# Small Boats, Big Impacts: The Ripple Effects of Irregular Migration

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**Abstract**

Irregular migration can have outsized political and social effects, even when small in scale, due to their high visibility and symbolic resonance. Using high-frequency data on small boat crossings in the English Channel linked to British Election Study panel data, we exploit variation in survey timing to identify causal effects. Recent arrivals reduce support for immigration, including legal routes; these effects are amplified by media coverage, especially in right-leaning outlets. These findings suggest that symbolic migration shocks, magnified by media narratives, can reshape public attitudes and legislative focus, even in the absence of large-scale demographic change.

*Key words*: irregular migration, migration attitudes, media multiplier, media framing
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# 1 Introduction

Irregular migration remains a highly politicized issue across the US and Europe, frequently shaping debates over third-country deportations/processing, border enforcement, and the scope of human rights obligations.[1] A 2020 Pew Research Center report estimated that between 800,000 and 1.2 million people, or around 1.2% to 1.8% of the UK population, were living in the country without legal authorization. Public attitudes toward irregular migration have direct consequences for issue salience, electoral outcomes, and policy decisions. These attitudes often co-evolve with the appeal of populist rhetoric, particularly narratives emphasizing national sovereignty and border control (Guriev and Papaioannou, 2022).

Yet studying these effects in real time remains difficult. Irregular migration is, by definition, clandestine and episodic, making it hard to measure as it unfolds. Most existing work has examined enforcement efforts, smuggling networks, labor supply, and humanitarian responses (Alsan and Yang, 2024; Deiana et al., 2024; Bazzi et al., 2021; Feigenberg, 2020; Fasani and Frattini, 2019) often using imputed legal status from observable traits (Borjas, 2017; Borjas and Cassidy, 2019). In contrast, we lack evidence on how the visibility of irregular entry, rather than its legal classification, shapes public responses. Although many individuals who cross borders illegally may later claim asylum, they lack legal refugee status at the time of entry. Unauthorized entry, even from genuine asylum seekers, can trigger sharper backlash than legal migration and may generate broader spillovers, including declining support for legal migration pathways.

This paper addresses this gap by examining how highly visible but small-scale episodes of irregular migration influence public opinion in real time. We focus on small boat crossings in the English Channel—a politically charged and visually prominent form of entry into the UK. Although these crossings account for a small share of overall immigration, they receive disproportionate media and political attention.[2] Daily arrival figures are regularly reported in major news outlets both online and offline, and even small fluctuations often feature in headlines, allowing for high-frequency public exposure.

To assess their impact, we compile a novel high-frequency dataset of daily small

[1] We define irregular migrants according to the UN 1994 International Conference on Population and Development as "persons who do not fulfill the requirements established by the country of destination to enter, stay or exercise an economic activity." This includes individuals who enter a country without authorization (e.g., outside designated border crossings or without valid documents) as well as those who overstay visas or remain without legal permission.

[2] Former PM Rishi Sunak made "Stop the Boats" one of his five key pledges during 2023–24. The slogan was originally popularized by Tony Abbott during his campaign for the 2013 Australian federal election. Sunak's successor, Keir Starmer, has also pledged to "Smash the Gangs" facilitating Channel crossings.

boat arrivals from 2018 to 2024 and link it to the British Election Study (BES) Internet Panel, which tracks the same individuals across multiple waves with precise interview dates. This linkage enables us to measure exposure to recent irregular migration events by using the number of small boat arrivals in the two days prior to each respondent's interview, allowing us to connect public opinion to real-time migration shocks in a way not previously possible.

Our analysis focuses on three outcomes: attitudes towards future immigration, perceptions of immigration levels, and issue salience. To identify causal effects, we exploit quasi-random variation in arrival timing and leverage the panel structure of the BES. Our specification includes individual fixed effects to account for time-invariant traits and district-by-wave fixed effects to capture local time-varying shocks. We also control for a wide set of characteristics, including employment status, housing tenure, education, social grade, media consumption, and broader media intensity and sentiment. This design allows us to identify within-person attitudinal changes driven by plausibly exogenous variation in recent small boat arrivals.

We begin by examining how recent small boat arrivals influence natives' attitudes towards future immigration, measured on a standardized 0 to 10 scale. A 1,000-person increase in arrivals over the previous two days leads to a 0.027 standard deviation decline in support for allowing more immigrants. We validate these findings using an instrumental variable strategy exploiting sea conditions, specifically wave height at the point of departure near Calais, France, which affects the likelihood of crossings and is plausibly exogenous to public attitudes. Following DellaVigna and Kaplan (2007) and DellaVigna and Gentzkow (2010), we estimate a persuasion rate of approximately 7.2% associated with exposure to small boat arrivals. For comparison, Djourelova (2023) report a 1.9-4.4% rate following the ban on the term illegal immigrant, while Keita, Renault and Valette (2024) find a 2.6% rate on immigration attitudes after systematic disclosure of offenders' origins in crime reporting.

Using an event-style design, we show that the effect of irregular migration shocks is most concentrated in the two days immediately preceding the interview, with no significant impact from earlier lags or future (placebo) arrivals. The absence of anticipatory effects or reverse causality supports a causal interpretation of the relationship. While these shifts attenuate over time, the effects remain statistically significant up to eight days, suggesting that public opinion remains sensitive to recent, visible migration events. To probe longer-lasting influence, we estimate a cumulative exposure model capturing repeated shocks over the prior month. These results show that the effect of a new arrival is amplified when it follows a sustained period of prior irregular migration

activity, pointing to a reinforcement mechanism: episodic but frequent shocks can sustain public concern and entrench immigration as a politically salient issue, even when individual episodes have only transient effects.

Notably, these short-run shocks appear to trigger broader anxieties, reducing support even for legal migration routes. The largest negative shifts are observed for foreign students (–0.21 SD), followed by non-EU workers (–0.17 SD), family migrants (–0.13 SD), and EU workers (–0.13 SD), with a smaller effect for asylum seekers—despite survey questions referring to these groups in general terms. We also find that Members of Parliament are significantly more likely to reference irregular migration in parliamentary debates following recent arrivals, suggesting that such events quickly elevate the issue on the legislative agenda alongside public concern. Recent policy changes, including restrictions on student dependents and higher income thresholds for family visas, appear to align with these attitudinal shifts, indicating that government actions may be responding to public sentiment shaped by irregular migration events.

To understand the mechanisms behind these shifts, we examine how small boat arrivals shape media coverage, public attention, and belief updating. First, channel crossings lead to immediate spikes in small boat migration-related reporting, particularly in right-leaning outlets, which disproportionately frame them in terms of crime, security, and law enforcement. In contrast, left-leaning media outlets emphasize humanitarian and welfare concerns.

To examine how national media coverage shapes individual-level responses, we construct a shift–share style media exposure index. This index interacts national coverage volumes——instrumented using crossing conditions—with pre-existing news consumption patterns from the BES. Since self-reported contemporaneous media use is potentially endogenous, this approach isolates plausibly exogenous variation in media exposure. We find that predicted media exposure significantly reduces support for immigration: each additional weighted article is associated with a 0.40 SD decline in support. Moreover, media exposure amplifies the attitudinal effect of migrant arrivals, consistent with salience-based models of opinion formation. Standardized estimates suggest that media exposure has a threefold larger impact than arrivals themselves, highlighting the central role of information environments in shaping public attitudes.

Second, Google Trends data shows heightened search activity for specific terms like 'English Channel crossings' and 'Small Boat', while broader terms such as 'Immigration', 'Refugee' or 'Asylum Seeker' remain largely unaffected. BES survey responses also show that immigration becomes more likely to be named the most important issue. In contrast, left-leaning consumers maintain focus on institutional or humanitarian di-

mensions. These shifts suggest that framing raises the salience of illegal migration and reorders public priorities in ideologically consistent ways.

Finally, we show that public responses to irregular migration are conditioned by prior beliefs. Individuals who already perceive immigration as rising, or who previously expressed low support for migrants, react more negatively to new arrival shocks. These patterns are consistent with confirmation bias: rather than shifting beliefs uniformly, visible events reinforce existing concerns. We also find that perceived immigration levels increase in response to small boat arrivals, and that these perceptions are closely linked to declining support for immigration—highlighting the role of subjective interpretations over objective scale. Importantly, these effects are migration-specific, with no comparable shifts observed for other national concerns such as crime, education, or the NHS.

Together, our results highlight that visible irregular migration events can exert disproportionate influence—not because they generate large average shifts in individual attitudes, but because they consistently shape perceptions over time, increase the salience of immigration, and reinforce beliefs that immigration levels are rising. These mechanisms—operating through media amplification, belief updating, and issue salience—help explain how modest but frequent shocks can sustain public concern and contribute to a political environment more receptive to restrictive policy change.

**Contribution to Literature** This paper brings together multiple strands of research to shed new light on how irregular migration events influence public attitudes and policy preferences.

First, prior research on irregular migration has predominantly examined how enforcement policies (Gathmann, 2008; Feigenberg, 2020; Bazzi et al., 2021), legal entry mechanisms (Lessem, 2018; Kovak and Lessem, 2020), migrant risk calculations (Auriol et al., 2023), media coverage (Di Maio et al., 2024) and humanitarian interventions (Battiston, 2022; Deiana, Maheshri and Mastrobuoni, 2024) shape movement patterns.[3] Much less is known about the demand side—how receiving-country citizens react to irregular migration. Studying this has been challenging due to the lack of granular data on irregular entry and individual-level attitudinal shifts. This paper addresses that gap using high-frequency data and real-time variation in public exposure.

Much of the literature on undocumented immigrants in the US relies on residual or imputation methods to infer legal status from observable traits (Warren and Passel, 1987; Borjas, 2017; Borjas and Cassidy, 2019), with recent improvements using confi-

[3] Becker and Ferrara (2019) provides a broader review of the literature on the consequences of forced migration in the past 10 years.

dential Mexican consular ID data (Camarena and Tiburcio, 2024). In European context, Hangartner et al. (2019) use a natural experiment and cross-sectional survey data in Greek Aegean islands to show that exposure to large-scale transit refugees increased anti-immigrant sentiment. We differ by shifting focus on how small-scale and highly visible episodes of irregular migration affect public attitudes in real time in receiving countries. Our design links high-frequency shocks to individual-level panel data, allowing us to capture within-person attitudinal changes and explore the role of media framing and heterogeneity in information processing by prior beliefs. These mechanisms differ from those in studies focused on long-run demographic change.

Next, we contribute to the literature on immigration attitudes by treating irregular migration not just as a legal status, but as a distinct form of public exposure shaped by its visibility, media framing, and symbolic resonance. Most existing studies emphasize large-scale flows or sustained local contact with migrants (e.g., Steinmayr, 2021; Ajzenman et al., 2022), and explain public reaction in terms of economic self-interest (Rozo and Vargas, 2021; Lebow et al., 2024) or perceived cultural threat (Tabellini, 2020). In contrast, we focus on discrete, emotive events that attract intense media attention despite limited direct contact for most of the population. Our findings highlight how visibility and framing shape public sentiment in ways not captured by standard models of exposure, underscoring the importance of symbolic and mediated forms of migration experience.

Relatedly, the literature shows that public perceptions of immigration levels are often exaggerated and only weakly correlated with actual migration statistics (Hopkins et al., 2019; Grigorieff et al., 2020; Dylong and Uebelmesser, 2024). These misperceptions are shaped more by media framing, political discourse, and symbolic cues than by local migration levels or hard facts (Facchini et al., 2017; Benesch et al., 2019; Djourelova, 2023; Alesina et al., 2023; Keita et al., 2024). Our paper adds to this work by showing that even small-scale but highly salient irregular migration episodes can recalibrate perceptions of national immigration trends.

Turning to immigration preferences by category, Bansak et al. (2023, 2016) and Hainmueller and Hopkins (2015) use large-scale conjoint experiments to show that European and American respondents consistently prefer migrants who are skilled, fluent in the local language, Christian, and possess credible humanitarian claims. These preferences appear remarkably stable across time, crises—including the Syrian and Ukrainian refugee waves—and migration volumes. In contrast, we find that highly visible irregular migration events can undermine support not only for irregular migrants but also for legal and historically well-supported channels such as family reunification and student visas. Bansak, Hainmueller and Hangartner (2023) explicitly investigate concerns about

'asylum fatigue' during the Ukrainian refugee crisis and find no evidence of declining support. However, such conjoint designs may miss the emotional salience and perceived loss of control triggered by real-world irregular arrivals, which provoke more visceral and generalized public backlash.

Finally, a growing literature shows that media coverage influences public attitudes not only by shaping what issues people think about, but also how they think about them, through framing, selective emphasis, and narrative cues (Enikolopov, Petrova and Zhuravskaya, 2011; Facchini, Mayda and Puglisi, 2017; Durante, Pinotti and Tesei, 2019; Djourelova, 2023; Müller and Schwarz, 2023; Bursztyn, Rao, Roth and Yanagizawa-Drott, 2023; Angelucci, Cagé and Sinkinson, 2024; Besley, Fetzer and Mueller, 2024; Schneider-Strawczynski and Valette, 2025). Building on this, we provide causal evidence that media acts as a powerful multiplier: predicted media exposure has a threefold larger impact on immigration attitudes than the underlying migration arrival shocks themselves. These effects operate through both the volume and the framing of coverage, with right-leaning outlets disproportionately emphasizing crime and law enforcement. Our results underscore the role of the information environment in magnifying symbolic events and translating them into broader shifts in public sentiment.

## 2 Background

The United Kingdom has long been a key destination for international migration, shaped by its historical ties, global economic role, and policy regimes. While most migrants enter the country through regular legal channels, irregular migration—particularly small boat crossings of the English Channel—has become a focal point of public concern and policy discourse in recent years.

As of 2017, the UK hosted the second-largest number of irregular migrants in Europe, with estimates ranging from 800,000 to 1.2 million individuals living in the UK without legal authorization (Connor and Passel, 2019). This includes people who overstayed visas, entered without inspection, or were born to undocumented parents. Irregular entry occurs through multiple routes: some arrive by air without documentation, others pass through UK ports undetected, and many attempt to hide in "roll-on/roll-off" freight vehicles (Walsh and Cuibus, 2024).[4] In 2018 alone, 7,554 migrants were detected in 2,390 vehicles attempting to cross the border this way.[5] According to the National

[4]These are vessels used to transport cargo such as cars and trucks that can be driven onto the vessel and off at the destination.

[5]Source: Independent Chief Inspector of Borders and Immigration, November 2020.

Crime Agency, smuggling routes include ferries, shipping containers, railways, and increasingly, small boats.

Among these, small boat crossings have become the most prominent and visible form of irregular migration, even though other entry routes continue to exist. Since 2018, more than 150,000 migrants have attempted unauthorized crossings of the English Channel in small, often overcrowded boats. These crossings typically begin in Calais, France, and involve crossing the Dover Strait en route to the UK (The Migration Observatory, 2014). Most of these migrants come from countries such as Iran, Albania, Afghanistan, Iraq, and Syria, and a large share apply for asylum upon arrival. However, the asylum process is protracted: as of mid-2023, nearly 80 percent of applicants had been waiting more than six months for an initial decision (Walsh and Jorgensen, 2024). Many cases are delayed due to a backlog and repeated or withdrawn applications, leaving applicants in prolonged legal uncertainty and reliant on state-provided support.

Although irregular migration stems from a combination of push and pull factors, small boat crossings are often driven by conflict, persecution, and economic instability in migrants' home countries (Conte and Migali, 2019; Crippa et al., 2024). While the UK does offer safety and opportunity, the perception that migrants are primarily motivated by access to generous welfare benefits is not strongly supported by empirical evidence—most are unaware of the extent of support available before arriving (James and Mayblin, 2016). Additionally, organized crime groups play a role in facilitating illegal migration, often exploiting vulnerable adults and children while charging exorbitant fees.

Government efforts to deter irregular migration have intensified. In 2022, the Conservative government launched the Rwanda Asylum Plan, under which individuals arriving illegally would be deported to Rwanda to have their asylum claims processed. Even if their asylum claims were approved, individuals would be required to remain in Rwanda. The plan significantly expanded detention powers, allowing detention without bail for 28 days. However, the plan was ruled unlawful in June 2023. This was followed by the 'Stop the Boats' pledge from former Prime Minister Rishi Sunak, which aimed to deny asylum, protection under modern slavery provisions, or the right to lodge human rights claims to anyone entering the UK illegally. The policy sought cooperation with France to prevent crossings at source, agreements with Albania to expedite deportations, and stepped-up enforcement through workplace and housing raids. The government framed this as safeguarding the integrity of legal migration pathways by deterring perceived queue-jumping. In 2024, a change in government led to a shift in strategy. The newly elected Labour government established the Border Security Command, a multi-agency task force involving the National Crime Agency, Border Force,

immigration enforcement, and intelligence services.

Irregular migration through the sea route is not unique to the UK. In 2022, Europe recorded over 189,000 irregular arrivals by land and sea, the highest annual total since 2016 (IOM, 2024). In 2023, Italy recorded 158,000 arrivals, Spain 57,000, and Greece 42,000 (Walsh and Cuibus, 2024). By comparison, the UK's figure of 29,000 is comparatively lower in absolute terms but remains politically salient due to the heightened visibility and symbolic resonance.

The prominence of small boat crossings in political discourse reflects both their symbolic significance and the challenges they pose for immigration control. Understanding public responses to such visible migration events—and the media narratives that shape them—is essential for evaluating the broader political and social consequences of irregular migration.

# 3 Conceptual Framework

We conceptualize small boat crossings across the English Channel as salient, politicized shocks that can shape public attitudes toward immigration. Although they account for a small fraction of total migration—fewer than 37,000 individuals were detected in 2024, compared to over 3 million legal entrants—their visibility and symbolic weight give them disproportionate influence over public perception. These events are often framed as a loss of control over borders, prompting broader concerns about immigration governance and system legitimacy.

