

Does Local Refugee Exposure Change Immigration Attitudes? Evidence from South Korea

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Abstract

Although many studies examine how refugee arrivals affect natives' attitudes toward immigrants, empirical findings are contradictory and inconsistent across examined cases. Existing explanations for the variation primarily emphasize differences in the contextual conditions of intergroup contact, such as contact quality, institutions, and media environments. This paper argues that these explanations share a common assumption – that residence in a refugee-receiving locality constitutes meaningful intergroup contact. I examine this assumption by examining the 2018 arrival of Yemeni asylum seekers on Jeju Island, South Korea, where refugees were geographically concentrated and largely confined to the island, generating localized exposure distinct from the rest of the country. Leveraging this natural experiment and a Difference-in-Differences design, I estimate the causal effect of local refugee exposure on multiple dimensions of immigrant attitudes. The analyses provide limited evidence that local refugee exposure produced attitudinal change. These findings suggest that residence within a refugee-receiving locality should not automatically be interpreted as meaningful intergroup contact, and the measurement of both treatment and multidimensional immigration attitudes needs to be carefully selected.

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1 Introduction

How can we explain conflicting empirical evidence of the effect of refugee contact on natives' immigration attitudes? A large literature examines natives' attitudes toward asylum seekers, yet its findings remain inconsistent across cases and focus on contextual conditions. Some studies find that public attitudes become more negative following refugee inflows (Hangartner et al., 2019), whereas others report more positive or null effects (De Coninck et al., 2021) under conditions of frequency and valence. Existing explanations emphasize contextual conditions under which contact occurs, including the quality of interpersonal contact (De Coninck et al., 2021), institutional responses by political authorities (Solodoch, 2021), or local governments' capacity to manage refugee arrivals (Hangartner et al., 2019). While these studies emphasize the contextual conditions of immigration, listing types of conditions does not fully explain the inconsistent findings, namely why studies examining similar episodes often reach markedly different conclusions.

The empirical inconsistency in the broader refugee literature is illustrated by the diverging results in recently published articles testing contact theories using South Korean public reactions to the sudden influx of Yemeni asylum seekers in 2018. The event, the arrival of approximately 550 Yemeni asylum seekers on the southernmost Jeju Island, presents such a puzzle because the recent studies examining this same episode reach contradictory conclusions. Shin (2025) concludes that the refugee influx reduced multicultural acceptance and increased hostility toward foreigners, whereas (Lee, 2025) finds that local exposure made residents relatively less hostile toward immigrants. What makes this puzzling is that both scholars examined the same empirical case with the identical type of contact, yet the diverging effects of contact remained unexplainable.

This paper revisits the Jeju refugee case by distinguishing four theoretically motivated dimensions of immigrant attitudes: stereotypes, material threat, symbolic threat, and humanitarian concern. Using the Korean Multicultural Acceptance Survey (KMAS; 2012, 2015, 2018), I estimate the causal effect of local refugee exposure using a Difference-in-Differences (DiD) design. Because the KMAS provides only a single pre-treatment wave, I supplement the analysis with the annual Korean Social Integration Survey (KSIS; 2015-2018), which allows a more informative assessment

of pre-treatment trends and additional robustness checks.

The analyses provide limited evidence that the influx of refugees in Jeju generated distinct local attitudinal change. DiD estimates with cluster-based standard errors suggest mixed results across dimensions: material threat increased, but humanitarian concern also increased. However, the estimates were no longer statistically significant in robustness checks using placebo tests across other regions in South Korea. Item placebo analysis further indicates that increases in immigrant acceptance were accompanied by increases in acceptance toward other social minority groups.

These findings contribute to the literature by suggesting the need for caution in studying natural experiments involving refugee exposure. Especially, variable measurement may be an important part of explaining the inconsistent empirical findings on immigration attitudes following refugee contact. First, in terms of treatment measurement, local refugee exposure in a given location may not necessarily constitute the kind of intergroup contact assumed in the literature. Moreover, using natural experiments in a DiD design warrants greater statistical caution regarding the number of clusters and treated clusters, as such designs often involve large geographic units such as states, villages, or other geographic regions (Hagemann, 2025). This calls for greater caution when researchers rely on geographic or administrative proximity as a proxy for treatment in natural experiments with a small number of treated units in studies of attitudinal changes after refugee influxes.

Second, given the multidimensionality of immigration attitudes, dependent variables may be measuring different things. While immigration attitudes are multidimensional (Kwon et al., 2024); (Sobolewska et al., 2017), studies use different measures of general attitudes toward foreign outgroups as outcomes of contact. This study highlights that the careful selection of such measures based on theory is important in assessing natives' attitudes after refugee exposure.

2 Prejudice, Anxiety, and Norms in Refugee Attitudes

This section reviews the literature on changes in attitudes toward refugees and foreign immigrants based on contact theory, intergroup theory, and the normative dimension of international refugee protection. Each perspective generates different expectations about the direction of attitudinal change resulting from intergroup contact, which requires distinguishing between negative and positive attitudes rather than treating immigration attitudes as a single dimension. The literature on immigration attitudes increasingly emphasizes these “mixed feelings” of the public toward integration, which involve more than preferences over cultural integration (Sobolewska et al., 2017). Empirical studies have similarly shown that the same cooperative contact can reduce prejudice while increasing concerns about one’s job position (Andersson and Dehdari, 2021). Building on this multidimensional understanding of immigration attitudes, I draw three hypotheses from contact theory, intergroup theory, and the normative dimension of international refugee protection, respectively.

