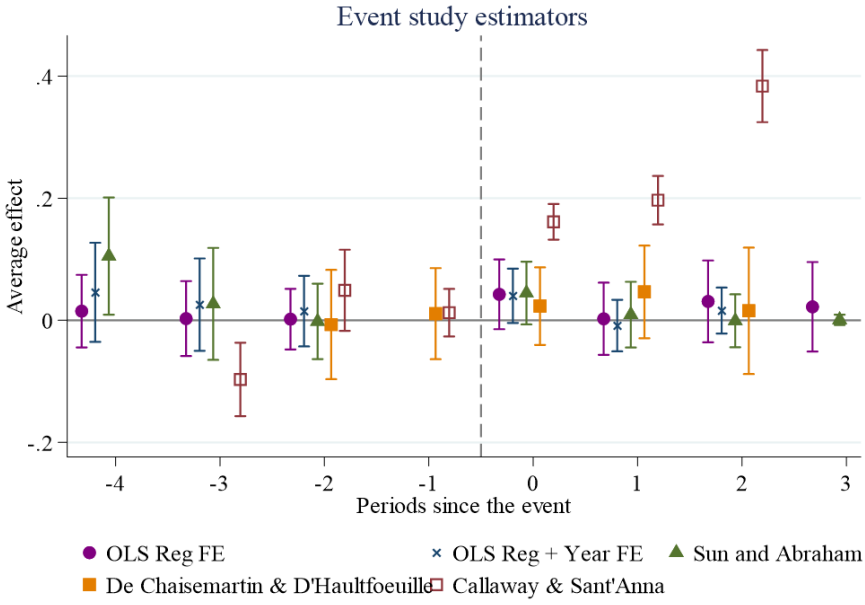
Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. Observations are at the country-year level. Standard errors are clustered at the country level. The dependent variable is the index of employment policies based on data from DWRAP and the authors described in Section 4.1.3. The independent variables are described in Section 4.1. See Table A2 for descriptions of the Immigrant Neighbors and Immigrant Policy questions. The Polity2 score comes from the Polity Project and is scaled -10 to 10.