Media plays a central role in shaping how these events are interpreted. While outlets exhibit relatively stable ideological leanings, their coverage of specific shocks—through shifts in tone, volume, and emphasis on policy implications—is dynamic and event-driven. We treat media not as passive filters but as active amplifiers that link discrete incidents to wider debates about immigration and control. Most individuals are unlikely to observe small boat arrivals directly, particularly at daily frequency. Instead, media reporting transforms otherwise remote or episodic events into widely shared points of attention, enabling public engagement with migration shocks even among those far removed from their physical occurrence. How individuals interpret these events depends on their existing beliefs and informational environments. The same incident may evoke different reactions depending on how it is framed and by whom it is received—highlighting the importance of both media narratives and ideological priors in shaping public response.

We identify three main channels through which these effects unfold. First, migration

shocks can elevate issue salience, increasing the perceived urgency of immigration as a political concern. Second, they may shape factual beliefs—such as perceptions that immigration levels are rising or that the system is under strain. Third, they can shift normative attitudes about which groups should be allowed to enter. Crucially, these reactions may extend beyond irregular entrants to legal migration routes—such as students or family migrants—especially when public concern is framed around system-wide failure. These mechanisms can interact: heightened salience may lead to belief updating, which in turn drives shifts in attitudes.

In this way, shocks like small boat arrivals may generate attitudinal spillovers that are mediated by dynamic media narratives and conditioned by prior beliefs. Understanding this chain—from external event to framing, interpretation, and belief change—is key to explaining public reactions to irregular migration.

# 4 Data

## 4.1 Small Boat Arrivals

To measure daily irregular migration flows into the UK via the English Channel, we use the official time series on small boat arrivals published by the UK Home Office.[6] The dataset contains daily counts of migrants detected arriving in the UK in small boats from 2018 onward and is based on provisional operational data. These figures may differ from those released by the Ministry of Defence or later finalized statistical reports due to differences in event definitions, reporting processes, and the timing of detection. Nonetheless, the Home Office dataset is considered the most comprehensive and up-to-date operational record of small boat arrivals. The most common route for these crossings is through the narrowest section of the English Channel, known as the Dover Strait, linking Calais in France to Dover in England (The Migration Observatory, 2014).

A 'small boat' refers to a vessel used by individuals attempting to enter the UK without legal permission—either by landing directly onshore or being intercepted at sea by UK authorities. Common vessel types include rigid-hulled inflatable boats (RHIBs), dinghies, and kayaks. The arrivals data include individuals detected in the Channel or upon arrival, but exclude those arriving undetected or via other maritime routes such as ferries or yachts. Each observation corresponds to a calendar date, and the dataset reports both the number of migrants arriving and the number of boats detected between

[6]Source: https://www.gov.uk/government/publications/migrants-detected-crossing-the-english-channel-in-small-boats

January 2018 and December 2024.

Our main variable of interest is the cumulative number of migrants arriving over recent days. We construct rolling sums of arrivals over 2-, 3-, 4-, 5-, 6-, 7-, and 8-day windows preceding each interview date to capture the short-term intensity of migration shocks. To probe the timing and persistence, we also construct a series of non-overlapping two-day arrival windows. We use a two-day window to balance capturing immediate public reactions with allowing sufficient time for media coverage and awareness to develop, enabling us to disentangle immediate from lagged effects with clear temporal ordering.

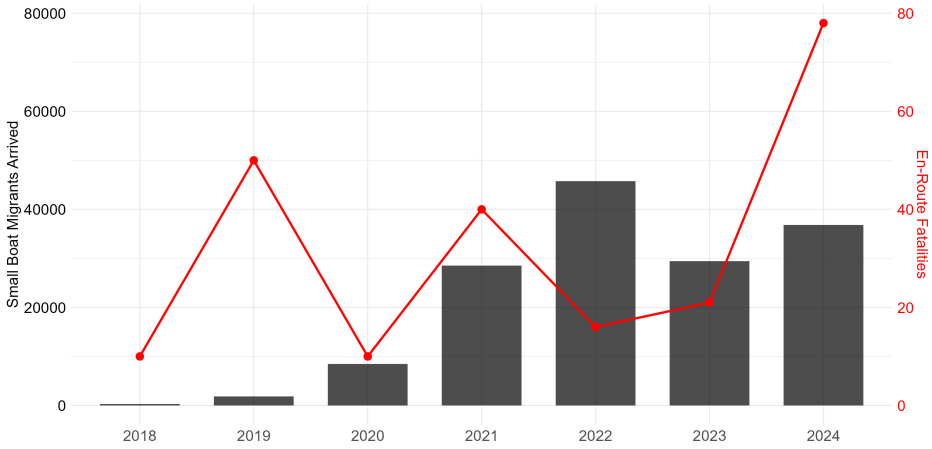
In addition, we define short-horizon cumulative exposure measures by summing arrivals over expanding backward-looking windows—up to 30 days—to assess whether the impact of migration shocks attenuates or persists with broader exposure. All measures are replicated using alternative metrics such as migrants per boat to capture variation in the density of crossings. Lastly, we construct a forward-looking two-day arrival measure, used as a placebo to test whether observed changes in attitudes precede actual arrivals events.

The time series on small boat arrivals reveals a substantial variation in the volume and timing of irregular migration flows to the UK. Figure 1(a) shows the total number of small boat migrants arriving each year from 2018 to 2024. While annual arrivals remained low before 2020, they increased sharply thereafter, averaging around 35,000 per year between 2021 and 2024. Appendix Figure A1 presents cumulative arrivals by day of year for each calendar year, showing that both the speed and intensity of crossings have increased over time. In recent years, arrivals have begun earlier in the calendar year and have continued more steadily into the autumn.

Figure 1(b) explores the density of crossings by plotting the average and standard deviation of migrants per boat over time. The average number of migrants per boat (conditional on arrival) was 32.7, with a standard deviation of 18.1 (Appendix Table A1 Panel A). The unconditional average was 10.8, reflecting the large number of days with no arrivals. The increasing trend in both the mean and standard deviation since 2021 suggests that crossings are not only becoming more frequent but also more densely packed, potentially increasing both the political visibility and humanitarian risks associated with small boat migration.

Seasonality is a defining feature of these crossings. Appendix Figure A2 shows average monthly arrivals and migrants per boat. Arrivals peak during summer and early autumn (July–September), coinciding with more favorable maritime conditions. Migrants per boat are also higher during these peak months, suggesting possible adjustments in

Figure 1—Small Boat Migrant Arrivals and Fatalities (2018 - 2024)




(a) Annual Small Boat Migrants and En-Route Fatalities




(b) Monthly Migrants per Boat (Conditional Mean and SD)

Notes: Figure (a) Consists of the total number of migrants arrived per year and the total number of migrant fatality per year from 2018-2024. Figure (b) Depicts the comparison between the mean number of migrants arrived per boat and the standard deviation of the mean number of migrants arrived per boat from 2018-2024 calculated on a monthly basis.
Sources: Small Boat Arrivals - UK Home Office; Migrant Fatalities - IOM Missing Migrants Data

smuggling tactics or vessel usage.

Daily arrival patterns exhibit sharp fluctuations, with prolonged periods of inactivity interspersed with sudden spikes. The average number of migrants arriving per day is 59, but conditional on any arrival, this increases to 178. Appendix Figure A3 shows these bursty patterns. Over the full sample, 67% of days recorded zero migrant arrivals. Even in 2024, when total arrivals reached record highs, 58% of days had no reported crossings. This bunching reflects both operational constraints—such as weather and enforcement—and the need for coordinated crossing efforts. These dynamics motivate

our use of short-run cumulative measures of arrival intensity in the analysis.

To contextualize the risks associated with these journeys, we also examine the human cost of small boat migration using data from the International Organization for Migration's (IOM) Missing Migrants Project, which documents deaths and disappearances during migration. We focus on fatal incidents recorded along the English Channel route between 2018 and 2024, building a daily time series of en-route fatalities (see Data Appendix Section A.1 for details). Over this period, 128 fatal incidents and 231 deaths were recorded, with the highest toll in 2024 (Appendix Table A2). Most incidents occurred in France (88%) with drowning as the leading cause of death. Spatial analysis of incident locations (Figure A4) shows that most events cluster along the northern French coastline, especially near Calais, underscoring both the dangers of crossing and the role of French departure zones as key points of risk in the migration route.

#### 4.1.1 Crossing Conditions

To proxy for daily crossing conditions in the English Channel, we use data on significant wave height (SWH) from the European Centre for Medium-Range Weather Forecasts (ECMWF).[7] The SWH measure—denoted $H^{1/3}$—represents the average height of the highest one-third of waves recorded in a given period and is widely used in maritime navigation as an indicator of sea roughness and vessel safety. Deiana et al. (2024) also use a similar measure to examine crossing conditions in Central Mediterranean.

We extract wave height data for a fixed departure point near Calais, France—one of the most common launch zones for small boat crossings to the UK. Given that most fatalities occur near the point of departure (Figure A4), measuring wave height conditions at the launch site—rather than at the midpoint of the Strait of Dover—provides a more relevant proxy for crossing feasibility and immediate risks faced by migrants. The dataset provides hourly wave conditions, which we aggregate to daily averages of the highest one-third wave heights (i.e., $H^{1/3}$ values). To match our estimation window, we compute the two-day average prior to each interview.

Significant wave height is a composite measure of maritime conditions—capturing wind, swell, and wave strength—and strongly influences the feasibility and safety of Channel crossings, particularly in small, overloaded vessels. Higher wave heights increase the risk of capsizing, delay departures, and reduce the likelihood of successful crossings. We use this measure as a plausibly exogenous instrument for small boat arrivals, leveraging it in robustness checks and IV analyses to identify the causal effect of

[7] Source: https://cds.climate.copernicus.eu/datasets/reanalysis-era5-single-levels

irregular migration exposure on public attitudes and media narratives.

## 4.2 British Election Study

To examine how individuals respond to irregular migration, we use the British Election Study (BES) Internet Panel, a nationally representative longitudinal survey of UK adults that tracks political attitudes and behaviors over time. We use the combined panel from Waves 14 to 29, covering the period from 2018 to 2024. Each wave includes approximately 30,000 to 35,000 respondents, with substantial within-person follow-up: on average, individuals participate in at least five waves (Appendix Figure A5). This individual-level panel structure allows us to estimate within-person responses to external events while controlling for time-invariant characteristics using fixed effects. Appendix Table A3 lists the start and end dates for each wave; on average, one wave spans 18 days. Table A4 provides the full text of the relevant questions.

Our main outcome variable is attitudes towards immigration, measured using a 0–10 scale that asks whether the UK should allow 'many fewer' to 'many more' immigrants. This item appears in majority of the survey waves, allowing for consistent tracking over time. In addition, a few waves include group-specific items that ask whether the UK should allow more or fewer immigrants from particular categories: asylum seekers, EU workers, non-EU workers, international students, and family members of existing migrants. We exclude "Don't know" responses and standardize all outcomes.

To measure perceptions of national conditions, we use two question batteries that ask whether things like immigration, the cost of living, crime, the NHS, education, and the economy are getting better or worse. These are recorded on five-point ordinal scales and standardized. These variables allow us to distinguish attitudes toward immigration policy from more general assessments of national trends.

We also examine perceived issue salience using the Most Important Issue (MII) question, which asks respondents to identify the most pressing issue facing the country. BES codes these open-ended responses into topical domains. Based on this, we construct binary indicators for whether respondents cite immigration, the economy, health, or other topics as their top concern.

Finally, we include a range of time-varying characteristics that may shape immigration attitudes, including education, home ownership, employment status, and social grade. We also include self-reported ideological placement on a left–right scale (rescaled 0–1). Respondents are also asked which daily newspaper they read most often. While this does not capture actual media consumption on a given day, it provides a broad proxy

for information environments. We classify reported newspapers as left-leaning (The Guardian, Mirror), right-leaning (Daily Mail, The Sun, The Telegraph, The Times), or centrist or unclassified outlets. Additional details, question wordings, and construction of variables are detailed in Data Appendix Section A.2.

Table A1 Panel B presents the summary statistics. On average, respondents place themselves below the midpoint on the 0–10 scale when asked whether the UK should allow more migrants (mean = 3.59), with even lower support for asylum seekers (mean = 3.28) and higher support for EU migrants (mean = 5.58) and foreign students (mean = 5.16). Perceptions of immigration as rising are also widespread, with a mean response of 3.63 on a five-point scale where higher values indicate a belief that immigration is increasing. Nearly half the respondents report reading a newspaper. The sample is balanced in terms of gender (56% female) and considerable representation across social classes and employment status.

## 4.3 GDELT

To capture both real-world developments and media coverage related to migration, we use data from the Global Database of Events, Language, and Tone (GDELT), which monitors global news media in real time. We rely on two components of GDELT: the Events database, which documents reported political and social events, and the Global Knowledge Graph (GKG), which captures the content and framing of news articles.

The GDELT Events database provides structured records of daily events extracted from global news sources. Each event includes metadata on the actors, geographic location, and intensity of interaction. We retain all events between 2018 and 2024 that reference the United Kingdom and aggregate them to the daily level. For each day, we compute the number of UK-related events, the volume of news articles and sources, and the average Goldstein score (a measure of event tone). Figure A6 illustrates the fluctuations in volume of media articles, showing how coverage intensity varies over time and often coincides with major political or social events.

We use the daily measures of UK-related news events in two ways. First, they serve as controls in our regressions to account for day-to-day variation in domestic media activity, helping to isolate the impact of small boat arrivals on public opinion. Second, we use them as explanatory variables to examine whether the volume and tone of media-reported UK events are associated with changes in small boat arrivals, testing whether domestic conditions may act as informational signals or pull factors for prospective migrants.

To capture media narratives around migration, we use the GDELT Global Knowledge Graph, which tags themes and locations mentioned in news articles. We retain all daily entries from 2018 to 2024 that mention the themes 'IMMIGRATION' or 'MIGRATION' and include the UK in the location metadata. This allows us to construct a daily series of UK-relevant migration news volume and average tone. We also identify articles that refer to specific locations such as the English Channel and Dover Strait to isolate small boat-related coverage.

To better capture how migration is framed within UK public discourse, we complement this analysis with a more targeted focus on major UK-based news outlets with broad national reach. These include left-leaning sources (The Guardian, Mirror), right-leaning sources (Daily Mail, The Telegraph, The Sun, The Times), and others typically viewed as centrist (BBC, Financial Times, Independent, Scotsman, Herald Scotland). We classify these outlets as left-, right-, or centre-leaning using standard media bias classifications, and construct daily measures of migration coverage volume and tone by outlet type. This allows us to examine how small boat migration is framed across the ideological spectrum.

To explore variation in framing, we apply topic modeling to the thematic tags of small boat-related articles from major UK outlets. We estimate a Latent Dirichlet Allocation (LDA) model with three topics, which we interpret as (1) rights and politics, (2) health, environment and welfare, and (3) crime and security (see Appendix Table A6 for top theme words by topic). Since theme tags are already condensed representations of article content—rather than full-text data—a smaller number of topics is appropriate to capture the main narrative frames without overfitting or fragmenting meaning. These topic assignments are used to study how different types of coverage are distributed across media sources and over time. More details of variable construction, source classification, and topic model implementation is provided in Data Appendix Section A.3.

Table A5 presents descriptive statistics for the GDELT-based measures. On average, around 20,000 UK-relevant news articles are recorded globally each day, with a mean tone close to neutral at –0.57. When narrowed to migration-related news, the volume is lower—averaging about 3,400 articles daily across all sources, and roughly 190 articles from major UK outlets. Notably, the tone of migration-related news is consistently negative, with average scores of –2.47 across all sources and –2.82 within major UK outlets. Coverage specifically related to small boat migration is relatively infrequent but highly variable, ranging from 0 to 983 articles per day globally and up to 21 per day in the major UK outlets. The tone of small boat-related coverage is even more negative, averaging –3.43 across all sources and –3.69 in UK outlets, suggesting that this form of migration

is framed in especially negative terms.

## 4.4 Google Trends

To measure public attention to migration-related topics, we use data from Google Trends, extracted in January 2025, which captures the relative volume of searches for specific keywords over time. We focus on five search terms that are closely associated with irregular migration and asylum in the UK context: 'English Channel migrant crossings', 'Small Boat', 'Immigration', 'Refugee', and 'Asylum Seeker'. The data reflect searches made by users in the United Kingdom, allowing us to track how interest in these topics evolves among the UK public.

Google Trends provides an index ranging from 0 to 100, representing the popularity of a search term relative to its peak during the selected period. For the five-year window from January 2020 to December 2024, only weekly data are available, as Google Trends provides daily data only for shorter time intervals (such as past 1 year). Weekly data offer sufficient temporal resolution to capture shifts in public interest while ensuring consistency and reliability over a longer time frame. Each weekly time series is standardized to have mean zero and unit variance to allow comparison across search terms.

The descriptive patterns in search interest are shown in Figure A7. Weekly Google Trends data reveal substantial variation across terms and over time. Searches for 'Small Boat' and 'English Channel Migrant Crossings' show frequent and sustained spikes, particularly during the summer months. In contrast, broader terms such as 'Immigration' and 'Asylum Seeker' display more stable patterns with occasional peaks, often aligning with public debates or major policy announcements. The term 'Refugee' receives relatively low baseline interest, with a single prominent spike in early 2022, likely reflecting the UK's response to the Ukraine crisis.[8]

## 4.5 Parliament Speeches

To examine how UK Members of Parliament (MPs) respond to recent irregular migration events in their parliamentary discourse, we compile a dataset of all speeches delivered in the House of Commons between January 2018 and December 2024. These speeches are drawn from XML files published by *TheyWorkForYou.com*, which archives structured transcripts of Commons debates. We use a custom R script to scrape, parse, and extract

[8]Figure A8 also shows a peak in entry clearance visas for Ukrainians in 2022.

relevant metadata for each speech, including the speaker's name, unique identifiers, date of speech, and full speech text.

We identify references to irregular migration using a regular expression that captures references to 'small boats,' 'asylum seekers,' 'channel crossings,' or 'illegal migration.' Each speech is coded as a binary variable equal to 1 if any of these keywords appear in the text. We restrict attention to speeches with a named speaker and aggregate the data to a speaker-by-date panel, assigning a value of 1 if the MP mentioned irregular migration at least once on that day. The final dataset contains 131,923 MP-day observations, with irregular migration referenced in 2.4% of cases. While individual MP-day mentions are scarce, irregular migration was referenced in 60% of all parliamentary sitting days between 2018 and 2024, underscoring its recurring presence in legislative debate.