Contact theory expects that interpersonal contact reduces prejudice and bias, especially under four conditions—equal status, common goals, intergroup cooperation, and authority support (Allport, 1954). Although the mechanisms through which contact facilitates the reduction of prejudice are not deterministic or fully specified (Pettigrew, 1998), contact can operate through distinct cognitive and emotional processes (Tropp and Pettigrew, 2005). Focusing on the cognitive mechanism, as originally emphasized by Allport, contact allows individuals to learn about newcomers and mitigate stereotypes and prejudice by affecting categorical knowledge based on the ethnic category or other attributes of outgroups (Allport, 1954).

Empirical studies have shown that meaningful direct contact leads to the expected outcomes. For example, during the 2015 European refugee crisis, interethnic contact was positively related to attitudes toward refugees in Belgium, France, the Netherlands, and Sweden (De Coninck et al., 2021). Similarly, a study measuring direct contact through residential proximity between locals and refugees in the Netherlands found that such proximity improved preferences toward ethnic minorities (Achard et al., 2022). Based on contact theory and these empirical findings, I therefore

expect the following hypothesis.

H1. Residents in Jeju Island, which experienced refugee inflows, will show reduced negative stereotypes toward foreigners compared with residents in mainland regions that did not experience such inflows.

The cognitive mechanism, however, is only one mechanism through which contact affects attitudes. Reducing stereotypes works mainly by providing information and thereby correcting mistaken beliefs as a cognitive process, but contact can also operate through emotions, including both negative and positive affect. Some studies argue that this affective route can in fact be stronger than the cognitive one (Tropp and Pettigrew, 2005).

Focusing on these emotional and perceptual aspects, perceived threats constitute theoretically distinct aspects of the psychological processing of intergroup contact. Specifically, threats can be divided into concerns about material and non-material matters. Material threats involve concerns such as security and economic competition, whereas non-material threats involve concerns such as culture and religion. Integrated threat theory, developed by Stephan and Stephan (2000), conceptualizes these perceptions of threat as distinct dimensions that can likewise shape the effects of intergroup contact. Following Stephan and Stephan, realistic (or material) threats include concerns such as jobs, welfare burdens, and crime. Symbolic threats, on the other hand, capture cultural and non-material concerns regarding the integrity of the ingroup's values, culture, and identity. Alongside intergroup anxiety and negative stereotypes, these perceptions serve as analytically separable channels through which outgroup exposure shapes attitudes. Drawing on integrated threat theory, I derive two separate hypotheses:

H2a. Residents exposed to the refugee inflow will report heightened material threat perceptions — concerns over crime, job competition, welfare burden, and public safety — relative to unexposed residents.

H2b. Residents exposed to the refugee inflow will report heightened symbolic threat perceptions — concerns that national identity, culture, and values are endangered — relative to unexposed residents.

Lastly, the international norm and humanitarian refugee attitudes engage one further dimension that neither contact nor threat theories capture: humanitarian norms. Unlike labor migrants, refugees arrive under the protection of an international regime, the 1951 Refugee Convention, and its institutionalized norms of asylum (Betts, 2015). Studies show that humanitarian concern can shape support for asylum seekers and that international legal obligations themselves can move public attitudes toward refugee protection (Sheppard and Von Stein, 2022). A sudden, proximate refugee inflow may therefore activate humanitarian awareness as a result of recognition of refugees and global responsibility of one's nation to protect them. This operates independently of whether residents hold stereotypes or perceive threats as hypothesized below.

H3. Residents exposed to refugee inflow will show greater humanitarian concern for refugees — support for their acceptance and protection — relative to unexposed residents.

Together, these theories imply that refugee exposure may influence multiple dimensions of attitudes toward immigrants through distinct psychological mechanisms. The multidimensionality of immigration attitudes can result in ambivalent responses, such as perceiving immigrants as economically harmful but culturally beneficial (Kwon et al., 2024), or reducing prejudice while still perceiving material threats (Andersson and Dehdari, 2021). This motivates examining these dimensions separately rather than relying solely on aggregate measures. Following intergroup contact theory, I develop hypotheses for each dimension and test them by exploiting the exogenous arrival of Yemeni asylum seekers on Jeju Island in 2018 using a difference-in-differences design.

3 Case Background

South Korea has historically not been a major destination for asylum seekers. However, between late December 2017 and May 2018, 561 Yemeni asylum seekers arrived on Jeju Island, a sudden and unprecedented influx. The island's geographic isolation as the southernmost province of the Korean peninsula limited spillover to the mainland, concentrating the exposure in a single, well-defined locality. The migration route itself underscores how unforeseen the event was; Figure 1 illustrates

the exogeneity of the influx.