Appendix Figure A1: Alternative DiD estimators

(a) Event of 10,000 increase or more

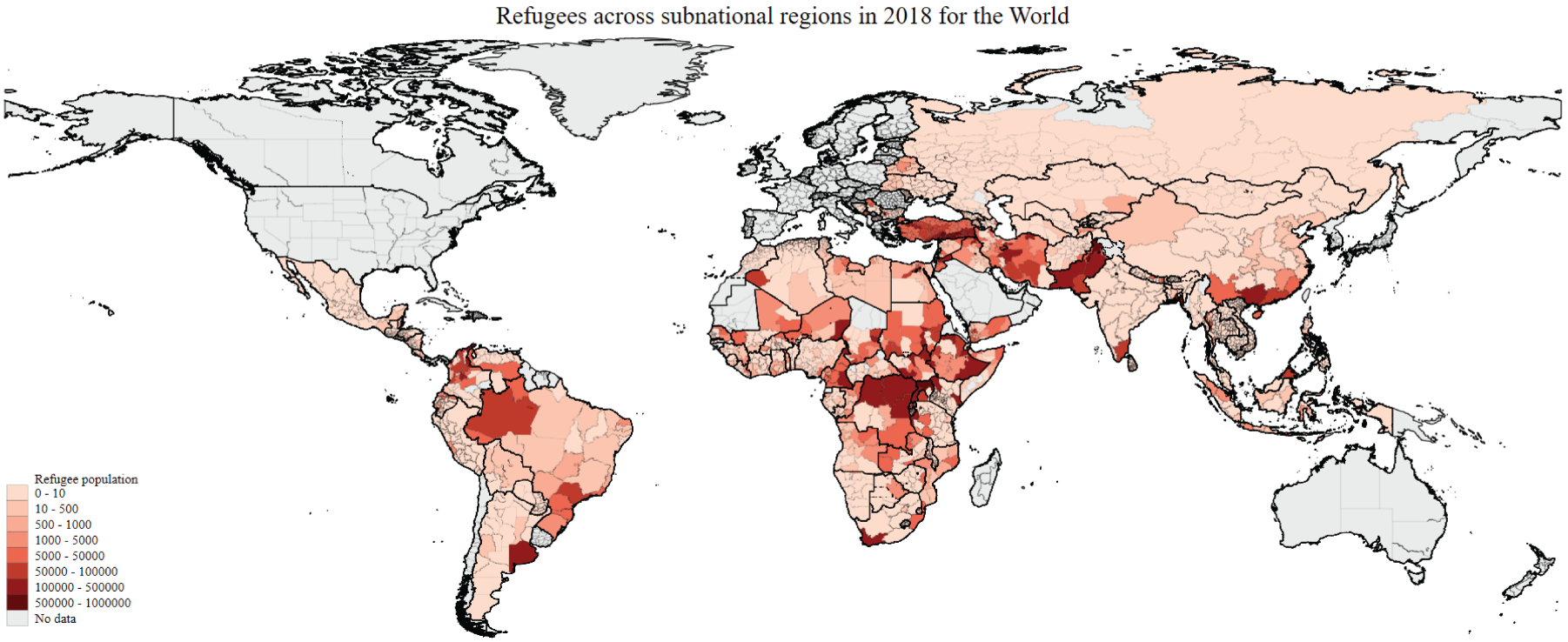


(b) Event of 100% increase or more



Notes: Coefficients resulting from using alternative difference-in-differences estimation methods in our event study design, with 95% confidence intervals. Standard errors are clustered at the event level. The sample includes regions with at least one event. Panel (a) uses our preferred definition for an event, an inflow of refugees of 10,000 or more, and at least 10%, while panel (b) presents the same estimations using an event definition of an inflow of refugees of 100% or more, and at least 5,000. The alternative DiD methods are those outlined by De Chaisemartin and D'Haultfoeuille (2020), Sun and Abraham (2021), and Callaway and Sant'Anna (2021), and they all control by event and year fixed effects.

Appendix Figure A2: Map



Notes: UNHCR data aggregated and imputed by authors

Appendix Table A2: Harmonized Variables from Additional Datasets

Variable	**Values**	**Surveys**	**Coverage**
Immigrant neighbors	1 if the respondent does not indicate a dislike for immigrant neighbors, 0 if yes.	Afrobarometer (waves 6 and 7), Arabbarometer (waves 4 and 5), Latinobarometer (wave 14), World Value Survey (waves 5, 6 and 7), Eurobarometer (87 and 88), Transatlantic Trends (waves 7 and 9).	15 years; 1915 subnational regions
Immigration is an issue	1 if the respondent identifies immigration as a relevant issue, 0 otherwise.	Asianbarometer (waves 3 and 4), European Election Studies (waves 6 and 7), World Bank Country Opinion Survey (wave 3), Eurobarometer (waves 63-69, 71, 77, 81-91), Transatlantic Trends (waves 7 and 8).	13 years; 355 subnational regions
Immigration on crime	1 if the respondent does not identify immigrants as increasing crime, 0 if yes.	European Social Survey (wave 6), International Social Survey Programme (wave 3), World Value Survey (wave 7), Eurobarometer (wave 88), Transatlantic Trends (wave 6), World Bank Country Opinion Survey (wave 3), Pew Global Attitudes & Trends (waves 14, 16 and 18).	10 years; 1167 subnational regions
Immigration on jobs	1 if the respondent does not think that immigration has increased unemployment, 0 if yes.	World Value Survey (wave 7), Latinobarometer (waves 14, 15 and 18). European Social Survey (wave 7), International Social Survey Programme (wave 3), Pew Global Attitudes & Trends (waves 14, 16 and 18), Eurobarometer (wave 88), Transatlantic Trends (waves 6, 7, 8, 9 and 11).	13 years; 1325 subnational regions.

Variable	Values	Surveys	Coverage
Immigration on the economy	1 if the respondent does not think that immigrants weaken the economy, 0 if yes.	European Social Survey (waves 3-9), World Bank Country Opinion Survey (wave 3), International Social Survey Programme (wave 3), World Value Survey (wave 7), Transatlantic trends (waves 6, 7, 8, 9, 11), Eurobarometer (wave 88).	14 years; 1210 subnational regions.
Immigration policy	1 if the respondent does not support restrictive immigration policy, 0 if yes.	Afrobarometer (wave 6), World Value Survey (waves 5 and 7), Latinobarometer (waves 14 and 18), European Election Survey (waves 7 and 8), Pew Global Attitudes & Trends (wave 14), Eurobarometer (wave 90), Transatlantic Trends (waves 6, 7, 8), European Social Survey (waves 3-9).	15 years; 1833 subnational regions.
Immigrants and vacancies	1 if the respondent thinks that immigrants fill important vacancies in the job market, 0 otherwise.	Eurobarometer (waves 64, 66, 71 and 88), Transatlantic Trends (waves 6-9 and 11), World Value Survey (wave 7).	11 years; 1082 subnational regions.
Immigration on culture	1 if the respondent agrees that immigration has a positive impact on the host country's culture, 0 otherwise.	European Social Survey (waves 3-9), International Social Survey Programme (wave 3), World Value Survey (wave 7), Transatlantic Trends (waves 6, 7, 8, 9, 11), Eurobarometer (wave 88).	14 years; 1210 subnational regions.
Refugee policy	1 if respondent indicates that he supports receiving refugees, 0 otherwise.	World Value Survey (wave 7), European Social Survey (waves 7 and 8), Eurobarometer (wave 76 and 84-91), Pew Global Attitudes & Trends (wave 18).	8 years; 1103 subnational regions.