# 5 Empirical Strategy

To identify the effects of small boat migrant arrivals, we estimate high-frequency panel models using individual-level data from the British Election Study merged with daily irregular migration arrivals. Our baseline specification is:

$$Y_{itdw} = \gamma \sum_{j=1}^{2} \text{Migrants Arrived}_{idw,t-j} + X'_{idtw}\beta_1 + X'_t\beta_2 + \alpha_i + \phi_{dw(t)} + \epsilon_{idtw} \tag{1}$$

Here, $Y_{itdw}$ denotes an outcome (e.g., support to allow more migrants) for the individual $i$ surveyed on date $t$ in district $d$ during the survey wave $w$. The key explanatory variable is the cumulative number of migrants arriving by small boat in the two days prior to $t$, scaled in thousands.[9] We include individual fixed effects ($\alpha_i$) to absorb time-invariant respondent characteristics such as demographic traits or latent attitudes. We include district-wave fixed effects ($\phi_{dw(t)}$) to control for local context and regional shocks that vary over time.

We control for a vector of individual-level characteristics ($X_{idtw}$), including employment status, home ownership, occupational class (social grades AB and C), left-right ideology, and media consumption. The vector $X_t$ controls for broader fluctuations in information environment using measures derived from the GDELT Events dataset. These

[9]We focus on a two-day window prior to the survey date as it strikes a balance between immediacy and plausibility: it is short enough to ensure clear temporal ordering and limit confounding events, yet long enough to allow for media reporting and public awareness to take shape. Our results are robust to using a one-day window.

include the log number of news articles, number of unique sources, the distribution of reported events across quad classes, and the average Goldstein score. This ensures that our estimates are not confounded by contemporaneous shifts in general media intensity or sentiment.[10] Standard errors are clustered at the survey date level, since treatment intensity varies daily and individuals surveyed on the same date are exposed to the same migration shock.

To assess robustness and mitigate concerns about unobserved confounders, we incrementally introduce fixed effects. We begin by including individual and wave fixed effects to account for time-invariant personal characteristics and common temporal shocks. We then add district and district-by-wave fixed effects, which capture more granular spatial and temporal variation in exposure to migration and public attitudes. This increasingly saturated specification sharpens causal identification by relying on within-individual, within-location variation. We also include lagged and placebo terms to verify that observed responses are not driven by anticipatory shifts or serial correlation in migration arrivals.

## 5.1 Identification Assumptions

Our identification strategy rests on the assumption that, conditional on individual fixed effects, district-by-wave fixed effects, and observed controls, short-term variation in small boat arrivals is quasi-random and plausibly exogenous to unobserved determinants of public opinion. In other words, daily fluctuations in irregular migration flows are assumed to be orthogonal to unmeasured factors that independently shape immigration attitudes. This subsection outlines several design choices and empirical checks that support this assumption.

First, we define exposure using a narrow two-day window immediately preceding each respondent's survey interview and adopt an event-style framework that compares effects across multiple non-overlapping pre- and post-survey windows. This design ensures that exposure precedes outcome measurement and helps isolate short-run effects from anticipatory behavior or reverse causality. By focusing on recent, salient migration shocks while controlling for longer-run trends, the approach strengthens the plausibility of our identifying assumption.

Second, we show that en-route migrant fatalities—while highly salient—do not significantly affect subsequent small boat arrivals or the number of migrants per boat (Ap-

[10]Since migration-related media coverage is plausibly endogenous to small boat arrivals, we do not control for it in the main specification. However, we additionally control for the predicted media exposure to verify that our main results are not solely driven by shifts in media salience.

pendix Figure A10 and Table A7). This suggests that spikes in media attention or public concern do not immediately feed back into migration behavior. We further reinforce our identification strategy using wave height at the departure point as an instrument for arrivals, exploiting its role as a weather-driven constraint that is plausibly orthogonal to UK public opinion.

Third, as a falsification test, we show that small boat arrivals do not significantly affect public perceptions of other issues—including crime, cost of living, the NHS, the economy, or education—supporting the claim that observed effects are specific to immigration attitudes. This also serves as a check on the exclusion restriction for our IV approach, suggesting that small boat arrivals influence a narrow attitudinal domain.

Fourth, we find no evidence that small boat arrivals affect survey retention in the British Election Study (Appendix Table A8), reducing concerns about selective attrition. Finally, UK-based media events do not appear to act as pull factors for prospective migrants (Appendix Table A9), suggesting that media dynamics are not a source of endogeneity in arrival timing. Together, these checks support the claim that short-term variation in small boat arrivals constitutes a plausibly exogenous source of shock, allowing us to identify causal effects on immigration attitudes.

# 6 Results

Table 1 presents estimates of how recent small boat arrivals influence public support for immigration, measured using a standardized 0–10 scale. Across all specifications, a 1,000-person increase in arrivals over the past two days is associated with a statistically significant decline of 0.027 to 0.028 standard deviations in support for allowing more immigrants. These effects remain stable and robust as we introduce additional controls. Column 1 includes individual and wave fixed effects; Column 2 adds local authority district (LAD) fixed effects to account for time-invariant regional differences; and Column 3 further includes LAD-by-wave fixed effects to control for time-varying shocks at the local level. The consistency of the main coefficient across specifications supports the interpretation that public attitudes are highly responsive to very recent migration shocks, even after accounting for individual characteristics and local context.

To benchmark the size of this effect, we compare it to longer-run changes in public opinion. Between 2018 and 2024, the average response to the question on whether the UK should allow more immigrants declined from 3.6 to 3.4 on a 0–10 scale—a drop of 0.20 points.[11] Our estimates suggest that a short-term increase of average small boat

[11] Appendix Figure A11 illustrates the evolution of immigration attitudes over time by category.

Table 1—Attitudes towards Future Migrants

| | Allow More Migrants (std) | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.027*** | -0.028*** | -0.027*** |
| | (0.008) | (0.008) | (0.008) |
| Controls | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes |
| Wave FE | Yes | Yes | Yes |
| LAD FE | | Yes | Yes |
| LAD x Wave FE | | | Yes |
| Observations | 287264 | 287249 | 287247 |

Notes: This table reports the estimated effect of recent small boat migrant arrivals on self-reported support for allowing more immigration, based on responses from the British Election Study Internet Panel. The dependent variable is standardized. The key explanatory variable is the number of migrants arriving via small boats over the previous two days (in thousands). The estimated specification corresponds to Equation (1) in the main text. Column 1 includes individual and wave fixed effects. Column 2 adds local authority district fixed effects. Column 3 adds local authority district by wave fixed effects. Standard errors are clustered at the survey date level. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Small Boat Arrivals - UK Home Office; Immigration Perceptions - British Election Survey Internet Panel (Waves 14-29)

arrivals over two days leads to a 0.03-point decline in support, implying that a single surge could account for around 14% of the total decline in immigration support over the entire period. This highlights the sensitivity of public sentiment to acute, visible migration events.

Moreover, media coverage frequently reports small boat arrivals using daily or cumulative figures that emphasize scale and urgency. News coverage such as 'more than 1,100 migrants arrived in the UK after crossing the English Channel on Saturday' (BBC, June 2025), or '919 people made the journey in 14 boats on Friday... pushing the provisional annual total to 16,183' (Express, June 2025) or 'more than 1,000 have crossed in a single day twice in the past fortnight' (Guardian, November 2021) illustrate this pattern. In addition, operational statistics reflect only those migrants detected and processed by UK authorities, while the number of undetected crossings remains unknown. This uncertainty, when combined with media narratives emphasizing border breaches or loss of control, may heighten public concern. These dynamics imply that sharp, repeated bursts in irregular migration, especially when framed within broader narratives, can meaningfully shift immigration attitudes.

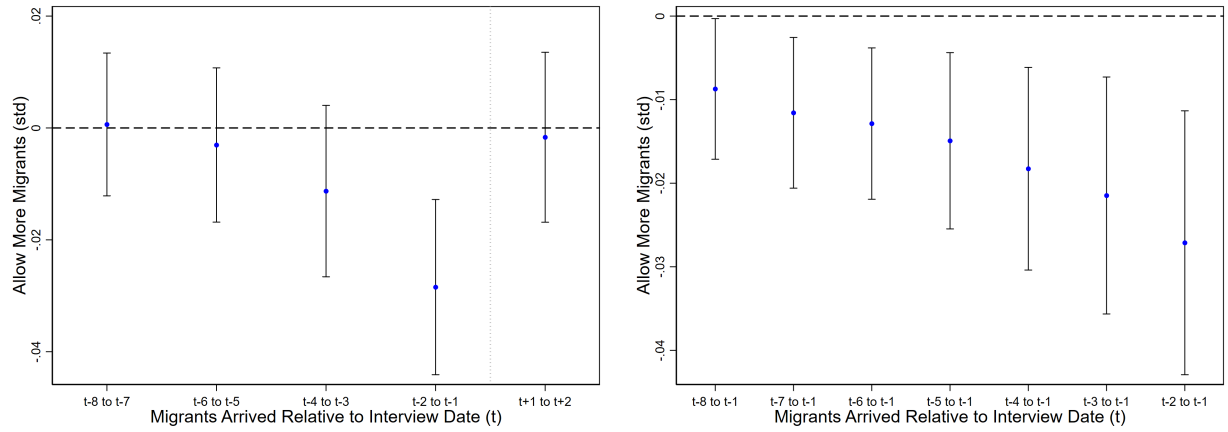
To further aid interpretation of effect size, we calculate a persuasion rate: the proportion of individuals who change their views on immigration in response to the treatment,

relative to those at risk of persuasion. Following the approach of DellaVigna and Kaplan (2007), we compute the persuasion rate $f$ for the UK population as:

$$f = 100 \times \frac{\hat{\gamma}}{N} \times \frac{1}{Attitudes_{UK}} \tag{2}$$

Here, $\hat{\gamma}$ represents the estimated average effect of a one standard deviation increase in small boat arrivals on support for immigration (0.019), as reported in Table 1. The term $N$ denotes the share of UK respondents who report reading a newspaper—50%, according to BES data—while $Attitudes_{UK}$ reflects the pre-2020 average share of respondents who favored reducing immigration (52.91%). This calculation assumes that treatment effects are confined to media consumers and that there are no spillovers to non-treated individuals. Under these assumptions, the estimated persuasion rate is $f = 100 \times \frac{0.019}{0.50} \times \frac{1}{0.5291} = 7.18\%$, which falls toward the upper range of estimates found in the persuasion literature (DellaVigna and Gentzkow, 2010). Our estimated persuasion rate reflects immediate responsiveness to small boat arrivals and should be interpreted as a short-run effect. Whether these shifts persist likely depends on repeated exposure and framing, which we examine next.

Figure 2—Timing and Persistence




(a) Two-Day Arrival Windows Before and After Interview Date

(b) Cumulative Effects of Varying Exposure Window Length

Notes: Figure (a) plots estimated effects of small boat arrivals on attitudes towards future immigration using two-day windows before and after the interview date (t). Figure (b) shows how the estimated effect varies as the exposure window expands from 2 to 8 days prior to the interview. Regression estimates corresponding to these figures are reported in Appendix Tables A10 Panel A and A11.

Sources: Small Boat Arrivals - UK Home Office; Immigration Perceptions - British Election Survey Internet Panel (Waves 14-29)

**Timing and Persistence** Figure 2 explores how the effect of irregular migration shocks on attitudes towards immigration evolves over time, using alternative specifications to test the timing, persistence, and cumulative nature of public responses. Full regression estimates corresponding to these figures are reported in Appendix Tables A10 Panel A and A11.

Figure 2(a) presents an event-style decomposition from a single regression equation that includes non-overlapping two-day arrival windows before and after the interview date (t), extending the baseline model in Equation (1). We find a large and statistically significant negative effect for the most recent window (t–2 to t–1), with no significant effects for earlier lags (t-8 to t-7, t-6 to t-5, t-4 to t-3) or for placebo leads (t+1 to t+2).[12] This timing pattern rules out reverse causality or anticipatory responses, confirming that attitudinal shifts are driven by recent migration events.

Figure 2(b) reinforces this conclusion using a series of separate regressions, each varying the length of the lagged exposure window. We plot the estimated coefficients from models that successively expand the window from 2 to 8 days before the interview date. Attitudes respond sharply to recent migration shocks, with the largest effect concentrated in the two days before the interview (-0.027 SD). While the magnitude of the effect diminishes as the exposure window expands, it remains statistically significant even for shocks occurring up to eight days prior (-0.009 SD).

This indicates that while the impact of any single episode may fade, public opinion continues to reflect recent migration salience over a slightly longer horizon.[13] While our design cannot determine whether these attitudinal shifts are permanent, the observed patterns are most consistent with short-term responsiveness to highly visible migration events. We are cautious in interpreting these changes as long-term persuasion or belief revision. Instead, we view them as temporary shifts in perceived urgency or salience, which may fade unless reinforced by repeated exposure.

To explore the possibility of longer-lasting effects, we complement the short-run analysis with a cumulative exposure specification that captures repeated shocks over a 30-day period. Since longer-run arrival patterns may be endogenous to unobserved factors affecting public attitudes, we instrument for cumulative arrivals using wave height at the point of departure.[14] Appendix Table A13 shows that both recent (t–2 to t–1) and cumulative (t–30 to t–3) predicted arrivals reduce support for immigration. Moreover, the interaction term suggests that the effect of recent shocks is amplified when they occur

[12] These results are robust to using a one-day exposure window (Appendix Table A12).

[13] Appendix Table A10 Panel B uses a weighted sum of arrivals, assigning higher weight to more recent days to reflect greater salience of closer events. The results are similar in magnitude and pattern.

[14] Further details on the IV is presented in the sub-sections 6.1 and 7.1.

following a sustained period of high irregular migration. This points to a reinforcement mechanism, where repeated exposure compounds public concern. Even if individual shocks fade quickly, visible and repeated migration events can sustain heightened salience, reinforcing immigration as a persistent public concern over time.

**Heterogeneity in Attitudes towards Future Migrants** Table A14, Column 1 tests whether the attitudinal response to small boat arrivals is moderated by the occurrence of en-route migrant fatalities. The interaction term is positive but statistically insignificant, suggesting that while such events may evoke sympathy and reduce opposition to immigration, their rarity may limit their short-run influence (Appendix Table A2).

Column 2 shows that the decline in support for immigration is concentrated among respondents who report reading newspapers, consistent with the idea that media engagement amplifies responsiveness to migration events. Column 3 further disaggregates this effect by the ideological leaning of preferred news sources. Respondents who consume right-leaning news exhibit the strongest negative reaction to arrivals, while those who consume left-leaning outlets display a modest positive response. Although these patterns are suggestive, media preferences are endogenous and likely reflect pre-existing views on immigration. We therefore interpret these results as descriptive. In the next section, we address this limitation by constructing a shift–share instrument for media exposure based on exogenous variation in media coverage and pre-treatment news habits.

Lastly, Table A15 shows that effects are concentrated among economically vulnerable individuals—those not in work and in lower social grades—consistent with the idea that perceived economic insecurity heightens sensitivity to migration events (Tabellini, 2020; Alesina, Miano and Stantcheva, 2023). Table A16 further shows that the overall effect is driven almost entirely by UK-born respondents, among whom the interaction with media is especially pronounced. Among foreign-born individuals, point estimates are small and statistically insignificant.

**Future Migrants by Category** To explore whether public reactions to small boat arrivals are specific to irregular migration or spill over to broader categories, we disaggregate responses by migrant type. While earlier results relied on a general question about whether the UK should allow more or fewer immigrants, Table 2 examines attitudes toward specific groups: asylum seekers, EU and non-EU workers, foreign students, and family members of existing immigrants. This breakdown allows us to test whether salience effects are group-specific or diffuse across migrant categories. Because this

Table 2—Future Migrants by Category

| | Allow More Migrants by Category (std) | | | | |
|---|---|---|---|---|---|
| | (1) Asylum Seekers | (2) EU | (3) Non-EU | (4) Foreign Students | (5) Families of Existing Immigrants |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.030 | -0.130* | -0.167** | -0.206*** | -0.126** |
| | (0.062) | (0.075) | (0.065) | (0.065) | (0.060) |
| Controls | Yes | Yes | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes | Yes | Yes |
| Observations | 9794 | 10049 | 9925 | 9795 | 9788 |

Notes: This table examines whether the effects of recent small boat arrivals on attitudes towards immigration vary by migrant category. The dependent variables are standardized responses to five questions asking whether the UK should allow more or fewer: (1) asylum seekers, (2) workers from EU countries, (3) workers from non-EU countries, (4) foreign students, and (5) family members of existing immigrants. Each variable is measured on a 0–10 scale and standardized across the full sample. The main explanatory variable is the total number of migrants arriving by small boat in the past two days (in thousands). The estimated specification corresponds to Equation (1) in the main text. The sample size is lower as the question was not fielding across all BES waves. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Small Boat Arrivals - UK Home Office; Immigration Perceptions - British Election Survey Internet Panel (Waves 14-29)

question is only available in a subset of waves, the sample is correspondingly smaller.[15]

Across all groups, recent arrivals are associated with reduced support for additional migration. The effects are strongest for foreign students, non-EU migrants and families of existing migrants, where a 1,000-person increase in arrivals over two days leads to a decline of 0.21, 0.17 and 0.13 standard deviations, respectively. Marginally significant negative effects are also observed for EU workers (–0.13 SD) and a negative and insignificant effect for asylum seekers. These results imply that highly visible irregular flows may activate broader anxieties, dampening support even for legal migration routes.

The backlash against legal migration routes—particularly students and family members—may reflect a perceived tradeoff, where irregular arrivals are seen to crowd out more accepted or manageable forms of migration. While we cannot directly test this belief-based mechanism, it offers one explanation for why public support declines more sharply for groups often viewed as discretionary rather than essential.