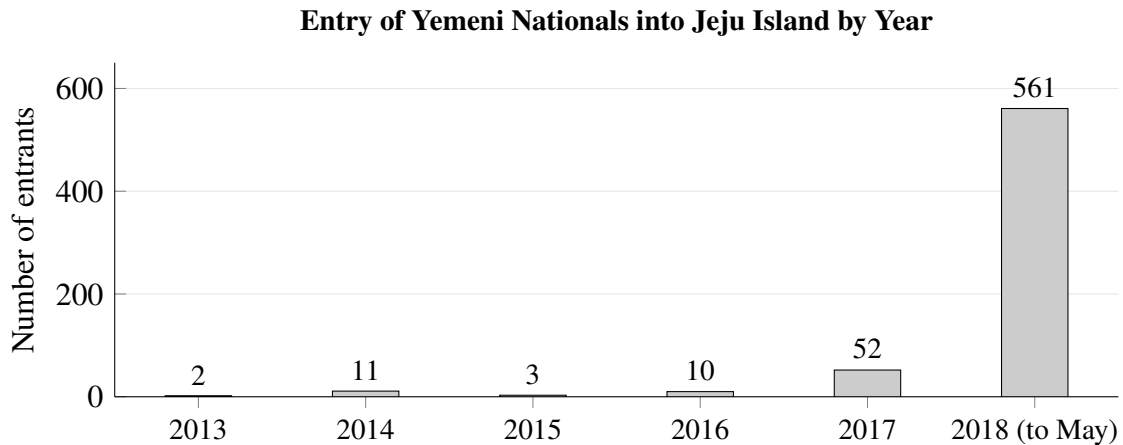


Figure 1: Entry of Yemeni nationals into Jeju Island by year.

Source: 2018 White Paper on Yemeni Refugees in Jeju, published by the Jeju Immigration and Foreigners Office (2020).

Neither arrival nor its destination was anticipated by residents or authorities. Many of the Yemenis had initially traveled to Malaysia, which offers 90-day visa-free entry and a shared Islamic cultural background. But Malaysia is not a signatory to the 1951 Refugee Convention or its 1967 Protocol and therefore lacks a formal domestic system for granting refugee status or legal protection. South Korea, by contrast, is a signatory and Jeju Island, uniquely, operates a visa-free entry policy for most nationalities. Although the policy was designed solely to promote tourism, it created an unintended legal pathway: once asylum seekers set foot on Korean territory, they became eligible to apply for refugee status. This combination of geographic proximity and unintended policy consequence renders the 2018 influx plausibly exogenous to local attitudes. The treated region was determined by a visa loophole, not by characteristics of Jeju or its residents. The scale of the arrivals further illustrates how unusual the episode was for a country with limited experience of culturally distant refugees. Before 2018, fewer than ten asylum seekers had ever applied on Jeju. However, in late December 2017, AirAsia launched a new direct route between Kuala Lumpur and Jeju, initiating the influx of Yemeni refugees residing in Malaysia. Arrivals peaked in May 2018 with 432 entries in that month alone (Jeju Immigration and Foreigners Office, 2020, 38–39). After authorities suspended visa-free entry for Yemeni nationals starting in June, total arrivals for 2018

capped at 561. Most arrivals were transient: 276 of the 561 left the island within the year (Park, 2023), and as of September 2025, only 32 Yemeni national residents remained registered in Jeju island (Ministry of Justice, Republic of Korea, 2025).

Two prior studies analyze this event using the same underlying data but diverge in design and conclusions. Both draw on the Korean Multicultural Acceptance Survey (KMAS), a triennial survey conducted by the Ministry of Gender Equality and Family; (Lee, 2025) additionally uses the Korean Social Integration Survey (KSIS), an annual survey tracking social conflict, trust, and attitudes toward minorities, run by the Korea Institute for Health and Social Affairs. I successfully replicate both studies' individual, contrasting results.

While both studies use the same data and method, their research designs differ in key details. The primary difference lies in the choice of dependent variable measuring immigration attitudes. (Shin, 2025) used a 35-item composite measure, the Multicultural Acceptance Index (MAI, spanning diversity, universality, and relational components), with higher scores reflecting greater "multicultural acceptance." Lee (2025), on the other hand, estimated four separate models, each using a single item as the dependent variable—such as opposition to extending humanitarian benefits (e.g., medical care) to asylum seekers and the belief that foreign workers increase crime—where higher values indicated greater "hostility." The choice of comparison group also differed: while Shin compared Seoul and Jeju based on the *k*-means of the MAI score, Lee compared mainland residents to Jeju residents. Lee also tested single items from the acceptance battery in the KSIS ("I would accept foreign immigrants as no relationship/ my neighbor/friend/spouse").

The two studies yielded starkly different results. In Lee's study, hostility toward immigrants decreased significantly on two of the four items: the perception that foreign workers increase crime and opposition to extending humanitarian benefits to asylum seekers. In contrast, Shin's design showed negative attitudinal changes among Jeju residents; their multicultural acceptance index decreased relative to Seoul residents following the refugee influx.

4 Research Design

Expanding on these two studies, I bridge this theoretical and empirical divide by refining the measurement of both the independent and dependent variables. I classify the dependent variables into three theoretically distinct attitudinal dimensions corresponding to competing hypotheses. While previous studies rely on either a single aggregate index or individual items that conflate different dimensions of immigrant attitudes, I construct distinct composite measures and examine each dimension separately. To assess the robustness of the refugee influx as a treatment, I conduct regional placebo tests comparing Jeju with sixteen mainland provinces to evaluate whether the estimated effect in Jeju is uniquely distinct. Lastly, I conduct item placebo tests using the social minorities battery items.