Appendix Table A3: Correlating Main and Additional Outcomes: Region Level

Outcome	OLS	Year FE	Region FE	Region + Year FEs	Obs	Years	Regions
Immigrant neighbors	0.232***	0.237***	0.029	0.028	2,170	11	1,223
	(0.016)	(0.017)	(0.025)	(0.025)			
Immigration on crime	0.143***	0.121***	0.116*	0.135**	1,176	8	805
	(0.027)	(0.029)	(0.065)	(0.059)			
Immigration on jobs	0.301***	0.216***	0.112***	0.063	1,939	11	1,001
	(0.023)	(0.023)	(0.042)	(0.041)			
Immigration on economy	0.105***	0.182***	0.014	0.056*	2,022	11	848
	(0.020)	(0.020)	(0.031)	(0.031)			
Immigration policy	0.250***	0.256***	0.171***	0.193***	2,374	10	1,263
	(0.020)	(0.019)	(0.031)	(0.033)			
Immigration is an issue	0.220***	0.180***	-0.034	0.019	1,694	10	313
	(0.018)	(0.012)	(0.022)	(0.015)			
Immigrants and vacancies	0.179***	0.108***	-0.018	-0.009	1,047	7	721
	(0.029)	(0.027)	(0.070)	(0.054)			
Immigration and culture	0.244***	0.283***	0.083**	0.104***	2,022	11	848
	(0.022)	(0.022)	(0.032)	(0.031)			
Refugee policy	0.219***	0.238***	0.099**	0.103***	1,623	6	780
	(0.023)	(0.022)	(0.044)	(0.039)			

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. Each cell is a separate regression at the region level with the binary dependent variable listed in the left-most column and the independent variable is our main outcome: 1 if the respondent answers yes to the question "is the city or area where you live a good place to live for immigrants from other countries?" and 0 otherwise. All dependent variables are listed and described in Table A2 and coded so that 1 is support for migrants (or not against, depending on the original framing of the question). *Regions* refers to the number of sub-national regions. GWP region averages use the Gallup sampling weights.

Appendix Table A4: Laws Included to Expand the Developing World Refugee and Asylum-Seeker Policy Dataset

Country	Law	From	To
Albania	On the asylum in the Republic of Albania	1998	2014
Albania	LAW NO. 121/2014 "ON ASYLUM IN THE REPUBLIC OF ALBANIA"	2014	2021
Albania	ON ASYLUM IN THE REPUBLIC OF ALBANIA	2021	2021
Argentina	2006 Refugee Law No. 26.165	2006	2021
Belarus	LAW OF THE REPUBLIC OF BELARUS of 23 June 2008 No. 354-Z On Granting Refugee Status, Complementary and Temporary Protection to Foreign Citizens and Stateless Persons in the Republic of Belarus (Amended in 2016)	2008	2021
Belize	REFUGEES ACT	1991	2021
Bolivia	Refugee Law No. 251	2012	2021
Bosnia Herzegovina	Law on Immigration and Asylum Bosnia and Herzegovina	1999	2008
Bosnia Herzegovina	LAW ON MOVEMENT AND STAY OF ALIENS AND ASSYLUM	2008	2016
Bosnia Herzegovina	Law on Asylum	2016	2021
Brazil	Law Number 9,474 of July 22,	1997	2021
Bulgaria	LAW ON ASYLUM AND REFUGEES (Amended in 2015)	2002	2021
Cambodia	SUB-DECREE ON PROCEDURE FOR RECOGNITION AS A REFUGEE OR PROVIDING ASYLUM RIGHTS TO FOREIGNERS IN THE KINGDOM OF CAMBODIA	2009	2021
Congo	Loi No. 021/2002 du 2002 portant statut des réfugiés en République Démocratique du Congo	2002	2021
Costa Rica	Reglamento de Personas Refugiadas/LEY GENERAL DE MIGRACIÓN Y EXTRANJERÍA	2010	2021
Ecuador	2008 Constitution & Reglamento a la Ley de Extranjería	2008	2017
Ecuador	Ecuador: Regulatory Decree of the Human Mobility Law	2017	2021
El Salvador	National Refugee Law	2005	2021
Guatemala	Migration Code	2016	2021
Honduras	Migration law	2004	2021
Indonesia	Presidential Regulation on the Handling of Refugees	2016	2021
Jamaica	Refugee Policy	2009	2021
Mexico	Refugees, Complementary Protection and Political Asylum Act & Migration Act (Amended in 2014)	2011	2021
Moldova	Law on Asylum	2009	2021
Montenegro	LAW ON ASYLUM	2006	2016
Montenegro	LAW ON INTERNATIONAL AND TEMPORARY PROTECTION OF FOREIGNERS	2016	2021
Nicaragua	National Refugee Law	2008	2021
Paraguay	LEY Nº 1938.- GENERAL SOBRE REFUGIADOS	2002	2021
Peru	LEY DEL REFUGIADO/LEY DE ASILO	2002	2021
Philippines	Department Circular No. 58	2012	2021
Russia	FEDERAL LAW ON REFUGEES	1993	2021
Serbia	LAW ON REFUGEES	1992	2007
Serbia	LAW ON ASYLUM	2007	2018
Serbia	LAW ON ASYLUM AND TEMPORARY PROTECTION	2018	2021
Thailand	Immigration Act	1979	2021
Ukraine	LAW OF UKRAINE "On Refugees"	2003	2011
Ukraine	LAW OF UKRAINE on Refugees and Persons in need of omplementary or emporary Protection in Ukraine	2011	2021