These patterns resonate with recent shifts in UK immigration policy. In 2024, the government introduced tighter restrictions on family and student migration: the minimum

[15]Table A4 provides the exact question wording and survey waves in which the question was fielded.

income threshold for sponsoring a partner visa rose from £18,600 to £29,000, and most international students were barred from bringing dependents unless enrolled in post-graduate research or scholarship-funded programs. These measures coincided with a sharp decline in study- and health-related migration.[16] The 2025 UK immigration white paper cites growing concerns about misuse of the student visa route, noting that nearly half of asylum applications from visa holders are submitted near the expiry of student visas. Additional concerns have been raised about international students' role in driving housing demand and local pressures in university towns (Rolfe et al., 2025).

Table 3—Impact of Parliament Speeches

| | Mention of Irregular Migration in Parliament Speeches | |
|---|---|---|
| | (1) | (2) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 0.010*** | 0.010*** |
| | (0.004) | (0.003) |
| Mean DV | 0.024 | 0.024 |
| Week-Year FE | Yes | Yes |
| MP FE | | Yes |
| Observations | 131923 | 131916 |

Notes: This table examines whether recent small boat arrivals increase the likelihood that Members of Parliament reference irregular migration in their speeches. The dependent variable is a binary indicator equal to one if an MP mentioned terms such as 'small boats,' 'asylum seekers,' 'channel crossings,' or 'illegal migration' in a Commons speech on a given day. The main explanatory variable is the total number of migrants arriving by small boat in the past two days (in thousands). Standard errors are clustered at the speaker level. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Small Boat Arrivals - UK Home Office; Speeches - House of Commons Debates from *TheyWorkForYou.com*

**Parliamentary Discourse and Legislative Attention** We next examine whether small boat arrivals also influence the legislative agenda by increasing attention to irregular migration in parliamentary debate. Table 3 presents results where the outcome is an indicator equal to one if an MP mentioned terms such as 'small boats,' 'asylum seekers,' 'channel crossings,' or 'illegal migration' in a Commons speech on a given day. Column 1 includes week-by-year fixed effects to account for national time trends; Column 2 adds MP fixed effects to account for time-invariant speaker characteristics.

Across specifications, a 1,000-person increase in small boat arrivals over the previous two days increases the probability that an MP raises irregular migration by 1.0 percent-

[16]Source: Guardian, August 2024; BBC, August 2024; BBC, October 2024

age point. Given a baseline probability of just 2.4%, this represents a more than 40% relative increase. Although the mean probability is low, the issue surfaces regularly in parliamentary proceedings, with at least one MP raising irregular migration on 615 out of 1,033 sitting days. These findings suggest that small boat arrivals not only shape public opinion but also quickly elevate the issue's salience in parliamentary discourse, influencing the day-to-day agenda of elected representatives.

Taken together, the public and parliamentary responses provide consistent evidence that highly visible migration shocks shift both mass sentiment and political attention. While we do not claim that small boat arrivals directly caused recent policy changes, the timing and direction of policy developments—including restrictions on students and family migration—are consistent with a broader shift in public and political mood.

## 6.1 Robustness Checks

We conduct a comprehensive set of robustness checks to assess the validity, sensitivity, and generalisability of our findings; see Appendix Section D for full details.

First, we verify that small boat arrivals do not affect respondents' ideology, polarization, or news consumption, ruling out broader shifts in political engagement or media use (Table B1). Second, excluding all respondents from the South East of England—where the majority of small boat landings occur—yields substantively similar results, suggesting that public responses are national in scope (Table B2). Third, our findings are robust to alternative functional forms of the arrival variable, including log and inverse hyperbolic sine transformations (Table B3), migration intensity: the number of migrants per boat (Table B4) and alternative clustering of standard errors: at the individual level, individual x date level (Table B5).

Fourth, we address remaining potential endogeneity using an instrumental variable strategy that leverages wave height at Calais, France as a shock to the feasibility of Channel crossings. This instrument satisfies two key assumptions: first, relevance—wave height strongly predicts variation in small boat arrivals, as confirmed by a high first-stage F-statistic; and second, the exclusion restriction—that wave height influences immigration attitudes only through its effect on arrivals, not via other channels. We provide support for this assumption by showing that wave height does not predict changes in public perceptions of unrelated national issues (Appendix Table B6). The IV estimates in Table B7, using variation within the BES survey window, suggest that small boat arrivals reduce support for immigration by 0.057 SD, nearly twice the corresponding OLS estimate. This larger effect is consistent with attenuation bias in OLS. In Appendix Table

A13 Column 1, we report a complementary IV strategy using predicted arrivals from the full time series. The resulting estimate (–0.031 SD) is similar to OLS, likely because predicted arrivals are smoother and less noisy, reinforcing the main findings.

Fifth, we address the concern that our main specification treats all respondents as equally exposed to small boat arrivals, even though actual exposure likely varies by media engagement. To capture this heterogeneity, we construct a measure of 'effective exposure' by interacting recent arrival counts with a newspaper readership indicator, and instrument both components using predicted arrivals based on sea conditions. The IV estimates show that the effect of small boat arrivals on immigration attitudes is concentrated among media consumers, with no significant effect for non-readers (Table B8). This pattern helps rule out alternative explanations such as national-level political events or coordinated messaging, and supports the interpretation that variation in perceived exposure—rather than uniform national trends—drives the observed attitudinal shifts.

Sixth, we examine whether BES survey waves coincide with periods of unusual migration activity or media salience. Comparing BES survey days to the rest of the calendar, we find no systematic differences in arrival volumes or media coverage, supporting the external validity of our estimates (Table B9). In addition, we find no evidence that the number of completed BES interviews per day responds to small boat arrivals, supporting the assumption that fieldwork timing is independent of migration shocks (Table B10).

Finally, we replicate our core analysis using the UK Household Longitudinal Study (UKHLS), a repeated cross-section that samples respondents continuously throughout the year. Focusing on an outcome that is directly comparable across surveys—whether immigrants are good or bad for the economy—we find similar patterns in UKHLS and BES: small boat arrivals are associated with more negative economic views, particularly among those not in paid work. While the smaller UKHLS sample yields less precise estimates, the direction and magnitude of the effects are consistent across the two surveys (Table B11).

Taken together, these robustness checks reinforce the credibility of our findings and demonstrate that the effects of irregular migration shocks on public attitudes are both statistically robust and substantively meaningful.

# 7 Mechanisms

We examine three potential mechanisms linking irregular migration shocks to shifts in public opinion: (1) media coverage and framing, (2) public attention and issue salience, and (3) the role of prior beliefs. These dimensions reflect distinct but complementary

pathways—ranging from exposure to narrative cues, to shifts in cognitive prioritization, to belief updating and confirmation bias. While each mechanism is explored with its own empirical strategy, our goal is not to establish causality for each pathway individually, but to shed light on the broader processes through which migration events shape public attitudes.

## 7.1 Media Narratives: Volume, Framing, and Individual Exposure

We begin by examining whether small boat arrivals affect the coverage and framing of migration in UK news outlets using GDELT GKG database. A key concern in this analysis is reverse causality: media coverage and narratives may shape the decision of migrants to cross English Channel, potentially biasing estimates of media responsiveness.[17] As shown in Appendix Table A17, left-leaning migration coverage is modestly predictive of fewer future arrivals.

To address this endogeneity, we instrument recent small boat arrivals using the average significant wave height over the past two days at a key departure point near Calais, France. Significant wave height is defined as the average height of the highest one-third of ocean waves recorded in a given period, and is a standard maritime indicator of crossing conditions. Higher wave heights are associated with more dangerous sea conditions, which reduce the likelihood of attempted crossings. We construct the instrumental variable $\overline{\text{Wave Height}}_{t-1,t-2}$ as the mean of daily $H^{1/3}$ values for the two days prior to day $t$. The first-stage regression is therefore:

$$\sum_{j=1}^{2} \text{Migrants Arrived}_{t-j} = \theta \overline{\text{Wave Height}}_{t-1,t-2} + \delta_{w(t)} + \nu_t \tag{3}$$

This captures the effect of adverse sea conditions on the cumulative number of migrants arriving via small boats over the two days leading up to day $t$. The second stage then uses the instrumented value of arrivals to estimate media responsiveness:

$$log(\text{Migration News})_t = \gamma \sum_{j=1}^{2} \widehat{\text{Migrants Arrived}}_{t-j} + \delta_{w(t)} + \epsilon_t \tag{4}$$

where $log(\text{Migration News})_t$ is the log number of migration news articles published on day $t$, and $\sum_{j=1}^{2} \widehat{\text{Migrants Arrived}}_{t-j}$ is the instrumented cumulative number of migrant arrivals in the past two days (in thousands). Week-year fixed effects $\delta_{w(t)}$ absorb

[17] Di Maio et al. (2024) provide evidence that worsening news sentiment leads to migrants staying longer in Libya, slowing down their journeys to their final destinations.

seasonality and common shocks, and standard errors are clustered at the date level. The sample spans 2,557 days from January 1, 2018 to December 31, 2024.

Table 4—Impact on Irregular Migration Media Coverage

| | log(English Channel + Strait of Dover Migration News) | | | |
|---|---|---|---|---|
| | (1) Overall | (2) Left | (3) Centre | (4) Right |
| **Panel A: OLS** | | | | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 0.417*** | 0.059*** | 0.042*** | 0.126*** |
| | (0.065) | (0.021) | (0.015) | (0.023) |
| **Panel B: IV** | | | | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 0.812*** | 0.056 | 0.050 | 0.242*** |
| | (0.156) | (0.043) | (0.031) | (0.047) |
| KP F Stat | 275.59 | 275.59 | 275.59 | 275.59 |
| Mean DV | 1.680 | 0.078 | 0.086 | 0.201 |
| Week-Year FE | Yes | Yes | Yes | Yes |
| Observations | 2553 | 2553 | 2553 | 2553 |

Notes: This table examines the relationship between small boat migrant arrivals and the migration-related news coverage in major UK-based outlets (overall and by political ideology). The dependent variable in each column is the log number of article referencing the English Channel or Strait of Dover. Panel A reports OLS estimates. Panel B presents IV estimates, instrumenting the number of migrants arriving via small boats over the previous two days (in thousands) with average wave height at the main departure point over the same period. The estimated specification corresponds to Equation (4) in the main text. Standard errors are clustered at the date level. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Small Boat Arrivals – UK Home Office; News Data – GDELT 1.0 Events Database.

**Media Coverage of Irregular Arrivals** We begin by examining whether small boat arrivals drive UK media attention to irregular migration, specifically coverage referencing the English Channel or Strait of Dover. Table 4 reports log-linear OLS and IV estimates, where the outcome is the log number of articles published by major UK outlets, disaggregated by ideological orientation.[18] To enable comparisons across outlet types, we first divide the number of articles by the number of outlets in each ideological group and then take logs—allowing coefficients to be interpreted as changes in the average number of articles per outlet per day.

Panel A presents OLS estimates. A 1,000-person increase in small boat arrivals over

[18]Table A18 shows that results are robust when the sample is not restricted to major UK outlets.

the previous two days is associated with a 0.42 log-point increase in overall coverage (Column 1), equivalent to a 52% increase relative to the mean of 1.68 articles per day. The effect is largest among right-leaning outlets (0.13 log-points; 13.4% increase), followed by smaller but still significant increases for left- and centre-leaning sources.

Panel B reports IV estimates using wave height as an instrument for migrant arrivals. The first-stage KP F-statistic is 275.6, well above conventional thresholds for instrument strength. The IV estimate for overall coverage increases to 0.81 log-points, a 124% increase, suggesting that OLS may understate the true effect. Among outlet types, the IV estimate for right-leaning outlets rises to 0.24 log-points (27% increase), while the effects for left and centre leaning outlets remain positive but imprecisely estimated.

The stronger IV estimates likely reflect attenuation bias in the OLS, possibly due to variation in how outlets frame migration. For instance, left-leaning sources may focus more on asylum conditions or humanitarian issues, leading to reporting that is less tightly coupled to short-run fluctuations in arrival numbers. The IV strategy addresses this by leveraging exogenous variation in migration flows. Appendix Table A19 presents the corresponding first-stage and reduced-form estimates.

To assess whether this response is specific to small boat crossings or part of a broader increase in migration coverage, Table A20 re-estimates the models using alternative location references: total UK, other UK regions, and the Mediterranean Sea. Across these alternative outcomes, neither the OLS nor IV estimates show a statistically significant relationship with recent small boat arrivals. The coefficients are small, imprecise, and their confidence intervals span zero.

These findings underscore three key patterns. First, UK media coverage of irregular migration is highly responsive to short-term changes in small boat arrivals. Second, this responsiveness is ideologically structured: right-leaning outlets show a much stronger reaction than left or centrist outlets, both in absolute terms and relative to their baseline levels of coverage. Third, the media response is geographically focused, with coverage intensifying specifically around the English Channel and not other migration routes or regions.

**Ideological Framing of Migration Events** Having shown that small boat arrivals drive media coverage, we next examine how this coverage is framed. Specifically, we test whether outlets differ in the narrative content they attach to the same underlying events. To do so, we use topic classifications derived from Latent Dirichlet Allocation (LDA) applied to GDELT theme tags. We focus on three dominant narrative frames identified through this procedure: (i) rights and politics; (ii) health, welfare, and environment; and

Table 5—Media Framing by Political Ideology

| | Topic Classification: Themes | | |
|---|---|---|---|
| | (1) Rights/ Politics | (2) Health/Welfare/ Environment | (3) Crime/Security/ Law Enforcement |
| I(News Source Left) | -0.034 | 0.061** | -0.026 |
| | (0.026) | (0.028) | (0.026) |
| I(News Source Right) | -0.109*** | 0.033** | 0.076*** |
| | (0.016) | (0.015) | (0.017) |
| Mean DV | 0.294 | 0.285 | 0.420 |
| Month-Year FE | Yes | Yes | Yes |
| Observations | 4289 | 4289 | 4289 |

Notes: This table examines how the thematic framing of small boat migration varies by the political orientation of major UK-based news outlets. The dependent variables are binary indicators for whether an article is classified into each of the three dominant topics identified via Latent Dirichlet Allocation applied to GDELT theme tags: (1) rights and politics, (2) health, environment, and welfare, and (3) crime, security, and law enforcement. The key explanatory variables are dummy variables for whether the article was published by a left- or right-leaning outlet; centrist outlets form the omitted category. The estimated specification corresponds to Equation (5) in the main text. Standard errors are clustered at the date level. Sources: News Data – GDELT 1.0 Global Knowledge Graph.

(iii) crime, security, and law enforcement.

The unit of observation in this analysis is the article-day, defined as a unique small boat-related article published by a major UK outlet between 2018 and 2024 (N = 4,289). We estimate the probability that article $i$ on day $t$ is assigned to topic $k$ as a function of outlet ideology:

$$\text{Topic}_{it}^{k} = \gamma_1 \text{I(News Source Left)}_{it} + \gamma_2 \text{I(News Source Right)}_{it} + \delta_{m(t)} + \epsilon_{it} \tag{5}$$

where I(News Source Left) and I(News Source Right) are indicator variables equal to 1 if the article is published by a left- or right-leaning outlet, respectively; centrist outlets are the omitted category. $\delta_{m(t)}$ denotes month–year fixed effects to account for time-specific shocks. Standard errors are clustered at the date level.

Results in Table 5 show clear ideological patterns in topic choice. Compared to centrist outlets, right-leaning sources are significantly more likely to frame small boat migration in terms of crime and security (+7.6 percentage points, relative to a mean of 42%), and less likely to use rights- or politics-based frames (–11 percentage points, relative to a mean of 29%). Left-leaning outlets place more emphasis on health, welfare, or environmental themes (+6.1 percentage points). Because topic shares sum to one, these differ-

ences reflect a reallocation of narrative emphasis rather than absolute increases. These findings suggest that while outlets report on the same events, they reinforce different ideological narratives in the public sphere.[19]

**From Narrative Supply to Individual Exposure** We now turn to how national-level media coverage translates into individual-level exposure and, ultimately, immigration attitudes. A key challenge is that measures of news consumption in the BES (whether a respondent reads a newspaper and which outlets they follow) are contemporaneous and likely endogenous. To address this, we construct a shift–share instrument that combines exogenous variation in predicted coverage with pre-treatment media habits.

Specifically, we compute time-invariant news consumption shares for each respondent using BES survey responses from 2018–2019, before small boat crossings became a salient political issue. Let $s_i^l, s_i^c, s_i^r \in [0,1]$ denote the share of those waves in which respondent $i$ reported reading at least one left-, unclassified-, or right-leaning newspaper, respectively. These shares reflect both the frequency and ideological composition of a respondent's media exposure prior to the migration shocks.

We then use Equation (4) to generate IV-fitted counts of irregular migration coverage in each ideological category ($\widehat{M}_t$), defined as the number of articles referencing the English Channel or Strait of Dover per outlet, predicted using wave height. Taking a two-day average to align with the main arrival window, we define $\widetilde{M}_t = (\widehat{M}_{t-1} + \widehat{M}_{t-2})/2$. The shift–share predictor of individual exposure is then: $\text{Media Exposure}_{it} = s_i^l \widetilde{M}_t^l + s_i^c \widetilde{M}_t^c + s_i^r \widetilde{M}_t^r$. All time variation in this index comes from exogenous national-level shocks, while all cross-sectional variation comes from pre-treatment media habits. Under the standard exclusion restriction that sea conditions affect attitudes only through arrivals and the induced coverage, this design supports identification of the effect of predicted media exposure on immigration attitudes.

Because wave height also affects actual small boat arrivals, which can directly influence attitudes, we include arrivals as a control in all specifications. Predicted coverage inherits some variation from instrumented arrivals, so the media coefficient should be interpreted as the effect of media exposure conditional on observed arrivals, with possible residual overlap due to shared shocks and measurement error. Empirically, regressing predicted media exposure on actual arrivals yields a statistically significant but modest relationship that explains 4.4% of within-individual variation, indicating that the exposure index captures more than the effect of recent arrivals.

[19] Appendix Table A22 shows that right-leaning outlets also use less positive emotional language than centrist ones.