4.1 Data

The main analysis draws on the Korean Multicultural Acceptance Survey (KMAS) from 2012, 2015, and 2018. The KMAS includes over fifty items spanning stereotypes, cultural openness, perceived threat, and policy preferences toward foreigners and refugees in South Korea, making it uniquely suited for constructing theoretically distinct attitudinal dimensions. Its triennial frequency, however, limits its utility for assessing pre-treatment trends. I therefore additionally employ the Korean Social Integration Survey (KSIS), which is fielded annually. Its 2015–2017 waves cover the window immediately preceding the influx. Because both surveys were fielded after the influx—KSIS from September 1 to October 31, 2018, and KMAS from October 22 to November 30, 2018—their 2018 waves capture attitudes shortly after the arrivals in May 2018. While the primary DiD analysis and regional placebo tests rely on the KMAS, the KSIS serves to evaluate the parallel trends assumption and estimate item placebos, leveraging its richer pre-treatment baseline.

Table 1: Theoretical DV Dimensions and CFA Loadings

Dimension (α)	Item	Loading
Stereotype ($\alpha = .74$)	Developing-origin migrants are more lazy	.78
	I trust less of developing-country migrants	.82
	Developed-country people more competent	.58
	Developing-origin migrants are inferior	.62
material threat ($\alpha = .78$)	More immigrants mean they take jobs away from Korean	.74
	Immigrants take more than they contribute	.74
	More immigrants lead to higher crime rates	.76
	More immigrants raise fiscal burden as we aid them	.72
Symbolic threat ($\alpha = .85$)	I criticize foreign online communities	.76
	I feel uncomfortable with migrants' gatherings	.85
	I avoid migrants' cultural events	.82
	I frown upon migrants' religious events	.79
Humanitarian ($\alpha = .75$)	Korea should contribute to global aid	.84
	I feel responsibility as a global citizen	.76
	Korea should accept more international refugees by relaxing criteria	.74
	Korea should provide benefits even to pending refugee status	.72

Note: Estimator = WLSMV (DWLS) with ordered indicators; $N = 3,998$. All loadings significant at $p < .001$.
Model fit: robust CFI = .83, robust TLI = .79, robust RMSEA = .109.

4.2 Measurement

I construct dependent variables deductively based on the theoretical mechanisms developed in Section 2. Rather than relying on a single composite measure of immigrant attitudes, I grouped the survey items into four theoretically motivated dimensions based on my hypotheses: stereotypes, symbolic threat, material threat, and humanitarian concern. Confirmatory factor analysis (CFA) is used to assess whether the observed items correspond to these theoretically specified dimensions. The CFA is estimated using the 2018 wave, as this is the primary survey year used to construct the dependent variables in the main analysis. The correlation table for both 2015 and 2018 (Appendix A) is presented as a descriptive check that the underlying item correlations are broadly consistent across waves.

Table 1 reports the items assigned to each dimension together with their standardized factor loadings from a confirmatory factor analysis. The stereotype dimension captures negative beliefs about immigrants from developing countries. material threat reflects perceived competition over

economic resources, crime, and welfare burdens. Symbolic threat measures concern regarding immigrants' cultural, religious, and identity-related presence. Finally, the humanitarian dimension captures support for international responsibility toward refugees, including willingness to accept refugees and provide humanitarian assistance.

Because the dimensions are derived deductively from intergroup theories rather than discovered inductively from the data, the confirmatory factor analysis is intended to assess whether the proposed measurement structure is broadly consistent with the theoretical classification. As shown in Table 3, most items load on their intended dimensions, although the overall model fit is a little less than the conventional standard (robust CFI = .83, robust TLI = .79, robust RMSEA = .109).

The independent variable, local refugee exposure, is operationalized as residence in Jeju Province. However, geographic residence does not necessarily equate to direct interpersonal contact or physical exposure to refugees. I return to this distinction in the discussion when interpreting the substantive meaning of the estimated local effect.

4.3 Estimation

I estimate a difference-in-differences specification comparing Jeju residents to mainland residents before (2015) and after (2018) the influx:

$$Y_{irt} = \beta_0 + \beta_1 \text{Jeju}_r + \beta_2 \text{Post}_t + \beta_3 (\text{Jeju}_r \times \text{Post}_t) + \varepsilon_{irt} \quad (1)$$

where Y_{irt} denotes the attitude measure for individual i residing in region r at time t , and β_3 captures the differential post-2018 change among Jeju residents relative to mainland residents.

The primary comparison group consists of respondents from all mainland regions rather than a single matched province. Because Jeju differs institutionally from every other province—most notably through its visa-free entry policy that generated the refugee inflow, selecting any individual province as the counterfactual would simply replace one source of incomparability with another.

To further improve comparability, I estimate an additional estimation using matching via

entropy balancing. The mainland observations are reweighted to match the pre-treatment covariate distribution of Jeju respondents with respect to age, gender, education, and household income. Although KMAS is nationally representative, this approach helps rule out compositional differences between Jeju and the Mainland as a driving factor, given that covariate balance is directly enforced between the treated and control groups.