Appendix Table A5: List of Events: Annual Increase $\geq 50,000$

Country	Region	Year	Refugees t-1	Refugees t	Absolute increase
Bangladesh	Chittagong	2017	276,182	932,183	656,001
Uganda	Northern Region	2016	149,662	577,757	428,095
Lebanon	Beqaa	2013	50,212	280,316	230,104
Afghanistan	Khost	2014	182	207,447	207,265
Bangladesh	Chittagong	2009	28,123	227,840	199,717
Turkey	Istanbul	2015	143,617	342,958	199,341
Lebanon	Mont-Liban	2013	9,684	199,673	189,989
Lebanon	Liban-Nord	2013	64,438	250,437	185,999
Turkey	Hatay	2014	138,085	319,924	181,839
Ethiopia	Gambella	2014	65,980	242,873	176,893
Turkey	Gaziantep	2014	230,851	405,049	174,198
Turkey	Sanliurfa	2014	150,614	310,879	160,265
Turkey	Adana	2014	20,830	139,849	119,019
Malaysia	Kuala Lumpur	2013	101,811	220,524	118,713
Lebanon	Liban-Sud	2013	7,526	106,038	98,512
Niger	Diffa	2014	7,801	97,786	89,985
Cameroon	East	2014	58,311	140,032	81,721
Malaysia	Sabah	2014	10	80,000	79,990
Afghanistan	Paktika	2014	10	73,007	72,997
Sudan	White Nile	2014	10,000	81,293	71,293
Iraq	Arbil	2013	15,249	82,901	67,652
Jordan	Amman	2013	133,952	196,928	62,976
Liberia	Grand Gedeh	2011	2,844	64,982	62,138
Democratic Republic of Congo	Province Orientale	2016	24,708	86,439	61,731
Uganda	Western Region	2015	228,219	289,252	61,033
Tanzania	Mbeya	2011	5,794	65,431	59,637
Argentina	Buenos Aires	2017	5,892	62,590	56,698
Jordan	Irbid	2013	46,191	101,640	55,449
Turkey	Bursa	2015	38,032	91,190	53,158
Tanzania	Rukwa	2011	2,155	54,233	52,078
Turkey	Mardin	2014	45,628	96,179	50,551

This table lists the region-years with a large increase in refugees between t and t-1 according to UNHCR and authors' imputations and that have GWP data on attitudes in at least one period before and after the event. Events are defined as the largest increase in an eight-year window.

Appendix Table A6: List of Events: Annual Increase Between 20,000 and 50,000

Country	Region	Year	Refugees t-1	Refugees t	Absolute increase
Tanzania	Tabora	2011	1,533	49,307	47,774
Turkey	Izmir	2015	32,262	79,205	46,943
Iran	Tehran	2014	271,578	317,304	45,726
Rwanda	East	2015	14,782	59,398	44,616
Turkey	Kocaeli	2017	56,526	100,272	43,746
Democratic Republic of Congo	Equateur	2017	68,324	108,880	40,556
Turkey	Konya	2017	76,178	114,526	38,348
Democratic Republic of Congo	Equateur	2013	946	38,053	37,107
Egypt	Cairo	2013	108,817	145,923	37,106
Colombia	Distrito Capital de Bogota	2017	360	35,125	34,765
Burkina Faso	Sahel	2012	10	33,571	33,561
Cameroon	Far North	2015	33,835	65,720	31,885
Ethiopia	Tigray	2014	60,119	91,239	31,120
Malaysia	Kuala Lumpur	2009	45,989	76,392	30,403
Jordan	Al Zarqa	2013	21,740	50,827	29,087
Uganda	Central Region	2014	43,360	72,003	28,643
Turkey	Ankara	2015	19,906	47,794	27,888
Turkey	Kayseri	2015	22,308	49,845	27,537
Turkey	Manisa	2015	11,130	37,795	26,665
Venezuela	Tachira	2016	39,652	66,030	26,378
Brazil	Amazonas	2017	14,700	41,036	26,336
Egypt	Alexandria	2013	3,653	29,986	26,333
Tanzania	Kigoma	2011	98,173	123,085	24,912
Cameroon	Adamaoua	2014	19,177	43,297	24,120
Liberia	Nimba	2011	21,275	44,710	23,435
Burundi	Bujumbura Mairie	2013	10	22,373	22,363
Rwanda	Kigali City	2015	2,155	24,205	22,050
Lebanon	Beyrouth	2013	3,934	25,977	22,043
Egypt	Giza	2013	8,500	30,219	21,719