Table 6—Impact of Irregular Migration Media Exposure on Individual Attitudes

| | Allow More Migrants (std) | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.028*** | -0.018* | -0.031*** |
| | (0.009) | (0.010) | (0.009) |
| Media Exposure | -0.402*** | -0.341*** | |
| | (0.067) | (0.068) | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived x Media Exposure | | -0.435** | |
| | | (0.201) | |
| Media Exposure$_l$ | | | 1.564*** |
| | | | (0.319) |
| Media Exposure$_c$ | | | -0.650 |
| | | | (0.615) |
| Media Exposure$_r$ | | | -0.414*** |
| | | | (0.067) |
| Controls | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes |
| Observations | 250361 | 250361 | 250361 |

Notes: This table reports the effect of predicted media exposure on attitudes toward immigration. Column (1) includes the Bartik media exposure index constructed by interacting the respondent's 2018–2019 news consumption patterns by outlet ideology with the predicted number of irregular migration media coverage by ideology. Column (2) adds an interaction between media exposure and small boat arrivals to test for amplification effects. Column (3) decomposes the media exposure index by outlet ideology. Standard errors are clustered at the date level. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Small Boat Arrivals – UK Home Office; News Data – GDELT 1.0 Events Database.

Table 6 presents the results. Column (1) shows that a one-unit increase in predicted media exposure (i.e., one additional article per outlet, weighted by respondent-level shares) is associated with a 0.40 SD decline in support for immigration. This is a large and precisely estimated effect. Importantly, coefficient on small boat arrivals remains negative and significant, indicating that media exposure does not fully mediate the attitudinal response and instead amplifies it. Column (2) confirms this amplification: support declines more on days with both higher arrivals and higher exposure.

Column (3) disaggregates media exposure by outlet ideology. Exposure to right-leaning media reduces support for immigration by 0.41 SD, consistent with the earlier finding that these outlets are more likely to frame small boat crossings in terms of crime, security, and law enforcement. Left-leaning media exposure, by contrast, increases sup-

port for immigration by 1.56 SD, reflecting the prominence of health, welfare, and humanitarian themes in their coverage. Exposure to centrist outlets has no significant effect. These asymmetric responses suggest that individuals are not merely reacting to the volume of coverage but to the narrative frames through which information is presented. The findings align with Alesina et al. (2020), who argue that shared factual stimuli can produce divergent belief updating when filtered through distinct ideological lenses.

To compare the relative magnitude of these effects, Table A21 reports standardized coefficients. A one standard deviation increase in small boat arrivals reduces immigration support by 0.004 SD, while a one standard deviation increase in media exposure reduces it by 0.012 SD. Thus, media exposure has an impact roughly three times larger than that of arrivals themselves—highlighting the powerful role of information environments in shaping public opinion.

## 7.2 Public Attention

Next, we examine whether increases in small boat arrivals are associated with greater public attention to migration-related topics using Google Trends data. We estimate the following regression model:

$$\text{Search Interest}_w = \gamma \sum_w \text{Migrants Arrived}_w + \delta_{my(w)} + \epsilon_{wt} \tag{6}$$

where Search Interest is the standardized Google Trends index for a given search term in week $w$, Migrants Arrived is the number of small boat migrants arriving in that week (measured in thousands), and $\delta_{my(w)}$ denotes month–year fixed effects to account for seasonality and time-specific shocks. Standard errors are clustered at the weekly level. Using weekly data from January 2020 to December 2024, we run separate regressions for five search terms: 'English Channel migrant crossings', 'Small Boat', 'Immigration', 'Refugee', and 'Asylum Seeker'. The goal is to assess whether real-world migration events generate observable shifts in public interest, and whether this attention is directed toward specific or broader framings of immigration.

Table 7 shows that higher small boat arrivals are strongly associated with increased search interest in the terms 'English Channel migrant crossings' and 'Small Boat'. A 1,000-person increase in weekly arrivals is associated with a 0.28 and 0.20 standard deviation increase in search interest for these terms, respectively—sizable effects given the short time frame. These results suggest that public attention is especially responsive to concrete and highly visible dimensions of irregular migration. By contrast, we find no significant relationship between arrivals and search interest in broader or institutional

Table 7—Impact on Public Attention

| | Google Trends Index (std) | | | | |
|---|---|---|---|---|---|
| | (1) English Channel migrant crossings | (2) Small Boat | (3) Immigration | (4) Refugee | (5) Asylum Seeker |
| $\sum_w$ Migrants Arrived | 0.279** | 0.194** | -0.044 | 0.026 | 0.127 |
| | (0.112) | (0.094) | (0.088) | (0.069) | (0.131) |
| Month-Year FE | Yes | Yes | Yes | Yes | Yes |
| Observations | 307 | 307 | 307 | 307 | 307 |

Notes: This table reports the association between the number of migrants arriving via small boats and public attention to migration-related topics, measured using the standardized Google Trends index for each search term. The dependent variable in each column is the standardized weekly Google Trends index for a different search term. The estimated specification corresponds to Equation (6) in the main text and use weekly data from January 2020 to December 2024. Standard errors are clustered at the week level. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Small Boat Arrivals – UK Home Office; Google Trends – extracted January 2025.

terms such as 'Immigration', 'Refugee', or 'Asylum Seeker'.

## 7.3 Issue Salience

Building on the public attention findings, we explore whether migration shocks alter what voters perceive as the most important issue facing the country using the BES. Each column in Table A23 presents effects on a binary variable indicating whether a given issue, such as immigration, health, or the economy, was chosen as the respondent's top concern in that survey wave.

In Panel A, we find that a 1,000-person increase in small boat arrivals over two days is associated with a 3.4 percentage point increase in the likelihood of naming immigration as the single most important issue (Column 4), relative to a baseline of 5.4 percent. This is a sizable shift in relative issue salience. Smaller increases are also observed for environmental concerns (+1.5 pp), while the likelihood of selecting generalized political dissatisfaction (e.g., 'negativity') falls by 2.4 percentage points. These patterns suggest that high-profile migration events may reorient public priorities, making immigration more salient in the short term.

Panel B explores variation by the ideological leaning of respondents' preferred media sources. The increase in the salience of immigration appears stronger among those who report reading right-leaning newspapers, while respondents aligned with left-leaning outlets are less likely to shift attention toward immigration and more likely to emphasize

issues such as the environment, Europe, or institutional concerns. While these patterns are suggestive, media preferences are endogenous and may reflect deeper ideological predispositions. We therefore interpret these heterogeneities as descriptive, illustrating how migration events may resonate differently across information environments.

Taken together, the findings indicate that small boat arrivals increase the salience of immigration in the public mind, consistent with theories of agenda-setting and issue activation. The extent and direction of this response appear to vary across ideological groups, highlighting the role of existing beliefs and media contexts in shaping how citizens interpret and prioritize political issues.

## 7.4 Perceived Immigration Levels

Lastly, we examine whether small boat arrivals shape public perceptions of immigration levels and how these perceptions, in turn, condition attitudinal responses. Column (1) of Table 8 uses responses to a BES question that asks whether immigration is 'getting higher, lower, or staying about the same'. A 1,000-person increase in arrivals over the prior two days raises perceived immigration by 0.095 SD ($p < 0.1$). This effect is notable given the small contribution of irregular arrivals—less than 4% of net migration to the UK in 2024—to overall migration flows.[20] These findings suggest that visible, emotive events can disproportionately shape public beliefs, even when they carry limited demographic weight.

Column (2) shifts focus to attitudes about future immigration, testing whether prior beliefs moderate how individuals respond to recent arrival shocks. To address simultaneity concerns, we interact current arrivals with lagged perceptions of immigration, measured in the respondent's previous survey wave. The interaction term is negative and statistically significant (–0.061 SD), indicating that respondents who already believed immigration was increasing are more likely to reduce their support for allowing more migrants. This pattern is consistent with belief confirmation: individuals interpret new migration events through the lens of existing concern. Moreover, lagged perceptions independently predict attitudes (–0.023 SD), underscoring the importance of prior beliefs in shaping preferences.

The main effect of arrivals in Column (2) becomes small and statistically insignificant once prior perceptions are accounted for, reinforcing the idea that these perceptions mediate attitudinal responses. If small boat arrivals affected immigration preferences

[20] In 2024, the UK issued 3,134,764 entry clearance visas and net migration stood around 900,000, compared to 36,816 individuals detected crossing the Channel illegally. Figure A8 compares irregular arrivals with entry clearance visas over time.

Table 8—Perception about Immigration Level

| | Immigration Getting Higher (std) | Allow More Migrants (std) |
|---|---|---|
| | (1) | (2) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 0.095* | -0.002 |
| | (0.051) | (0.013) |
| ... x lag(Immigration Getting Higher (std)) | | -0.061*** |
| | | (0.018) |
| lag(Immigration Getting Higher (std)) | | -0.023*** |
| | | (0.004) |
| Controls | Yes | Yes |
| Individual FE | Yes | Yes |
| LAD x Wave FE | Yes | Yes |
| Observations | 139542 | 75599 |

Notes: This table examines whether recent small boat arrivals influence public perceptions about whether immigration levels are rising in the UK. The dependent variable in Column (1) is the standardized version of the survey question, "Do you think the level of immigration is getting higher, lower, or staying about the same?", coded on a 1–5 scale. Higher values indicate the belief that immigration is rising. Columns 2 include interactions between current arrivals and the respondent's perception (in the previous survey wave) to examine changes in attitudes towards immigration. Standard errors are clustered at the survey date level. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Small Boat Arrivals - UK Home Office; Immigration Perceptions - British Election Survey Internet Panel (Waves 14-29)

without altering perceptions of immigration levels, it would suggest a symbolic response driven by the event's visibility rather than its perceived scale. Instead, the fact that perceived immigration and support for future immigration shift together points to a cognitive mechanism, where emotional salience and prior beliefs interact to shape public response.

Appendix Table A24 provides additional validation. Using standardized responses across five other national issues—cost of living, crime, the economy, education, and the NHS—we find no evidence that small boat arrivals affect broader national concerns. These findings help rule out general survey reactivity, reinforcing that the shifts we observe are migration-specific rather than reflections of broader shifts in public mood.

To further distinguish between belief updating and confirmation bias, we interact current arrival shocks with respondents' lagged immigration attitudes (Appendix Table A25). Results show that the negative effect of arrivals is significantly larger among those already opposed to immigration. This asymmetric response provides further evidence for confirmation bias: visible migration shocks reinforce pre-existing preferences rather

than shifting attitudes uniformly across the population.

Taken together, these findings show that small boat arrivals influence not only public perceptions of immigration levels but also future immigration preferences—and that these effects are conditional on what people already believe. Irregular migration events, despite their limited scale, can shape public opinion in outsized ways due to their visibility, emotive content, and cognitive resonance.

# 8 Conclusion

This paper shows that even modest and episodic irregular migration events—such as small boat arrivals in the English Channel—can have immediate and measurable effects on public opinion. Although these crossings account for a small share of overall immigration, their high visibility and intense media coverage make them politically salient. We find that recent arrivals reduce support for immigration and increase the salience of immigration as a national issue.

Our findings point to several mechanisms through which these events influence public attitudes. Irregular arrivals trigger spikes in media coverage—particularly in right-leaning outlets that frame the events as threats to national security or control—and raise public attention, as reflected in online search behavior. Prior beliefs strongly condition individual responses: those already concerned about immigration react more negatively, consistent with confirmation bias. Arrivals also increase perceived immigration levels, which in turn predict declining support—underscoring the importance of subjective interpretations rather than objective scale.

Crucially, the effects are not confined to irregular migration. We find spillovers to support for legal migration routes, including international students and family members. This generalization of concern reinforces political pressure for broader restrictions. Importantly, these effects are not limited to public attitudes: MPs are significantly more likely to discuss irregular migration in Parliament following recent small boat arrivals, highlighting how such events shape the short-run legislative agenda. While our results point to emotionally charged reactions, we cannot fully disentangle these from more deliberative forms of public reasoning. Understanding the boundary between affective and policy-based responses remains a key direction for future research.

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# Online Appendix

## A Data Appendix

Table A1—Summary Statistics

| Panel A: Small Boat Arrivals | | | | |
|---|---|---|---|---|
| | mean | sd | min | max |
| Daily Migrants Arrived (Unconditional) | 59.11 | 146.06 | 0 | 1305 |
| Daily Migrants Arrived (Conditional) | 178.44 | 207.68 | 1 | 1305 |
| Migrants per Boat (Unconditional) | 10.73 | 18.42 | 0 | 77 |
| Migrants per Boat (Conditional) | 32.39 | 17.96 | 1 | 77 |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 118.26 | 239.39 | 0 | 2022 |
| I($\sum_{t-1}^{t-2}$ Migrant Fatality) | 0.08 | 0.27 | 0 | 1 |

| Panel B: British Election Study | | | | |
|---|---|---|---|---|
| | mean | sd | min | max |
| Immigration Getting Higher | 3.59 | 1.04 | 1 | 5 |
| Allow More Migrants: Overall | 3.77 | 2.92 | 0 | 10 |
| ... : Asylum Seekers | 3.46 | 3.10 | 0 | 10 |
| ... : EU Migrants | 5.68 | 2.77 | 0 | 10 |
| ... : Non-EU Migrants | 4.94 | 2.74 | 0 | 10 |
| ... : Foreign Students | 5.29 | 2.76 | 0 | 10 |
| ... : Families of Existing Migrants | 4.87 | 3.05 | 0 | 10 |
| L-R Scale | 4.93 | 2.28 | 0 | 10 |
| I(Reads News) | 0.50 | 0.50 | 0 | 1 |
| I(News Source Left) | 0.12 | 0.33 | 0 | 1 |
| I(News Source Unclassified) | 0.09 | 0.29 | 0 | 1 |
| I(News Source Right) | 0.28 | 0.45 | 0 | 1 |
| I(Female) | 0.55 | 0.50 | 0 | 1 |
| I(Employed) | 0.50 | 0.50 | 0 | 1 |
| I(Own a House) | 0.68 | 0.47 | 0 | 1 |
| I(Social Grade A/B) | 0.36 | 0.48 | 0 | 1 |
| I(Social Grade C) | 0.42 | 0.49 | 0 | 1 |

Notes: This table reports summary statistics for variables used in the analysis. Panel A describes daily small boat migrant arrivals. Panel B presents individual-level variables from the British Election Study Internet Panel.

Sources: Small Boat Arrivals - UK Home Office; British Election Study Internet Panel (Waves 14–29).

## A.1 Missing Migrants Project

To measure the human cost of irregular migration across the English Channel, we use data from the International Organization for Migration's Missing Migrants Project (MMP), which tracks deaths and disappearances during migration worldwide.[21] The dataset includes both confirmed fatalities and individuals missing and presumed dead. The MMP compiles information from a wide range of sources, including official records (e.g., coast guards, border police, coroners), media reports, NGO documentation, and interviews with migrants, providing a reasonably comprehensive—though not exhaustive—record of fatalities.

The MMP defines a migrant death as one occurring during the process of international migration, including incidents caused by transportation accidents, drowning, exposure to environmental hazards, or violence. It excludes deaths in detention, post-return, or within destination countries when unrelated to the migration journey. As with any such database, under-reporting remains a challenge, particularly for maritime deaths; thus, all figures should be treated as minimum estimates of the true toll.

We identify all fatal incidents recorded between 2018 and 2024 along the route labeled 'English Channel to the UK' in the MMP dataset. For each incident, we extract the date, geographic location, and number of confirmed deaths. We aggregate fatalities by date to construct a daily time series of en-route migrant deaths, which we then merge with the small boat arrival data. To capture the potential salience of recent fatalities, we generate a binary indicator equal to one if any deaths occurred in the two days prior. This variable is used to examine whether recent migrant deaths influence patterns of media coverage or moderate public and political responses to small boat migration.

Between 2018 and 2024, the dataset records 128 fatal incidents and 231 deaths along this route (Appendix Table A2). Figure 1a also shows annual variation in en-route migrant fatalities (red line, right axis), which fluctuate from year to year and reach their highest level in 2024, when more than 75 deaths were recorded. Most incidents occurred on the French side of the Channel—88% in France, 7% in Belgium, and 5% in the UK (Panel A). Fatalities are more concentrated in the UK than incidents, accounting for 20% of total deaths. Drowning is the most commonly reported cause (50%), followed by vehicle accidents or hazardous transport (31%), and exposure to environmental stressors (7%) (Panel C). Spatial analysis of incident locations (Figure A4) shows that most events cluster along the northern French coastline, especially near Calais, underscoring both the dangers of crossing and the role of French departure zones as key points of risk in

[21] Source: https://missingmigrants.iom.int/downloads

the migration route.

Table A2—Summary Statistics: Migrant Fatalities

| | Numbers | Percentages |
|---|---|---|
| Panel A: Location of Incidents | | |
| Incidents in the UK | 7 | 5% |
| Incidents in the Belgium | 9 | 7% |
| Incidents in the France | 112 | 88% |
| Total | 128 | 100% |
| Panel B: Location of Fatalities | | |
| Fatalities in the UK | 47 | 20% |
| Fatalities in the Belgium | 8 | 4% |
| Fatalities in the France | 176 | 76% |
| Total | 231 | 100% |
| Panel C: Cause of Death by Incident | | |
| Drowning | 64 | 50% |
| Vehicle accident/ death linked to hazardous transport | 40 | 31% |
| Harsh environmental conditions/ sickness / lack of adequate shelter, food, water, healthcare | 8 | 7% |
| Violence | 5 | 4% |
| Accidental Death | 8 | 6% |
| Mixed or unknown | 3 | 2% |
| Total | 128 | 100% |

Notes: This table presents summary statistics on migrant fatalities for reported journeys en-route to the United Kingdom between 2018 and 2024. Panel A reports the location where incidents occurred, while Panel B shows the country where deaths were recorded. Panel C categorizes the cause of death by incident type.
Source: Migrant Fatalities – IOM Missing Migrants Project.

## A.2 British Election Study

To examine how individuals attitudes, we use data from the British Election Study Internet Panel.[22] The BES tracks public attitudes, policy preferences, and political behavior over time, making it well suited for high-frequency analysis of public opinion in response to real-world developments. We use the combined panel from Waves 14 to 29, covering the period between 2018 and 2024. Each wave consists of approximately 30,000

[22]Source: https://www.britishelectionstudy.com/data-object/british-election-study-combined-wave-1-29-internet-panel/

to 35,000 respondents, on average respondents took part in at least 5 waves (Appendix Figure A5).