A key limitation of the estimation strategy is the small number of clusters and, more critically, the presence of only a single treated cluster. Because Jeju is the sole treated region among the seventeen administrative provinces in the surveys, this setting raises serious concerns regarding both cluster size and treated-unit count. First, cluster-robust standard errors are known to be unreliable when the total number of clusters is small—typically fewer than 30 (Cameron et al., 2008)—which often leads to underestimated standard errors and overstated statistical significance. With only 17 administrative provinces in South Korea, both the KMAS and KSIS fall well below this threshold. Moreover, having only a single treated cluster further exacerbates the issue, as standard cluster-based inference relies on the assumption of a large number of both control and treated clusters (Esarey and Menger, 2019).

To mitigate this concern, in addition to the main estimation, I employ regional placebo tests for robust inference. In settings with a single treated unit and a small number of control units, Abadie et al. (2010) and Abadie et al. (2015) propose evaluating the significance of the estimated treatment effect against a distribution of placebo effects obtained by iteratively reassigning the treatment to each control unit. Following this approach, I estimate the same DiD specification 17 times: once with Jeju as the true treated unit, and 16 times reassigning the treatment to each of the remaining provinces in turn (with Jeju returned to the control pool in each placebo run). I then benchmark Jeju's estimated coefficient against this empirical distribution of 17 coefficients. The resulting p-value represents the proportion of the 17 coefficients whose absolute magnitude equals or exceeds that of Jeju's estimate, directly capturing how extreme the actual effect is relative to chance assignment under the sharp null hypothesis.

4.4 Identifying Assumption: Parallel Trends

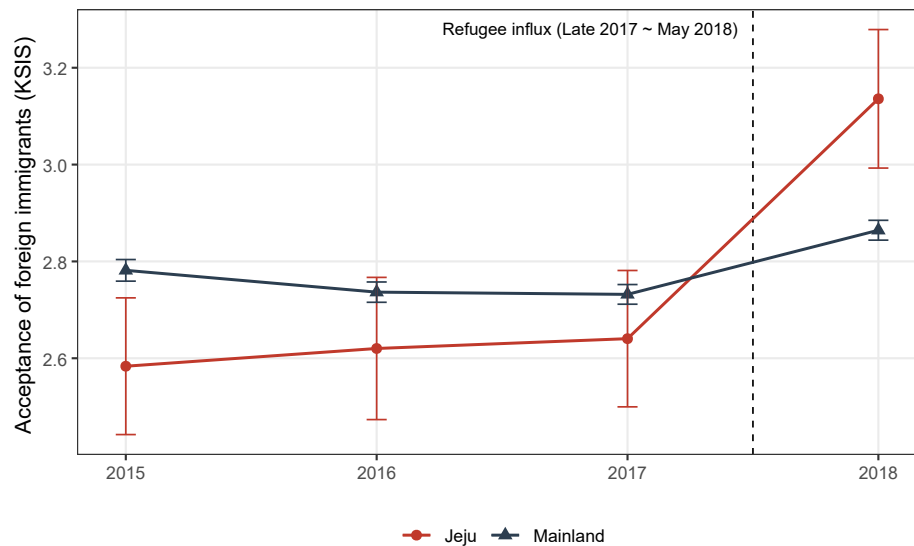


Figure 2: Acceptance of foreign immigrants, Jeju vs. mainland, 2015–2018

Note: Points show weighted means by year and region (KSIS data); error bars denote 95% confidence intervals. Dashed line marks the onset of the refugee influx (late 2017).

The key identifying assumption of this study is the parallel trends assumption, which requires that attitudes in Jeju and the mainland would have followed the same trajectory in the absence of the influx. Because the KMAS includes only a single pre-treatment period (2012 to 2015), the KSIS provides a better basis for evaluating pre-treatment trends. A trade-off, however, is its limited dimensionality, as the KSIS offers only a single immigrant-related item from the broader social acceptance battery. The item asks whether respondents would accept immigrants as “no relationship / neighbors / close friends / spouses,” operationalized as an ordinal scale where higher values indicate more pro-immigrant attitudes. Under this measure, pre-treatment trends appear largely parallel. Figure 2 plots the survey-weighted mean levels of foreign immigrant acceptance for Jeju and the mainland from 2015 to 2018. The two series move largely in parallel prior to the influx, showing slight convergence immediately before the treatment (2016–2017).

Table B4 in the Appendix reports the corresponding event-study estimates for the pre-trend check, showing that the coefficient for 2016—the period immediately preceding the reference year—is substantively small and statistically indistinguishable from zero.

5 Results

5.1 Main Estimation Results from KMAS

All items are coded such that higher values indicate more pro-immigrant attitudes. Accordingly, negative coefficients on all indices indicate an increase in negative attitudes (stronger stereotyping, greater perceived threat, reduced humanitarian concerns) following the influx, whereas positive coefficients indicate attitudes moving in a more pro-immigrant direction. The hypotheses predict different directions across these dimensions, reflecting distinct theoretical mechanisms. Contact theory (H1) predicts that increased intergroup contact reduces stereotyping through cognitive and relational pathways and therefore expects a positive coefficient on the stereotype index. Threat-based theories (H2) predict that the intergroup contact heightens emotional perceptions of threat, and therefore expect negative coefficients on the material (H2a) and symbolic (H2b) threat indices. Finally, H3 predicts that the influx of international refugees and the associated pressure to comply with international norms provokes humanitarian concern, leading to a positive coefficient on the humanitarian index.