This table lists the region-years with a large increase in refugees between t and t-1 according to UNHCR and authors' imputations and that have GWP data on attitudes in at least one period before and after the event. Events are defined as the largest increase in an eight-year window.

Appendix Table A7: List of Events: Annual Increase Between 10,000 and 20,000

Country	Region	Year	Refugees t-1	Refugees t	Absolute increase
China	Guangxi Zhuangzu Zizhiqu	2016	112,268	132,124	19,856
Niger	Tillaberi	2012	10	19,631	19,621
Malaysia	Sabah	2010	61,314	80,000	18,686
Libya	Tarabulus	2013	13,474	32,136	18,662
Iraq	Sulaymaniya	2013	9,562	28,080	18,518
Iran	Isfahan	2014	107,245	125,304	18,059
Angola	Luanda	2012	12,277	29,619	17,342
Niger	Tahoua	2012	10	16,935	16,925
Venezuela	Zulia	2016	47,770	64,378	16,608
Jordan	Al Mafraq	2017	157,297	173,890	16,593
Yemen	Lahj	2015	10	16,179	16,169
Turkey	Kirikkale	2017	45,578	61,529	15,951
South Sudan	Unity	2017	97,624	113,570	15,946
Egypt	Giza	2017	46,482	61,661	15,179
Rwanda	East	2010	10	14,886	14,876
Rwanda	South	2012	10	14,668	14,658
Turkey	Samsun	2017	38,006	52,220	14,214
Ethiopia	Afar	2015	28,699	42,725	14,026
Colombia	Norte de Santander	2017	69	13,740	13,671
Liberia	Maryland	2011	307	13,609	13,302
Sudan	Gedaref	2012	29,256	42,053	12,797
Cameroon	Yaounde	2013	7,418	20,198	12,780
Zambia	Luapula	2017	10	12,738	12,728
Mali	Kayes	2013	91	12,806	12,715
Turkey	Trabzon	2015	3,390	15,892	12,502
Niger	Niamey	2012	420	12,850	12,430
Iraq	Arbil	2009	3,101	15,484	12,383
Turkey	Kastamonu	2015	8,620	20,388	11,768
Turkey	Aydin	2014	1,445	12,872	11,427
Brazil	Sao Paulo	2017	13,031	24,444	11,413
Turkey	Malatya	2017	29,936	41,158	11,222
Democratic Republic of Congo	Province Orientale	2010	2,461	13,350	10,889
Uganda	Central Region	2010	26,985	37,807	10,822
Venezuela	Bolivar	2017	9,149	19,889	10,740
Mexico	Ciudad de Mexico	2017	8,745	19,241	10,496
Iran	Kerman	2014	62,214	72,689	10,475
Turkey	Zonguldak	2015	3,455	13,901	10,446
Mali	Sikasso	2010	59	10,495	10,436
Senegal	Saint-Louis	2011	8,491	18,903	10,412
Iran	Fars	2014	60,876	71,126	10,250
Kenya	Nairobi	2015	51,259	61,348	10,089

This table lists the region-years with a large increase in refugees between t and t-1 according to UNHCR and authors' imputations and that have GWP data on attitudes in at least one period before and after the event. Events are defined as the largest increase in an eight-year window.