Appendix Table A3 lists the start and end dates for each wave and Table A4 provides the full text of the questions and options. The table shows that survey waves typically span 11 to 28 days, with an average duration of approximately 18 days. This time frame aligns with the rapid escalation of small boat arrivals and includes rich survey data at regular intervals. We reshape this dataset into a respondent-wave panel, with each row representing a respondent at a specific wave. We use the recorded end date of the survey as the reference date, converting it into calendar date and week identifiers. This enables us to merge the BES panel with time-varying data on migration arrivals and media coverage.

Our main outcome variable is self-reported support for immigration. Respondents are asked: "Some people think that the UK should allow many more immigrants to come to the UK to live and others think that the UK should allow many fewer. Where would you place yourself on this scale?" Responses range from 0 ("Many fewer") to 10 ('Many more'), with 9999 indicating "Don't know". We recode all 9999 responses as missing and standardize the scale across waves. We also use a set of five items asking whether the UK should allow more or fewer individuals from different groups to immigrate: asylum seekers, EU workers, non-EU workers, foreign students, and family members of UK residents. Each item uses a 0–10 scale, with higher scores indicating greater openness. These variables are similarly cleaned and standardized.

Issue salience is measured using responses to the Most Important Issue (MII) question, which asks respondents to state the single most important issue facing the country at the present time. Open-text responses are manually coded into one of 50 categories, which are then collapsed into 12 broad domains in the small_mii_cat variable. Based on this, we create binary indicators for whether a respondent identifies the following as their most important issue: Europe (code = 1), immigration (2), the economy (3), health and the NHS (4), the environment and climate change (8), general dissatisfaction or negativity about the state of the country (10), and liberalism versus authoritarianism (11). A residual 'other' category combines responses coded as education (5), taxation and benefits (7), housing (9), and remaining other liberal-authoritarianism and other issues (12, 13). Each indicator equals one if the relevant issue was selected and is set to missing for non-response. These variables allow us to track shifts in issue salience over time and to assess whether immigration rises in perceived importance.

Perceptions of national conditions are captured through two question batteries. First, respondents are asked whether immigration, the cost of living, or crime is getting higher,

Table A3—British Election Study Survey Wave Time Period

| Survey Wave | Start Date | End Date | Span (In Days) |
|---|---|---|---|
| 14 | 4 May 2018 | 21 May 2018 | 17 |
| 15 | 11 Mar 2019 | 29 March 2019 | 18 |
| 16 | 24 May 2019 | 18 June 2019 | 25 |
| 17 | 1 Nov 2019 | 12 Nov 2019 | 11 |
| 18 | 13 Nov 2019 | 11 Dec 2019 | 28 |
| 19 | 13 Dec 2019 | 23 Dec 2019 | 10 |
| 20 | 3 June 2020 | 21 June 2020 | 18 |
| 21 | 7 May 2021 | 25 May 2021 | 18 |
| 22 | 26 Nov 2021 | 15 Dec 2021 | 19 |
| 23 | 6 May 2022 | 26 May 2022 | 20 |
| 24 | 1 Dec 2022 | 14 Dec 2022 | 13 |
| 25 | 5 May 2023 | 23 May 2023 | 18 |
| 26 | 3 May 2024 | 22 May 2024 | 19 |
| 27 | 24 May 2024 | 7 June 2024 | 14 |
| 28 | 10 June 2024 | 3 July 2024 | 23 |
| 29 | 5 July 2024 | 19 July 2024 | 14 |

Notes: This table provides the fieldwork dates for each wave of the British Election Study Internet Panel included in the analysis. For each survey wave, the table lists the start and end dates, along with the total number of days the survey was in the field. The data span from Wave 14 in May 2018 through Wave 29 in July 2024.
Sources: British Election Study Internet Panel (Waves 14–29).

lower, or staying the same, measured on a five-point ordinal scale. Second, they are asked whether the economy, NHS, or education system is improving or deteriorating, also on a five-point scale. Higher scores indicate perceived worsening. All 'Don't know' responses are set to missing, and variables are standardized.

To assess heterogeneity in responses by media exposure, we use self-reported newspaper readership from the BES question: "Which daily newspaper do you read most often?" We construct binary indicators based on ideological orientation: left-leaning (The Guardian or Mirror), right-leaning (The Express, Daily Mail, The Sun, Telegraph, Times, Financial Times), and other (The Independent, Scotsman, Herald, Western Mail, or other regional outlets).[23] Respondents selecting 'None' (code 16) are excluded from ideological classification. We also generate a binary indicator for media consumption in general, which equals one if the respondent names any newspaper. These measures allow us to test whether individuals exposed to different ideological sources—or to news more generally—respond differently to migration events.

[23]This classification is based on information from each newspaper's Wikipedia page, categorizing them as left-leaning, right-leaning, or unclassified.

To account for observable individual characteristics that may influence immigration attitudes, we construct a standard set of demographic controls. These include binary indicators for being employed (full-time, part-time, or self-employed), and owning a home (outright or with a mortgage) and for socio-economic class using indicators for higher (social grade A/B), intermediate (social grade C1/C2) groups and political ideology (left-right self-placement, rescaled to 0–1). These variables along with binary indicator for media consumption are included in all specifications examining public opinion outcomes as control variables.

## A.3 GDELT

We use data from the Global Database of Events, Language, and Tone (GDELT), which captures global news reporting in real time and provides structured metadata on both media narratives and real-world events. We draw on two components of the GDELT dataset: the Events database, which records daily social and political development and the Global Knowledge Graph, which captures how media articles are framed.

### A.3.1 Events Data

To capture real-world social and political activity in the UK, we use the GDELT 1.0 Events database, which provides structured, machine-coded records of daily events reported in global news media. Each entry in the dataset represents an event extracted from one or more news articles, along with metadata on the actors involved, location, tone, and type of interaction. We downloaded daily .export.csv.zip files for all dates between January 1, 2018, and December 31, 2024, from the GDELT archive.[24]

We retain only those events where at least one actor (Actor1Geo_CountryCode or Actor2Geo_CountryCode) is based in the UK. This filtering ensures that we capture events that involve UK-based individuals or institutions. We combine these filtered records into a single dataset covering the full 2018–2024 period. For each date, we compute a set of summary measures. These include the total number of events, the number of events falling into each of GDELT's four QuadClass categories—verbal cooperation (QuadClass 1), material cooperation (2), verbal conflict (3), and material conflict (4)—as well as the average Goldstein score, which reflects the overall tone or intensity of reported events. We also calculate the total number of unique articles and sources that contributed to event coding on each day. The resulting dataset provides a high-frequency measure of real-world social and political activity in the UK.

[24] http://data.gdeltproject.org/events/

Table A4—Survey Questions and Options

| **Survey Question and Options** | **Survey Waves** |
|---|---|
| **Question**: Some people think that the UK should allow *many more* immigrants to come to the UK to live and others think that the UK should allow *many fewer* immigrants. Where would you place yourself and the parties on this scale?<br>**Options**: **0** - Many fewer; **10** - Many more; **9999** - Don't know | 14-17, 20-23, 25, 27-29 |
| **Question**: Do you think that Britain should allow more or fewer of the following kinds of people to come and live in Britain? - Asylum Seekers, Workers from other EU countries, Workers from outside the EU, Foreign students, Families of people who already live here<br>**Options**: **0** - Many fewer; **10** - Many more; **9999** - Don't know | 20, 25-26 |
| **Question**: As far as you're concerned, what is the SINGLE MOST important issue facing the country at the present time?<br>**Options**: Open text responses coded into 12 options by BES team; **1** - Europe; **2** - Immigration; **3** - Economy; **4** - Health; **5** - Terrorism; **7** - Inequality; **8** - Environment; **9** - Austerity/spending; **10** - Negativity; **11** - Other lib-auth; **12** - Other left-right; **13** - Other | 14-29 |
| **Question**: Do you think that each of the following are getting higher, getting lower or staying about the same? - Immigration<br>**Options**: **1** - Getting a lot lower; **2** - Getting a little lower; **3** - Staying about the same; **4** - Getting a little higher; **5** - Getting a lot higher; **9999** - Don't know | 14-17, 25-27 |

Notes: This table lists the full wording of key British Election Study survey questions used in the analysis, along with the available response options and the waves in which each question was asked. Questions cover immigration policy preferences, perceptions of change in immigration levels, and issue salience (e.g., identifying immigration as the most important issue). Response scales vary by question, and coding conventions (e.g., "9999" for "Don't know") follow the official BES documentation.
Sources: British Election Study Internet Panel (Waves 14–29).

We use this daily measure of media environment in two distinct ways. First, these are used as controls to account for variation in media activity on each day of the survey. Including these controls helps isolate the effect of small boat arrivals from broader shifts in news coverage or national events. Second, we use them as predictors in examining whether the volume and nature of UK-based news events are associated with subsequent increases in small boat arrivals. This allows us to test whether observable conditions in the UK, as reflected in media-reported events, may serve as signals or pull factors influencing migration decisions.

### A.3.2 Global Knowledge Graph

To measure framing of media articles, we use data from the GDELT 1.0 Global Knowledge Graph (GKG), a high-frequency dataset that tracks global media narratives across multiple languages in real time. The GKG is published in daily batches, with each file containing structured metadata on news articles published globally on that date. We downloaded daily .gkg.csv.zip files for all dates between January 1, 2018 and December 31, 2024 from the GDELT archive.[25]

We implemented a script that loops through each date in the sample period, downloads the corresponding zipped GKG file, extracts the CSV file, and retains entries where the themes field contains either 'IMMIGRATION' or 'MIGRATION', and the locations field mentions the United Kingdom. This yields a sample of news reports with explicit relevance to migration and the UK context. We aggregate the data at the daily level by counting the number of migration-related news items each day and the average tone, providing a high-frequency proxy for the intensity and mood of UK-related migration news in global news reporting.

To isolate news coverage specifically related to small boat migration, we search the locations field for references to geographic terms: 'English Channel' and 'Dover Strait', the primary route of small boat crossings. Articles containing one of these location tags are classified as covering small boats migration; all others are coded as covering other forms of migration. This allows us to separately track news that focuses on small boats and news that relates to other forms of migration over time.

While this approach provides a comprehensive view of global media attention to UK-related migration, it includes any article that mentions these locations, irrespective of the outlet's geographic origin. Because the GKG captures co-occurring entities within a text—rather than direct associations—location metadata may reflect incidental references

[25] http://data.gdeltproject.org/gkg/

Table A5—Summary Statistics: GDELT Media Coverage

| Panel A: All UK News | | | | |
|---|---|---|---|---|
| | mean | sd | min | max |
| Total Events | 7761.61 | 2556.29 | 141.00 | 18561.00 |
| Total Articles | 116165.89 | 47544.59 | 2286.00 | 514878.00 |
| Total Sources | 23845.99 | 9743.29 | 252.00 | 104777.00 |
| Share Quad Class 1 | 0.65 | 0.03 | 0.54 | 0.84 |
| Share Quad Class 2 | 0.11 | 0.01 | 0.05 | 0.18 |
| Share Quad Class 3 | 0.13 | 0.02 | 0.06 | 0.20 |
| Share Quad Class 4 | 0.11 | 0.02 | 0.05 | 0.28 |
| Average Goldstein Scale | 0.84 | 0.25 | -0.90 | 2.03 |
| **Panel B: Total Migration News** | | | | |
| | mean | sd | min | max |
| Total Articles | 191.00 | 48.39 | 24 | 374 |
| Average Tone | -2.83 | 0.45 | -5 | -1 |
| **Panel C: Small Boats Migration News** | | | | |
| | mean | sd | min | max |
| Total Articles | 1.68 | 2.44 | 0 | 21 |
| Average Tone | -3.69 | 1.88 | -12 | 4 |
| **Panel D: Other UK Migration News** | | | | |
| | mean | sd | min | max |
| Total Articles | 189.32 | 48.07 | 24 | 371 |
| Average Tone | -2.82 | 0.46 | -5 | -1 |

Notes: This table presents descriptive statistics for UK news media coverage based on the GDELT Global Knowledge Graph from 2018 to 2024. Panel A includes aggregate media coverage metrics for all UK-related news, including the number of events, articles, sources, and shares of articles classified into four thematic quadrants. The Goldstein Scale measures the sentiment or tone of media events. Panels B–D disaggregate article counts and average tone for migration-related coverage, distinguishing between total migration news, small boats migration news, and other UK migration news.
Sources: GDELT Global Knowledge Graph, 2018–2024.

to the UK, even when the country is not the primary focus of the article. As a result, total coverage may reflect broader global discourse rather than domestic media narratives.

To better capture how migration is framed within UK public discourse, we complement this analysis with a more targeted focus on major UK-based news outlets with broad national reach. These include left-leaning sources (The Guardian, Mirror), right-leaning sources (Daily Mail, The Telegraph, The Sun, The Times), and others typically viewed as centrist or publicly funded (BBC, Financial Times, Independent, Scotsman, Herald Scotland). Each outlet is classified by its political orientation based on established media bias ratings and editorial orientation, allowing us to examine how coverage varies across the media spectrum. For each day, we construct counts and average tone of total migration-related articles and those specifically referencing small boat crossings. We disaggregate small boat coverage by the ideological orientation of the outlet. This allows us to assess not only the volume of domestic media attention to small boat migration but also how its salience varies across left-, right-, and centre-leaning news sources.

Table A6—Top Theme Words by Topic from LDA Model

| **Topic** | **Top Theme Words** |
|---|---|
| Rights and Politics | Human, Violence, Jobs, Conflict, Rights, Minister, Political, Immigration, WorldMammals, Management |
| Health, Environment, and Welfare | Health, Disease, Transport, WorldMammals, Military, Natural, Weapons, Education, Political, Nutrition |
| Crime, Security, and Law Enforcement | Jobs, Security, French, Authorities, Conflict, Violence, Military, Immigration, Incident, Crime |

Notes: This table reports the most salient words associated with each topic identified through Latent Dirichlet Allocation (LDA) topic modeling of media articles. The three topics were labeled based on the semantic grouping of the top words. Each row lists the dominant words that characterize the corresponding topic. Topics reflect distinct frames used in media reporting on migration-related issues.
Sources: GDELT Global Knowledge Graph, 2018–2024.

To further examine how small boat migration is framed, we apply Latent Dirichlet Allocation (LDA) to the GKG theme tags of small boat-related articles published by these major UK outlets. We use the cleaned theme tags as input for topic modeling. These tags are cleaned by removing procedural or institutional prefixes (e.g., SOC, REL, WB, IMF), splitting composite tags at underscores, filtering out terms shorter than three characters, and excluding generic descriptors such as GOVERNMENT and MEDIA. We retain only those words that appear in at least 1% but no more than 80% of articles to reduce noise. Since theme tags are already condensed representations of article content—rather than full-text data—a smaller number of topics is appropriate to capture the main narrative frames without overfitting or fragmenting meaning.

Using this cleaned set of theme words, we construct a document–term matrix and estimate an LDA model with three topics, selected to balance thematic coherence with

model simplicity.[26] Each article is assigned to its most probable topic. Based on the most frequently associated theme words, we interpret the resulting topics as: (1) rights and politics, (2) health, environment, and welfare, and (3) crime, security, and law enforcement (see Appendix Table A6 for top theme words by topic). We use the resulting topic assignments to explore variation in framing across media outlets with different political orientations.

# B Additional Tables

Table A7—Event Study: Migrant Fatality

| | Total Migrants Arrived (1) | Migrants per Boat (2) |
|---|---|---|
| Event Time = -4 | 10.07 (25.57) | 2.491 (3.139) |
| Event Time = -3 | -28.09 (23.35) | -1.295 (3.053) |
| Event Time = -2 | -17.38 (19.14) | -1.701 (2.699) |
| Event Time = 0 | 45.38** (22.73) | 5.883** (2.580) |
| Event Time = 1 | -19.87 (22.30) | 1.467 (2.856) |
| Event Time = 2 | -26.13 (24.60) | 0.4421 (2.918) |
| Event Time = 3 | -10.54 (25.45) | -0.2599 (3.073) |
| Event Time = 4 | 6.030 (23.98) | 1.829 (3.158) |
| Event Time = 5 | -16.27 (17.64) | -0.2245 (2.837) |
| Event Time = 6 | 13.02 (21.47) | 1.458 (3.044) |
| Event Time = 7 | 13.58 (21.41) | 1.319 (3.008) |
| Week-Year FE | Yes | Yes |
| Observations | 1,128 | 1,128 |

Notes: This table presents an event study examining the effects of a migrant fatality on subsequent small boat arrivals. The dependent variables are (1) the total number of migrants arriving by small boat and (2) the number of migrants per boat. The main explanatory variables are time dummies relative to the day before a recorded migrant fatality (Event Time = -1 ). Coefficients capture deviations from baseline trends before and after the event. All models include week-by-year fixed effects. Standard errors are clustered at the date level.
Sources: Small Boat Arrivals – UK Home Office; Migrant Fatality - IOM Missing Migrants Project

[26]The results are robust to alternative topic numbers, although interpretability declines with additional complexity.

Table A8—Respondent Retention in Survey

| | Attrition in Subsequent Wave | Share Survey Waves Completed |
|---|---|---|
| | (1) | (2) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 0.093 | 0.044 |
| | (0.079) | (0.061) |
| Mean DV | 0.517 | 0.451 |
| First Wave FE | Yes | Yes |
| Observations | 90928 | 90928 |

Notes: This table examines whether small boat migrant arrivals influence respondent retention in the panel survey. The dependent variables are (1) an indicator for attrition in the subsequent wave and (2) the share of total survey waves completed by each respondent. The main explanatory variable is the number of migrants arriving via small boats over the prior two days (in thousands). All models include fixed effects for respondents' first wave of entry into the panel. Standard errors are clustered at the survey date level.
Sources: Small Boat Arrivals – UK Home Office; British Election Study Internet Panel (Waves 14–29).