Table 2: Difference-in-Differences Estimates: Jeju $\times$ Post-2018 Effect

Dependent Variable	Did Clustered by Region Coefficient (SE)	Matching Coefficient (SE)	Region Placebo Coefficient (<i>p</i> -value)
Stereotype (H1)	0.054 (0.05)	0.041 (0.05)	0.054 (.941)
material Threat (H2a)	−0.113 (0.047)**	−0.124 (0.049)*	−0.113 (.706)
Symbolic Threat (H2b)	0.033 (0.045)	−0.03 (0.05)	0.033 (.824)
Humanitarian (H3)	0.08 (0.037)**	0.08 (0.037)*	0.08 (.529)

Note. Column (1) reports estimates with region-clustered standard errors. Column (2) reports matching estimates using weights based on age, gender, education, and household income. Column (3) reports the region placebo inference coefficient together with its *p*-value. **p* < .10, ***p* < .05, ****p* < .01.

Table 2 reports the estimated effects of the 2018 Yemeni refugee influx on four theoretically derived dimensions of immigrant attitudes. The DiD estimate clustered by region shows that perceived material threat decreased by −0.113 (*p* < .05), meaning that Jeju residents came to feel

more material threat following the refugee influx. By contrast, humanitarian concern increased by 0.08 ($p < .05$), signaling a shift toward more pro-immigrant attitudes on that dimension.

This mixed pattern remains robust in the matching results. After matching mainland respondents' weights to Jeju residents on age, sex, education, and income, Jeju residents still show a heightened sense of material threat (-0.124 , $SE = 0.049$), while humanitarian concern remains elevated (0.08 , $SE = 0.037$)—the same mixed pattern as in the main specification.

These results suggest that the dimensions of immigrant attitudes responded differently to the refugee influx, and that contact the refugee-related event did not produce a uniform effect across dimensions. Jeju residents grew more concerned about material threats relative to the mainland—for example, that immigrants take jobs away from Koreans, that immigrants take more than they contribute, that immigrants increase crime rates, and that immigrants raise the fiscal burden. At the same time, humanitarian concern increased, reflected in items such as Korea's responsibility to contribute to global aid, a felt sense of responsibility as a global citizen, support for relaxing criteria to accept more international refugees, and support for extending benefits even to those with pending refugee status.

However, because only a single region is treated, standard cluster-robust inference may not be reliable. Column (3) reports region placebo results, in which the coefficient is identical to that of Column (1), since regional placebo does not re-estimate the estimate but constructs an alternative (regional) reference distribution to assess its statistical significance. Under this approach, none of the four coefficients remains statistically significant ($p > .10$ in all cases). This indicates that the magnitude of the observed change in Jeju is not unusual relative to the range of changes observed across the other 16 regions, suggesting that the significance found under conventional clustered standard errors should be interpreted with caution.

5.2 Item Placebo Evidence from KSIS

The Korean Social Integration Survey (KSIS) provides a broader measure of social acceptance toward minority groups, including immigrants. Because KSIS spans 2015 to 2018, the resulting

event-study plot offers an independent measure of immigrant acceptance along with additional pre-treatment observations.

To examine whether the estimated effect reflects a general shift in social tolerance or an outcome specific to the refugee shock, I conduct item placebo tests using six social minority categories from the KSIS survey: (1) immigrants, (2) North Korean defectors, (3) sexual minorities (LGBT), (4) ex-convicts, (5) persons with disabilities, and (6) single parents. Respondents were asked whether they would accept each group as "no relationship / neighbor / friend / or partner." Among these, I select the three outcomes that satisfy the parallel pre-trends assumption.

Figure 3 presents event-study estimates for the subset of outcomes that satisfy the parallel pre-trends assumption prior to the 2018 shock—specifically immigrants, sexual minorities (LGBT), and ex-convicts.¹

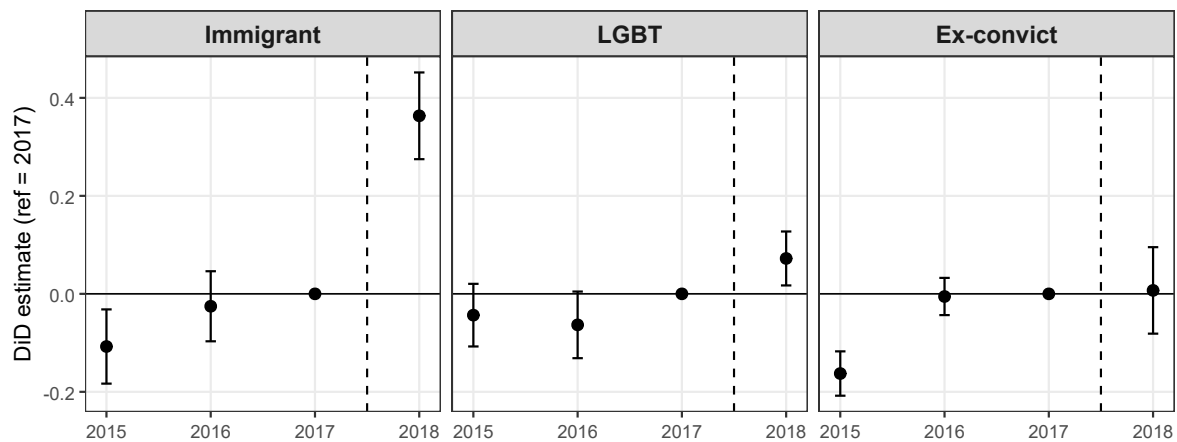


Figure 3: Event-study estimates for valid placebo outcomes (KSIS data, reference year: 2017)