Appendix Table A8: List of Events: Annual Increase Between 5,000 and 10,000

Country	Region	Year	Refugees t-1	Refugees t	Absolute increase
Democratic Republic of Congo	Katanga	2011	1,736	11,657	9,921
Jordan	Al Balqa'a	2013	5,791	15,700	9,909
Venezuela	Distrito Capital	2017	8,468	18,264	9,796
Burundi	Bubanza	2012	10	9,439	9,429
Iran	Qom	2014	55,932	65,350	9,418
Burundi	Muyinga	2010	10	9,248	9,238
Ethiopia	Addis Ababa	2015	5,893	15,033	9,140
Ethiopia	Benshangul-Gumaz	2017	52,747	61,836	9,089
Burundi	Bujumbura Rural	2010	12,225	21,250	9,025
Democratic Republic of Congo	Kinshasa	2013	10,398	19,163	8,765
Turkey	Antalya	2015	7,478	16,236	8,758
Turkey	Balikesir	2014	1,888	10,535	8,647
Zimbabwe	Manicaland	2017	8,335	16,878	8,543
Iraq	Anbar	2012	423	8,899	8,476
Chad	Logone-Oriental	2014	39,042	47,122	8,080
Togo	Centrale	2009	10	8,059	8,049
Mali	Bamako	2012	5,712	13,551	7,839
Brazil	Rio de Janeiro	2017	6,297	13,898	7,601
Rwanda	West	2013	17,671	24,615	6,944
Malawi	Dowa	2016	23,486	30,410	6,924
Colombia	Valle del Cauca	2017	40	6,879	6,839
Cameroon	North	2017	12,684	19,333	6,649
Turkey	Malatya	2013	2,610	9,165	6,555
Egypt	Al Sharqia	2013	572	7,123	6,551
Colombia	Arauca	2017	28	6,242	6,214
Turkey	Tekirdag	2015	4,391	10,589	6,198
Afghanistan	Nangarhar	2012	200	6,264	6,064
Nigeria	Cross-River	2017	10	6,019	6,009
Jordan	Al Karak	2013	2,770	8,764	5,994
Armenia	Yerevan	2012	1,580	7,567	5,987
Afghanistan	Konar	2012	932	6,840	5,908
Costa Rica	San Jose	2013	10,049	15,926	5,877
Jordan	Jarash	2013	2,556	8,230	5,674
Brazil	Parana	2017	4,252	9,804	5,552
Angola	Lunda Norte	2012	599	5,717	5,118

This table lists the region-years with a large increase in refugees between t and t-1 according to UNHCR and authors' imputations and that have GWP data on attitudes in at least one period before and after the event. Events are defined as the largest increase in an eight-year window.

Appendix Table A9: Summary Statistics by Refugee Population: Events

	10K to 20K	20K to 50K	50K to 100K	Over 100K
Good Place for Immigrants (Main Outcome)	0.640	0.602	0.591	0.619
	(0.251)	(0.179)	(0.213)	(0.184)
Refugee population	15,005	33,252	70,251	235,909
	(2,647)	(8,960)	(14,063)	(139,791)
Total Population	2,275,755	5,342,528	2,557,236	5,940,133
	(1,831,160)	(9,629,225)	(1,649,413)	(6,958,978)
GDP per capita (USD PPP)	3,293	6,430	7,247	8,394
	(4,185)	(4,805)	(6,095)	(7,061)
Elementary education (%)	60.5	48.0	47.0	36.1
	(30.3)	(23.1)	(20.2)	(14.7)
More than elementary education (%)	39.5	52.0	53.0	63.9
	(30.3)	(23.1)	(20.2)	(14.7)
Rural (%)	33.7	15.5	23.5	22.6
	(31.1)	(31.5)	(32.5)	(31.3)
Small town (%)	38.9	30.3	37.4	20.3
	(32.0)	(31.8)	(30.9)	(22.1)
Suburbs or large city (%)	27.4	54.3	39.1	57.1
	(34.3)	(37.5)	(34.3)	(37.0)
Minimum distance to border (km)	4	15	6	23
	(19)	(32)	(16)	(57)
Travel time to a major city	268	116	268	111
	(377)	(134)	(400)	(104)
Population density	218	1,634	116	649
	(528)	(4,804)	(150)	(1,190)
Camp presence (%)	70.6	27.3	42.1	37.5
	(47.0)	(45.6)	(50.7)	(49.5)
Employment index	0.2	0.2	0.3	0.3
	(0.1)	(0.1)	(0.3)	(0.3)
Polity index	3.3	1.3	0.4	1.7
	(3.9)	(4.5)	(4.7)	(5.0)
N	17	22	19	24

Notes: Observations are at the region-event level. The sample consists of the events in the the main specifications for waves of at least 10,000 refugees in a year. Time-varying variables are reported at the year of the event. See the notes for Table 5 for a description of the variables.