Table A9—Future Migrants Arrivals by UK News Coverage

| | $\sum_{t+1}^{t+2}$ Migrants Arrived |
|---|---|
| | (1) |
| log(Total Events) | 0.015 |
| | (0.032) |
| log(Total Articles) | -0.009 |
| | (0.069) |
| log(Total Sources) | -0.021 |
| | (0.064) |
| Share Quad Class 1 | -1.316* |
| | (0.716) |
| Share Quad Class 2 | -1.461 |
| | (0.990) |
| Share Quad Class 3 | -0.659 |
| | (0.530) |
| Goldstein Scale | 0.093 |
| | (0.058) |
| Week-Year FE | Yes |
| Observations | 2557 |

Notes: This table examines how characteristics of UK media coverage relate to future small boat migrant arrivals. The dependent variable is the number of migrants arriving over the following two days (in thousands). Explanatory variables include the logged number of migration-related events, articles, and sources, as well as the share of events classified into GDELT Quadrant Classes 1–3, which reflect distinct dimensions of tone and conflict. The Goldstein Scale captures the intensity of reported events. All models include week-by-year fixed effects. Standard errors are clustered at the date level.

Sources: Small Boat Arrivals – UK Home Office; News Data – GDELT 1.0 Events Database.

Table A10—Future Migration Attitudes: Different Estimators and Time Periods

| | Allow More Migrants (std) | | | | | | |
|---|---|---|---|---|---|---|---|
| | (1) Past 2 Days | (2) Past 3 Days | (3) Past 4 Days | (4) Past 5 Days | (5) Past 6 Days | (6) Past 7 Days | (7) Past 8 Days |
| **Panel A: Total Arrivals** | | | | | | | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.027*** | -0.021*** | -0.018*** | -0.015*** | -0.013*** | -0.012** | -0.009** |
| | (0.008) | (0.007) | (0.006) | (0.005) | (0.005) | (0.005) | (0.004) |
| **Panel B: Weighted Sum** | | | | | | | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.029*** | -0.028*** | -0.027*** | -0.025*** | -0.024*** | -0.024*** | -0.021*** |
| | (0.010) | (0.009) | (0.009) | (0.008) | (0.008) | (0.008) | (0.008) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 287247 | 287247 | 287247 | 287247 | 287247 | 287247 | 287247 |

Notes: This table tests the robustness of the relationship between small boat migrant arrivals across different estimation approaches and time windows. The dependent variable is a standardized measure of support for allowing more migrants. Panel A reports effects using unweighted totals of migrants over time windows ranging from 1 to 7 days; Panel B uses a weighted sum of arrivals, assigning more weight to recent days. All models include individual fixed effects and local authority district by wave fixed effects. Standard errors are clustered at the survey date level.

Sources: Small Boat Arrivals – UK Home Office; Immigration Perceptions – British Election Study Internet Panel (Waves 14–29).

Table A11—Future Migration Attitudes: Temporal Persistence

| | Allow More Migrants (std) | |
|---|---|---|
| | (1) | (2) |
| $\sum_{t+1}^{t+2}$ Migrants Arrived | -0.002 | -0.002 |
| | (0.008) | (0.008) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.028*** | -0.029*** |
| | (0.008) | (0.008) |
| $\sum_{t-3}^{t-4}$ Migrants Arrived | -0.011 | |
| | (0.008) | |
| $\sum_{t-5}^{t-6}$ Migrants Arrived | -0.003 | |
| | (0.007) | |
| $\sum_{t-7}^{t-8}$ Migrants Arrived | 0.001 | |
| | (0.006) | |
| $\sum_{t-3}^{t-8}$ Migrants Arrived | | -0.005 |
| | | (0.005) |
| Controls | Yes | Yes |
| Individual FE | Yes | Yes |
| LAD x Wave FE | Yes | Yes |
| Observations | 287247 | 287247 |

Notes: This table investigates the robustness of the estimated effect of small boat migrant arrivals on attitudes towards future immigration by incorporating longer pre-trends. The dependent variable is a standardized measure of support for allowing more migrants. The main explanatory variable is the cumulative number of migrants arriving via small boats over the past two days (in thousands). Additional lagged and placebo variables are included to test for dynamic effects and to rule out pre-trends. All models include individual fixed effects and local authority district by wave fixed effects. Standard errors are clustered at the survey date level. Specifically, we estimate this equation below:

$$Y_{itdw} = \sum_{k=1}^{4} \gamma_k \sum_{j=0}^{1} \text{Migrants Arrived}_{idw,t-(2k-j)} + \gamma_5 \sum_{j=1}^{2} \text{Migrants Arrived}_{idw,t+j} + X'_{idtw}\beta_1 + X'_t\beta_2 + \alpha_i + \phi_{dw(t)} + \epsilon_{idtw}$$

Sources: Small Boat Arrivals – UK Home Office; Immigration Perceptions – British Election Study Internet Panel (Waves 14–29).

Table A12—Future Migration Attitudes: Persistence (1 Day Window)

| | Allow More Migrants (std) |
|---|---|
| | (1) |
| Migrants Arrived$_{t+2}$ | -0.005 |
| | (0.010) |
| Migrants Arrived$_{t+1}$ | 0.002 |
| | (0.012) |
| Migrants Arrived$_{t-1}$ | -0.018 |
| | (0.011) |
| Migrants Arrived$_{t-2}$ | -0.038*** |
| | (0.010) |
| Migrants Arrived$_{t-3}$ | -0.011 |
| | (0.011) |
| Migrants Arrived$_{t-4}$ | -0.013 |
| | (0.010) |
| Migrants Arrived$_{t-5}$ | -0.003 |
| | (0.009) |
| Migrants Arrived$_{t-6}$ | -0.002 |
| | (0.010) |
| Migrants Arrived$_{t-7}$ | -0.004 |
| | (0.009) |
| Migrants Arrived$_{t-8}$ | 0.006 |
| | (0.008) |
| Controls | Yes |
| Individual FE | Yes |
| LAD x Wave FE | Yes |
| Observations | 287247 |

Notes: This table investigates the robustness of the estimated effect of small boat migrant arrivals (using a 1 day window) on attitudes towards future immigration. The dependent variable is a standardized measure of support for allowing more migrants. All models include individual fixed effects and local authority district by wave fixed effects. Standard errors are clustered at the survey date level.
Sources: Small Boat Arrivals – UK Home Office; Immigration Perceptions – British Election Study Internet Panel (Waves 14–29).

Table A13—Future Migration Attitudes: Cumulative Exposure

| | Allow More Migrants (std) | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| $\sum_{t-1}^{t-2}$ $\widehat{\text{Migrants Arrived}}$ | -0.031*** | -0.036*** | -0.012 |
| | (0.012) | (0.011) | (0.020) |
| $\sum_{t-3}^{t-30}$ $\widehat{\text{Migrants Arrived}}$ | | -0.007*** | -0.006** |
| | | (0.003) | (0.003) |
| $\sum_{t-1}^{t-2}$ $\widehat{\text{Migrants Arrived}}$ x $\sum_{t-3}^{t-30}$ $\widehat{\text{Migrants Arrived}}$ | | | -0.009* |
| | | | (0.006) |
| Controls | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes |
| Observations | 287247 | 287247 | 287247 |

Notes: This table examines the cumulative and interactive effects of irregular migration exposure on support for allowing more migrants. The dependent variable is a standardized index of migration attitudes. Column 1 includes predicted small boat arrivals in the two days before the interview, instrumented using wave height at the point of departure. Column 2 adds a measure of predicted cumulative arrivals over the prior 3–30 days. Column 3 includes an interaction term between recent and lagged predicted arrivals to test for reinforcement. All models include individual fixed effects and local authority district-by-wave fixed effects. Standard errors are clustered at the survey date level.

Sources: Small Boat Arrivals – UK Home Office; Wave Height – ECMWF; Immigration Perceptions – British Election Study Internet Panel (Waves 14–29).

Table A14—Heterogeneity in Attitudes towards Future Migrants

| | Allow More Migrants (std) | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.031*** | 0.006 | 0.006 |
| | (0.009) | (0.011) | (0.011) |
| ... x I($\sum_{t-1}^{t-2}$ Migrant Fatality) | 0.024 | | |
| | (0.020) | | |
| ... x I(Reads News) | | -0.064*** | |
| | | (0.015) | |
| ... x I(News Source Left) | | | 0.047** |
| | | | (0.019) |
| ... x I(News Source Unclassified) | | | 0.010 |
| | | | (0.019) |
| ... x I(News Source Right) | | | -0.141*** |
| | | | (0.025) |
| Controls | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes |
| Observations | 287247 | 287247 | 287247 |

Notes: This table examines heterogeneity in the effect of recent small boat arrivals on public support for allowing more immigrants. The dependent variable is standardized across the full sample. The main explanatory variable is the number of migrants arriving via small boats over the past two days (in thousands). Column 1 includes an interaction with a binary indicator for whether a migrant fatality occurred in the preceding two days. Column 2 interacts arrivals with a binary indicator for whether the respondent reports reading any newspaper. Column 3 further disaggregates this interaction by the political leaning of the respondent's preferred news source (left, right, or unclassified), with non-readers forming the omitted group. Standard errors are clustered at the survey date level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.
Sources: Small Boat Arrivals - UK Home Office; Immigration Perceptions - British Election Survey Internet Panel (Waves 14-29)

Table A15—Future Migration Attitudes: Heterogeneity by Demographic Characteristics

| | Allow More Migrants (std) | | | | |
|---|---|---|---|---|---|
| | (1) Employed (FT/PT) | (2) Not Working | (3) Social Grade: A/B | (4) Social Grade: C | (5) Social Grade: D/E |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.008 | -0.045*** | -0.017 | -0.020** | -0.044** |
| | (0.011) | (0.010) | (0.012) | (0.010) | (0.018) |
| Controls | Yes | Yes | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes | Yes | Yes |
| Observations | 133374 | 147550 | 108762 | 112600 | 52384 |

Notes: This table examines how the effect of recent small boat migrant arrivals on support for future migration varies across key demographic subgroups. The dependent variable is a standardized measure of support for allowing more migrants. Subgroups include employment status (employed vs. not working) and social grades (A/B, C, D/E). The main explanatory variable is the number of migrants arriving by small boats over the past two days (in thousands). All models include individual fixed effects and local authority district by wave fixed effects. Standard errors are clustered at the survey date level.

Sources: Small Boat Arrivals – UK Home Office; Immigration Perceptions – British Election Study Internet Panel (Waves 14–29).

Table A16—Future Migration Attitudes: Sub-Samples by Foreign-Born vs Natives

| | Allow More Migrants (std) | | | |
|---|---|---|---|---|
| | UK Born Respondents | | Foreign Born Respondents | |
| | (1) | (2) | (3) | (4) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.024*** | 0.010 | -0.007 | 0.006 |
| | (0.009) | (0.012) | (0.046) | (0.071) |
| ... x I(Reads News) | | -0.066*** | | -0.022 |
| | | (0.016) | | (0.082) |
| Controls | Yes | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes | Yes |
| Observations | 266582 | 266582 | 13647 | 13647 |

Notes: This table explores heterogeneity in the effect of recent small boat arrivals on migration attitudes across UK-born and foreign-born respondents. The dependent variable is a standardized measure of support for allowing more migrants. The main explanatory variable is the number of migrants arriving via small boats in the previous two days (in thousands). The interaction term is a binary indicator for whether the respondent reads newspapers. All models include individual fixed effects and local authority district by wave fixed effects. Standard errors are clustered at the survey date level.
Sources: Small Boat Arrivals – UK Home Office; Immigration Perceptions – British Election Study Internet Panel (Waves 14–29).

Table A17—Future Migrants Arrivals by UK Migration News Coverage

| | $\sum_{t+1}^{t+2}$ Migrants Arrived | |
|---|---|---|
| | (1) | (2) |
| log(EC News Articles) | -0.009 | |
| | (0.007) | |
| log(Other Migration News Articles) | 0.004 | |
| | (0.020) | |
| log(Left Migration News) | | -0.063** |
| | | (0.027) |
| log(Centre Migration News) | | -0.011 |
| | | (0.039) |
| log(Right Migration News) | | -0.022 |
| | | (0.025) |
| Week-Year FE | Yes | Yes |
| Observations | 2555 | 2555 |

Notes: This table investigates whether UK migration-related news coverage is associated with subsequent small boat migrant arrivals. The dependent variable is the number of migrants arriving over the following two days (in thousands). Key independent variables include logged counts of news articles about the English Channel (EC), other migration topics, and migration news coverage by political leaning (left, centre, and right). All models include week-by-year fixed effects. Standard errors are clustered at the date level.
Sources: Small Boat Arrivals – UK Home Office; News Data – GDELT 1.0. Global Knowledge Graph

Table A18—Impact on Media Coverage (All News Articles)

| | log(EC + Dover Strait Migration News) | |
|---|---|---|
| | (1) OLS | (2) IV |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 0.815*** | 1.435*** |
| | (0.126) | (0.304) |
| KP F Stat | | 275.59 |
| Mean DV | 34.210 | 34.223 |
| Week-Year FE | Yes | Yes |
| Observations | 2554 | 2553 |

Notes: This table assesses the impact of small boat migrant arrivals on UK media coverage related to migration across the English Channel and Dover Strait. The dependent variable is the logged number of migration-related news articles. Column (1) presents OLS estimates; column (2) shows IV estimates instrumenting migrant arrivals using significant wave height. The main explanatory variable is the number of migrants arriving via small boats over the prior two days (in thousands). All models include week-by-year fixed effects. Standard errors are clustered at the date level. Sources: Small Boat Arrivals – UK Home Office; Wave Height – ECMWF; News Data – GDELT 1.0. Global Knowledge Graph

Table A19—Impact on Media Coverage (First Stage and Reduce Form)

| | $\sum_{t-1}^{t-2}$ Migrants Arrived | log(EC + Dover Strait Migration News) |
|---|---|---|
| | (1) | (2) |
| Wave Height | -0.203*** | -0.165*** |
| | (0.012) | (0.031) |
| Mean DV | 0.118 | 1.680 |
| Week-Year FE | Yes | Yes |
| Observations | 2555 | 2553 |

Notes: This table presents the first-stage and reduced-form relationships underlying the instrumental variable analysis of migrant arrivals and media coverage. Column (1) shows the first-stage regression of small boat migrant arrivals on average wave height over the previous two days, demonstrating the strength of the instrument. Column (2) reports the reduced-form effect of wave height on the volume of media coverage related to the English Channel and Dover Strait. All models include week-by-year fixed effects. Standard errors are clustered at the date level.

Sources: Small Boat Arrivals – UK Home Office; Wave Height – ECMWF; News Data – GDELT 1.0. Global Knowledge Graph

Table A20—Impact on Media Coverage (Other Migration News)

| | log(Migration News Articles) | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| | Total UK | Other UK Locations | Mediterranean Sea |
| **Panel A: OLS** | | | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 0.020 | 0.012 | -0.053 |
| | (0.022) | (0.022) | (0.097) |
| **Panel B: IV** | | | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 0.087 | 0.075 | -0.306 |
| | (0.060) | (0.060) | (0.247) |
| KP F Stat | 275.59 | 275.59 | 275.34 |
| Mean DV | 191.032 | 189.351 | 43.837 |
| Week-Year FE | Yes | Yes | Yes |
| Observations | 2553 | 2553 | 2546 |

Notes: This table examines whether small boat migrant arrivals affect media coverage of migration topics unrelated to the English Channel. The dependent variables are the logged number of migration-related articles covering: (1) all UK locations, (2) UK locations other than the English Channel, and (3) the Mediterranean Sea. Panel A presents OLS estimates. Panel B presents IV estimates using average wave height as an instrument for migrant arrivals over the previous two days (in thousands). All models include week-by-year fixed effects. Standard errors are clustered at the date level.

Sources: Small Boat Arrivals – UK Home Office; Wave Height Data – ECMWF; News Data – GDELT 1.0. Global Knowledge Graph

Table A21—Impact of Irregular Migration Media Exposure on Individual Attitudes (standardized)

| | Allow More Migrants (std) | |
|---|---|---|
| | (1) | (2) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived (std) | -0.004*** | -0.004*** |
| | (0.001) | (0.001) |
| Media Exposure (std) | -0.012*** | |
| | (0.002) | |
| Media Exposure$_l$ (std) | | 0.006*** |
| | | (0.001) |
| Media Exposure$_c$ (std) | | -0.001 |
| | | (0.001) |
| Media Exposure$_r$ (std) | | -0.013*** |
| | | (0.002) |
| Controls | Yes | Yes |
| Individual FE | Yes | Yes |
| LAD x Wave FE | Yes | Yes |
| Observations | 250361 | 250361 |

Notes: This table reports the effect of predicted media exposure on attitudes toward immigration with standardized variables to ease comparison. Standard errors are clustered at the date level. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Small Boat Arrivals – UK Home Office; News Data – GDELT 1.0 Events Database.

Table A22—Media Framing: Intensive Margin (Tone)

| | Emotional Connotation Score | | |
|---|---|---|---|
| | (1) Overall Tone | (2) Positive Score | (3) Negative Score |
| I(News Source Left) | -0.008 | 0.059 | 0.068 |
| | (0.148) | (0.061) | (0.131) |
| I(News Source Right) | -0.134 | -0.239*** | -0.105 |
| | (0.084) | (0.037) | (0.074) |
| Mean DV | -3.742 | 1.995 | 5.737 |
| Month-Year FE | Yes | Yes | Yes |
| Observations | 4291 | 4291 | 4291 |

Notes: This table investigates differences in the emotional tone of media coverage of small boat migration across news outlets with different political orientations. The dependent variables are emotional connotation scores derived from the text of news articles: (1) overall tone, (2) positive tone, and (3) negative tone. The key explanatory variables are indicators for whether the article was published by a left- or right-leaning outlet; centrist outlets form the omitted category. All models include month-by-year fixed effects. Standard errors are clustered at the date level.
Sources: News Data – GDELT 1.0 Global Knowledge Graph.