While attitudes toward immigrants show a significant positive shift in 2018 following the refugee influx, sexual minorities also show a smaller but statistically significant increase ($\hat{\beta} \approx 0.07$), whereas ex-convicts show no significant change. While immigrant acceptance follows a relatively clean, monotonic trend toward increased acceptance, the other outcomes exhibit more fluctuation across years, with some switching sign between periods. This pattern suggests that the observed increase in immigrant acceptance may not be entirely attributable to the refugee influx itself, and

¹Event-study estimates for all six outcomes are reported in Appendix Figure 4, and corresponding regression coefficients are provided in Appendix Table D5.

may instead partly reflect a broader shift in social attitudes toward minority groups in Jeju over this period.

6 Discussion: Plausible Explanations for Limited Local Effects

This section considers several plausible explanations for the limited evidence that local refugee exposure altered natives' attitudes toward immigrants.

First, geographic co-location does not necessarily imply physical interpersonal contact. Most of the asylum seekers remained concentrated around the northern part of the island (Samdo-dong), near Jeju International Airport and the Jeju Immigration and Foreigners Office, often sharing accommodation in a small number of hotels nearby (Jwa, 2018). Given Jeju's population of approximately 660,000, the roughly 550 refugees represented only a limited physical presence across the island as a whole. The Naomi Center, a Catholic organization providing aid and shelter to refugees, was also located in this area. This spatial concentration suggests that reductions in physical distance between refugees and most local residents may have been considerably smaller than implied by treatment assignment at the regional level. Since the survey sample was designed to represent respondents across both urban and rural areas of Jeju (Korea Institute of Public Administration, 2018), many respondents may have had little opportunity for direct interpersonal contact.

Second, consistent with this limited reduction in physical proximity, nationwide media coverage may also have contributed to the absence of detectable differences between Jeju and mainland residents. Previous research shows that indirect or parasocial contact through news and media can shape attitudes toward outgroups (Schiappa et al., 2005), including attitudes toward immigrants specifically (Marble et al., 2021). The Yemeni refugee issue quickly became a nationally salient political controversy, receiving extensive television, newspaper, and online coverage throughout South Korea, while local media tended to emphasize humanitarian aspects of the response, and national media framed the issue more in terms of a polarized pro/anti-refugee dispute (Hur and

Yang, 2024). Depending on which media outlet residents consumed, the informational content they were exposed to may have varied more by media consumption than by physical proximity to the refugee population itself.

Lastly, direct public exposure among local residents may have been buffered by active administrative intervention from the Jeju Immigration and Foreigners Office. The most notable institutional support was the active job placement of the local government. In coordination with the central government, although refugee applicants are typically barred from employment for the first six months after arrival, this restriction was temporarily lifted to allow immediate employment, in part to alleviate residents' anxiety. In this process, the Jeju provincial government and the immigration office actively brokered employment in the fishing and food service industries, resulting in 382 of the roughly 500 refugees finding employment (Jeju Special Self-Governing Province, 2018). This measure was intended to address public complaints driven by concerns over homelessness and associated crime, and the provincial government's stated policy was to "actively support individual job searches for those still unemployed", according to the white paper about Yemeni refugees (Jeju Immigration and Foreigners Office, 2020), which suggests that social unrest stemming from perceived threat was buffered through active institutional response. These explanations remain speculative, as the present study does not directly identify the mechanisms linking refugee exposure to public attitudes. Nevertheless, they suggest that administrative residence within a refugee-receiving locality may be an imperfect proxy for meaningful inter-group contact, revisiting the assumption that local exposure to refugees necessarily constitutes such contact.

7 Conclusion

This paper began by asking why the literature on refugee exposure and immigration attitudes produces such divergent findings. Existing work has largely focused on the conditions of intergroup contact—its quality, duration, and institutional context—to explain when contact reduces prejudice and when it does not. Yet studies such as Lee and Shin's diverging results across similar refugee-exposure

settings suggest that the conditions-of-contact framework alone may not fully account for this divergence. Motivated by this puzzle, I revisited the 2018 Jeju refugee case, distinguishing four theoretically motivated dimensions of immigrant attitudes— stereotype, symbolic threat, material threat, and humanitarian concern—using a difference-in-differences design applied to the Korean Multicultural Acceptance Survey (KMAS) and the Korean Social Integration Survey (KSIS).

The results, however, were not stable across different dimensions of immigration attitudes and different estimations. DiD estimates with cluster-based standard errors suggested mixed effects across dimensions, with material threat increasing and humanitarian concern also increasing. But subjected to region placebos, accounting for the fact that there was only a single cluster, none of the estimates remained statistically significant. Item placebo analyses using the KSIS further showed that the shift in immigrant acceptance was accompanied by changes in attitudes toward other unrelated minority groups. This suggests there is a lack of evidence to believe that the refugee influx itself drove any attitudinal changes.