Appendix Table A10: Summary Statistics by Refugee Population: Regions in 2018

	Under 1K	1K to 10K	10K to 50K	Over 50K
Good Place for Immigrants (Main Outcome)	0.563	0.588	0.608	0.586
	(0.223)	(0.203)	(0.176)	(0.182)
Refugee population	50	4,180	23,072	200,482
	(141)	(2,691)	(10,008)	(183,572)
Total Population	4,418,165	3,977,211	3,953,326	10,079,072
	(14,469,545)	(7,900,268)	(8,140,559)	(21,130,917)
GDP per capita (USD PPP)	5,447	4,394	5,271	5,742
	(5,366)	(4,723)	(4,778)	(5,778)
Elementary education (%)	48.2	50.6	48.5	42.7
	(25.9)	(24.5)	(27.4)	(24.1)
More than elementary education (%)	51.8	49.4	51.5	57.3
	(25.9)	(24.5)	(27.4)	(24.1)
Rural (%)	37.7	27.4	27.8	24.0
	(35.6)	(28.9)	(33.7)	(27.3)
Small town (%)	33.8	32.9	31.0	24.0
	(32.8)	(29.2)	(32.2)	(24.1)
Suburbs or large city (%)	28.4	39.8	41.3	51.9
	(32.8)	(34.6)	(40.4)	(35.0)
Minimum distance to border (km)	29	21	19	18
	(60)	(92)	(58)	(47)
Travel time to a major city	190	230	188	227
	(321)	(428)	(266)	(334)
Population density	267	1,170	1,118	511
	(745)	(3,497)	(3,208)	(1,220)
Camp presence (%)	0.4	15.9	22.6	52.5
	(6.6)	(36.8)	(42.0)	(50.3)
Employment index	0.2	0.2	0.2	0.2
	(0.2)	(0.1)	(0.1)	(0.2)
Polity index	3.1	1.3	-0.3	0.3
	(5.4)	(5.3)	(4.9)	(5.3)
N	921	113	93	80

Notes: Observations are at the region-event level. The sample consists of the events in the the main specifications for waves of at least 10,000 refugees in a year. Time-varying variables are reported for 2018. See the notes for Table 5 for a description of the variables.

Appendix Table A11: Summary Statistics by Policies and Camps: Regions in 2018

	Camp presence			Median Index		
	No	Yes	Difference	Below	Above	Difference
Good Place for Immigrants (Main Outcome)	0.570	0.594	0.024	0.575	0.580	0.005
	(0.212)	(0.204)	(0.384)	(0.206)	(0.216)	(0.734)
Refugee population	7,394	122,433	115,040	21,535	8,013	-13,522
	(37,651.299)	(189,439.877)	(0.000)	(81,648.886)	(49,887.138)	(0.001)
Total Population	4,262,468	6,441,998	2,179,530	4,561,431	2,387,573	-2,173,859
	(13,383,757.197)	(16,145,026.873)	(0.241)	(15,396,214.717)	(4,349,466.083)	(0.001)
GDP per capita (USD PPP)	6,244	2,463	-3,781	4,173	7,906	3,734
	(6,164.699)	(3,630.568)	(0.000)	(4,781.359)	(6,957.280)	(0.000)
Elementary education (%)	46.2	62.8	16.6	52.7	40.1	-12.7
	(26.161)	(24.251)	(0.000)	(26.524)	(24.455)	(0.000)
More than elementary education (%)	53.8	37.2	-16.6	47.3	59.9	12.7
	(26.161)	(24.251)	(0.000)	(26.524)	(24.455)	(0.000)
Rural (%)	34.1	41.2	7.1	43.3	26.1	-17.3
	(34.933)	(34.560)	(0.128)	(36.001)	(32.869)	(0.000)
Small town (%)	32.7	27.2	-5.5	31.1	36.0	4.9
	(32.606)	(27.994)	(0.151)	(31.058)	(34.129)	(0.022)
Suburbs or large city (%)	33.2	31.6	-1.6	25.6	37.9	12.3
	(35.405)	(36.009)	(0.736)	(32.482)	(36.990)	(0.000)
Minimum distance to border (km)	34	6	-28	26	37	10
	(80.457)	(21.664)	(0.000)	(53.680)	(96.143)	(0.027)
Travel time to a major city	215	192	-23	214	226	12
	(392.632)	(158.704)	(0.286)	(384.977)	(403.412)	(0.612)
Population density	434	204	-230	438	374	-64
	(1,628.457)	(367.590)	(0.000)	(1,480.490)	(1,704.746)	(0.489)
Camp presence (%)	0.0	100.0	100.0	9.8	2.8	-7.0
	(0.000)	(0.000)		(29.715)	(16.448)	(0.000)
Employment index	0.2	0.2	-0.1	0.1	0.4	0.2
	(0.195)	(0.091)	(0.000)	(0.081)	(0.205)	(0.000)
Polity index	2.8	0.6	-2.2	0.8	4.8	4.0
	(5.281)	(4.617)	(0.000)	(5.233)	(4.170)	(0.000)
N	1,242	85	1,327	655	576	1,231

Notes: Observations are at the region level. The sample consists of all regions in countries with at least 5,000 refugees in 2018. Time-varying variables are reported for 2018. See the notes for Table 5 for a description of the variables.