These findings speak to the original question in two ways. First, they suggest that local refugee exposure to a given location may not necessarily need to be the kind of meaningful intergroup contact. Administrative or geographic proximity may be an imperfect proxy for actual contact. Second, on methodological grounds, natural experiments that rely on a small number of treated clusters, as is often the case when treatment is assigned at the level of large administrative or geographic units (Hagemann, 2025), warrant greater statistical caution than conventional clustered standard errors alone can provide. Third, immigration attitude measures may cluster and have distinct dimensions that may move in opposing ways. This paper therefore aims for more contextual and methodological caution in immigration attitudes as a response to the refugee influx.

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A Correlation Table

Table A3: Correlations among Attitudes toward Foreigners Indices

2015				
	Stereotype	Material	Symbolic	Humanitarian
Stereotype	1.00	0.52	0.32	0.20
Material	0.32	0.31	1.00	0.23
Symbolic	0.52	1.00	0.31	0.22
Humanitarian	0.20	0.22	0.23	1.00
2018				
	Stereotype	Material	Symbolic	Humanitarian
Stereotype	1.00	0.56	0.40	0.18
Material	0.40	0.31	1.00	0.26
Symbolic	0.56	1.00	0.31	0.17
Humanitarian	0.18	0.17	0.26	1.00

B Pre-treatment Trend Check (KSIS)

Table B4: Event-Study Coefficients: Jeju vs. Mainland

	Estimate	Std. Error	t value	Pr(> t)
2015 × Jeju	−0.107	0.039	−2.782	0.013*
2016 × Jeju	−0.025	0.036	−0.695	0.497
2018 × Jeju	0.363	0.045	8.048	< 0.001***

Note: $N = 31,700$. SE clustered by *ara* (17 clusters). Reference year: 2017. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

C Event-Study Estimates for Six Placebo Outcomes

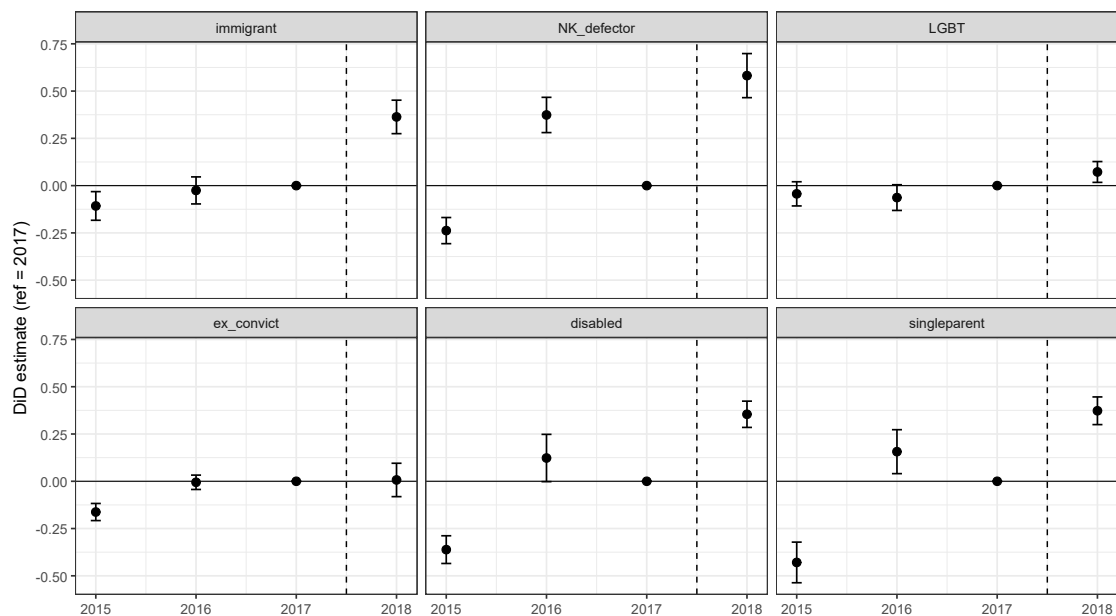


Figure 4: Event-study estimates for six placebo outcomes (KSIS data, reference year: 2017). Points show the Jeju X year interaction coefficients with 95% confidence intervals; the dashed line indicates the refugee influx.

D Event-Study Estimates for Six Placebo Outcomes

Table D5: Event-Study estimates for placebo outcomes (Reference year: 2017)

Target Group	2015	2016	2018
Immigrant	−0.107 (0.039)**	−0.025 (0.037)	0.363 (0.045)***
North Korean Defector	−0.238 (0.035)***	0.374 (0.048)***	0.582 (0.060)***
LGBT	−0.044 (0.033)	−0.063 (0.035)*	0.072 (0.028)**
Ex-Convict	−0.163 (0.023)***	−0.005 (0.019)	0.007 (0.045)
Disabled	−0.362 (0.037)***	0.123 (0.064)*	0.354 (0.035)***
Single Parent	−0.429 (0.055)***	0.157 (0.059)**	0.373 (0.037)***

Note. Each row reports the Jeju $\times$ year coefficients (with standard errors in parentheses) from a separate event-study regression, using 2017 as the reference year. All models include region and year fixed effects, with standard errors clustered by region. * $p < .10$, ** $p < .05$, *** $p < .01$.