Appendix Table A12: Refugee Waves and Attitudes Toward Immigrants - Per capita measures

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Event FE only	+ Controls	+ Year FE	+ Never treated regions	Country*Year FE
Post-event: ≥ 600 increase pc	-0.002	0.017	-0.007	-0.009	-0.033
	(0.018)	(0.027)	(0.032)	(0.024)	(0.028)
IHS refugee population		0.003	0.001	0.001	-0.001
		(0.007)	(0.006)	(0.005)	(0.005)
IHS region population		-0.324	-0.258	0.134*	0.243***
		(0.198)	(0.270)	(0.081)	(0.071)
Age		0.002	0.002	0.000	0.000
		(0.002)	(0.001)	(0.001)	(0.001)
Age^2		-0.000	-0.000	0.000	0.000
		(0.000)	(0.000)	(0.000)	(0.000)
Male		0.005	0.006	0.009*	0.009*
		(0.011)	(0.011)	(0.005)	(0.005)
Completed secondary education		0.042***	0.038**	0.026***	0.025***
		(0.016)	(0.015)	(0.007)	(0.007)
Completed college education		0.054**	0.050*	0.042***	0.042***
		(0.027)	(0.026)	(0.013)	(0.012)
Lives in small town		0.033	0.026	0.045***	0.045***
		(0.022)	(0.022)	(0.011)	(0.010)
Lives in suburb of large city		0.064***	0.058**	0.097***	0.095***
		(0.024)	(0.024)	(0.017)	(0.017)
Lives in large city		0.084***	0.084***	0.081***	0.083***
		(0.023)	(0.023)	(0.013)	(0.013)
Constant	0.599***	5.220*	4.282	-1.404	-2.974***
	(0.009)	(2.886)	(3.966)	(1.173)	(1.026)
Observations	45,272	45,272	45,272	168,327	168,327
R-squared	0.097	0.102	0.108	0.108	0.121
Event FE	Yes	Yes	Yes	Yes	Yes
Year FE	No	No	Yes	Yes	No
Country*Year FE	No	No	No	No	Yes
Never treated Regions	No	No	No	Yes	Yes
Dep Var Mean	0.598	0.598	0.598	0.600	0.600
Events	82	82	82	82	82
Years	12	12	12	12	12
Regions	80	80	80	460	460
Countries	33	33	33	33	33

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. The dependent variable is the attitudes towards immigrants question, equal to 1 if the respondent answers yes to the question "is the city or area where you live a good place to live for immigrants from other countries?", 0 for disagreement, and missing for blanks or refusals. Regional controls for the inverse hyperbolic sine transformation of region population and refugee population at the year of the event, and individual controls for age, age squared, sex, educational level and city size were used. The sample includes individual respondents to the Gallup World Poll in region-years (columns 1, 2, and 3) and country-years (columns 4 and 5) who were surveyed within 4 years before or after an event. An event is defined as a region with an increase of at least 600 refugees per 100,000 inhabitants in a calendar year. Results use the Gallup sampling weights and standard errors are clustered at the event level.

Appendix Table A13: Different event definitions - Per capita measures

VARIABLES	(1) Attitudes Event Regions	(2) Attitudes All Regions	(3) Attitudes Event Regions	(4) Attitudes All Regions	(5) Attitudes Event Regions	(6) Attitudes All Regions
Post-event: ≥ 300 increase pc	0.007	-0.038*				
	(0.024)	(0.020)				
Post-event: ≥ 1,200 increase pc			0.000	-0.055		
			(0.041)	(0.036)		
Post-event: ≥ 100% increase pc					0.015	-0.032
					(0.033)	(0.027)
IHS refugee population	-0.002	-0.003	0.001	0.002	-0.006	-0.004
	(0.005)	(0.004)	(0.007)	(0.006)	(0.006)	(0.005)
IHS region population	0.118	0.216***	-0.354	0.335***	-0.066	0.223**
	(0.221)	(0.075)	(0.346)	(0.081)	(0.251)	(0.103)
Observations	77,438	257,243	31,618	95,556	56,124	204,149
R-squared	0.107	0.143	0.113	0.149	0.103	0.143
Event FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	No	Yes	Yes
Country*Year FE	No	Yes	No	Yes	No	No
Never treated Regions	No	Yes	No	Yes	No	No
Dep Var Mean	0.617	0.592	0.598	0.606	0.602	0.609
Events	132	132	50	50	104	104
Years	12	12	11	11	12	12
Regions	128	714	50	257	102	538
Countries	45	45	21	21	39	39

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. The dependent variable is the attitudes towards immigrants question, equal to 1 if the respondent answers yes to the question "is the city or area where you live a good place to live for immigrants from other countries?", 0 for disagreement, and missing for blanks or refusals. Regional controls for the inverse hyperbolic sine transformation of region population and refugee population at the year of the event, and individual controls for age, age squared, sex, educational level and city size were used. The sample includes individual respondents to the Gallup World Poll in region-years (columns 1, 3, and 5) and country-years (columns 2 and 6) who were surveyed within 4 years before or after an event. An event is defined as a region with an increase of at least 300 refugees per 100,000 inhabitants (row 1), 1,200 refugees per 100,000 inhabitants (row 2) or 100% of refugees per 100,000 inhabitants (row 3) in a calendar year. Results use the Gallup sampling weights and standard errors are clustered at the event level.