Table A23—Single Most Important Issue Facing the Country

| | I(Single Most Important Issue) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Europe | Health | Economy | Immigration | Environment | Negativity | Other Liberal Authoritarian | Other |
| **Panel A: Overall Effect** | | | | | | | | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.002 | -0.005 | -0.008 | 0.034*** | 0.015* | -0.024*** | -0.011 | 0.001 |
| | (0.008) | (0.028) | (0.018) | (0.011) | (0.008) | (0.007) | (0.009) | (0.008) |
| **Panel B: Heterogeneity by Media Source** | | | | | | | | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 0.039*** | -0.012 | -0.007 | 0.018 | 0.011 | -0.027*** | -0.022** | -0.001 |
| | (0.013) | (0.024) | (0.020) | (0.014) | (0.010) | (0.008) | (0.011) | (0.008) |
| ... x I(News Source Left) | 0.143*** | -0.069** | -0.121** | -0.065*** | 0.052*** | 0.084*** | -0.017 | -0.007 |
| | (0.038) | (0.034) | (0.047) | (0.022) | (0.016) | (0.023) | (0.017) | (0.016) |
| ... x I(News Source Unclassified) | 0.023 | 0.003 | -0.033 | -0.015 | -0.018 | 0.059*** | -0.018 | -0.000 |
| | (0.028) | (0.025) | (0.035) | (0.018) | (0.012) | (0.017) | (0.019) | (0.018) |
| ... x I(News Source Right) | -0.205*** | 0.051** | 0.059** | 0.086** | -0.006 | -0.044*** | 0.049** | 0.009 |
| | (0.037) | (0.025) | (0.029) | (0.033) | (0.010) | (0.012) | (0.020) | (0.011) |
| Mean DV | 0.373 | 0.204 | 0.148 | 0.054 | 0.055 | 0.051 | 0.040 | 0.074 |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 243714 | 243714 | 243714 | 243714 | 243714 | 243714 | 243714 | 243714 |

Notes: This table examines whether small boat migrant arrivals influence which issue respondents identify as the most important facing the UK. The main explanatory variable is the number of migrants arriving via small boats over the past two days (in thousands). All models include controls, individual fixed effects, and local authority district by wave fixed effects. Standard errors are clustered at the survey date level. 'Negativity' consists of all the responses signaling distrust of current political scenario of Britain, distrust in any particular political party or concerns regarding societal divides, 'Other Liberal Authoritarian' are responses that express concerns regarding morality, cultural anxiety, racism/discrimination, criminal activities, foreign affairs, war, defense, authoritarian concerns, liberalism and gender and family identity, The 'Other' category includes responses referencing constitutional matters, devolution, Scottish independence, trade, domestic and foreign emergencies, unspecified referendum, and other uncategorized political concerns. Panel A presents the overall effect of migrant arrivals. Panel B examines heterogeneity with an indicator for the occurrence of a migrant fatality. The key explanatory variable is the number of migrants arriving via small boats over the past two days (in thousands). All models include controls, individual fixed effects, and local authority district by wave fixed effects. Standard errors are clustered at the survey date level.

Sources: Small Boat Arrivals - UK Home Office; Single Most Important Issue - British Election Survey Internet Panel (Waves 14-29).

Table A24—Respondents' Perceptions

| | Getting Higher (std) | | | Getting Better (std) | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Immigration | Cost of Living | Crime | Economy | Education | NHS |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 0.095* | -0.026 | -0.001 | 0.010 | -0.007 | 0.009 |
| | (0.051) | (0.043) | (0.026) | (0.046) | (0.058) | (0.023) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 139542 | 150491 | 143898 | 250075 | 99057 | 250146 |

Notes: This table explores whether recent small boat migrant arrivals influence respondents' perceptions of key public and economic issues. The dependent variables are standardized responses to questions about whether each issue is perceived to be getting higher (Columns 1–3: immigration, cost of living, crime) or getting better (Columns 4–6: economy, education, NHS). The key explanatory variable is the number of migrants arriving via small boats over the previous two days (in thousands). All specifications include controls, individual fixed effects, and local authority district by wave fixed effects. Standard errors are clustered at the survey date level.

Sources: Small Boat Arrivals – UK Home Office; Immigration Perceptions – British Election Study Internet Panel (Waves 14–29).

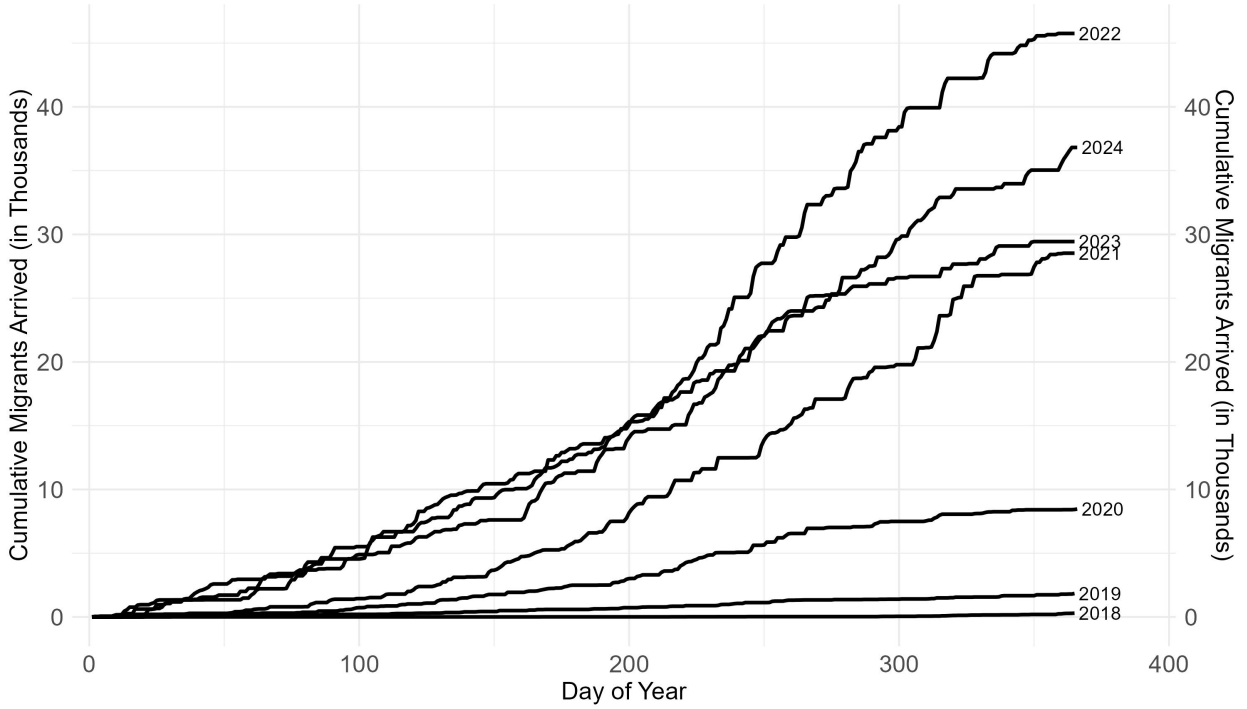
Table A25—Future Migration Attitudes: Heterogeneity by Prior

| | Allow More Migrants (std) | |
|---|---|---|
| | (1) | (2) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.021** | -0.021** |
| | (0.010) | (0.010) |
| lag(Allow More Migrants (std)) | 0.079*** | 0.076*** |
| | (0.010) | (0.010) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived x lag(Allow More Migrants (std)) | | 0.029** |
| | | (0.014) |
| Controls | Yes | Yes |
| Individual FE | Yes | Yes |
| LAD x Wave FE | Yes | Yes |
| Observations | 141053 | 141053 |

Notes: This table examines whether the effect of recent small boat arrivals on public support for immigration is moderated by prior anti-immigration attitudes.
Sources: Small Boat Arrivals – UK Home Office; Immigration Perceptions – British Election Study Internet Panel (Waves 14–29).

# C Additional Figures

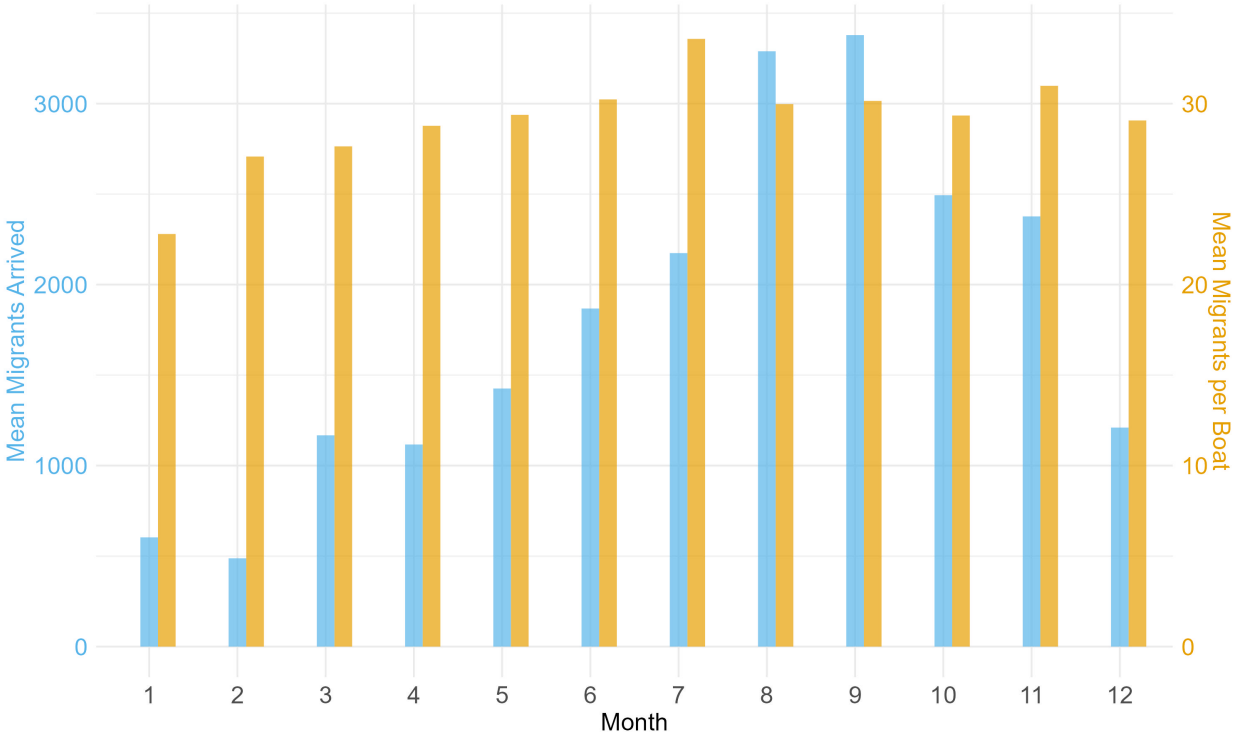
Figure A1—Cumulative Yearly Migrant Arrivals




Notes: This figure plots the cumulative number of small boat migrants arriving in the UK for each year from 2018 to 2024. The x-axis denotes the day of the year (1–365), and the y-axis shows cumulative arrivals (in thousands). Each line represents a different year, allowing comparison of arrival patterns and intensity over time.

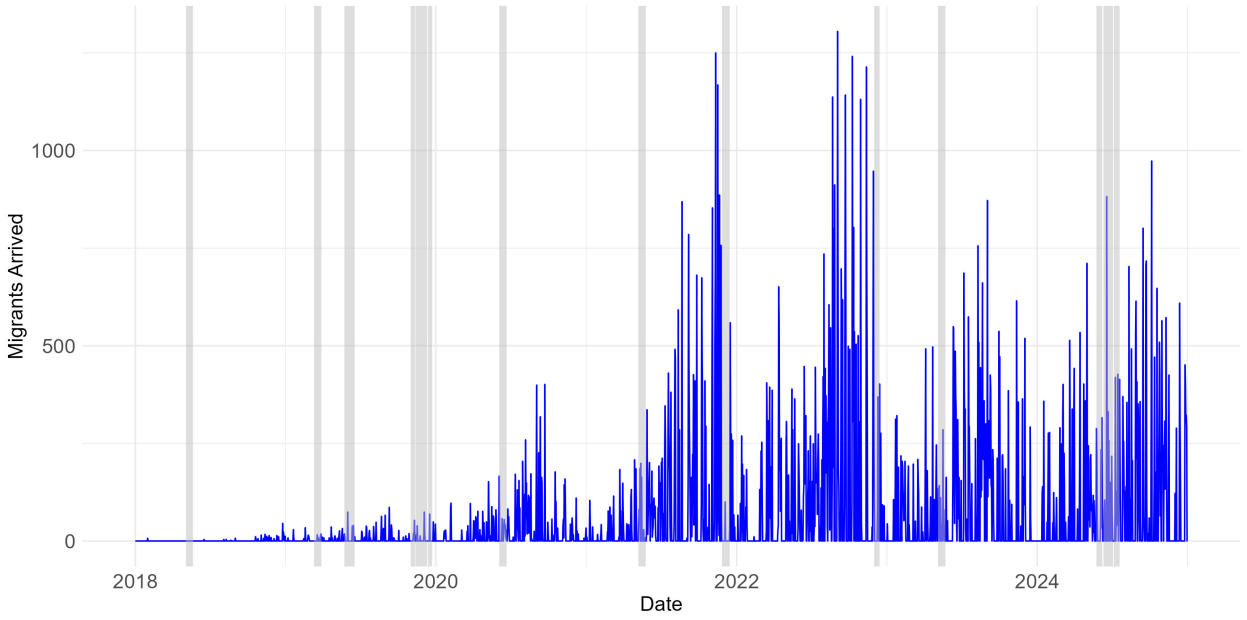
Sources: Small Boat Arrivals – UK Home Office.

Figure A2—Monthly Mean: Total Migrants Arrived and Migrants per Boat



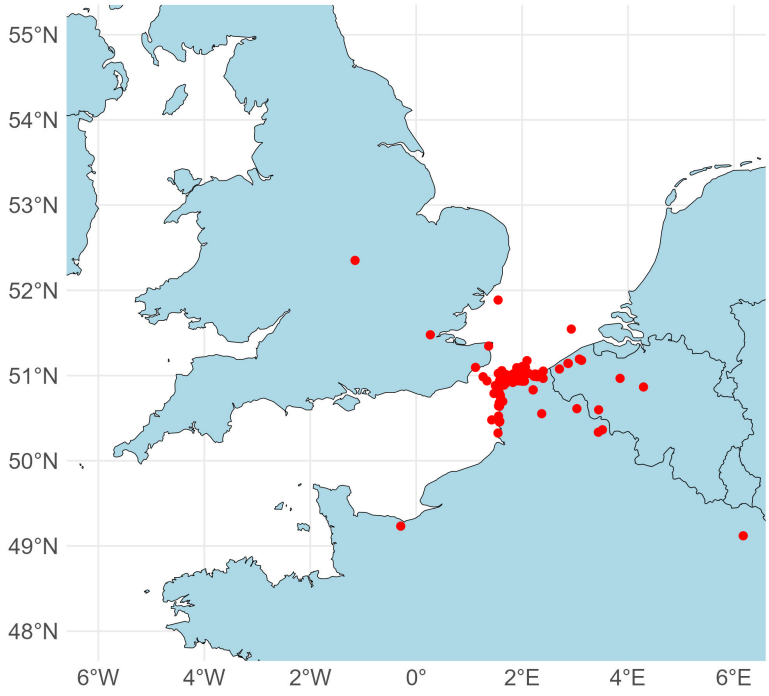

Notes: This figure shows the monthly average number of small boat migrants arriving in the UK, represented in Blue and the monthly average number of migrants per boat represented in Yellow, across the years 2018 to 2024. The left y-axis corresponds to the mean number of migrants arrived per month, and the right y-axis corresponds to the mean number of migrants per boat.
Sources: Small Boat Arrivals – UK Home Office.

Figure A3—Daily Small Boat Migrants Arrived

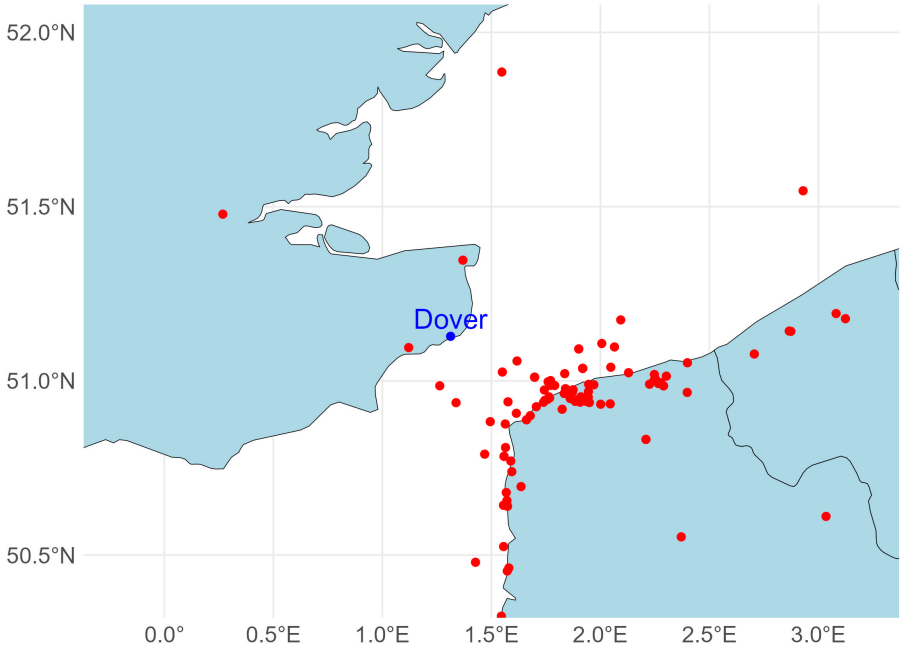



Notes: This figure plots the daily number of small boat migrants arriving in the UK from 2018 to 2024. Each blue vertical line represents the count of migrants arriving on a single day. The shaded vertical bands represent the survey periods of the British Election Survey.
Sources: Small Boat Arrivals – UK Home Office; Survey Period - British Election Survey (Waves 14-29)

Figure A4—Location: Incidents of Migrant Fatalities



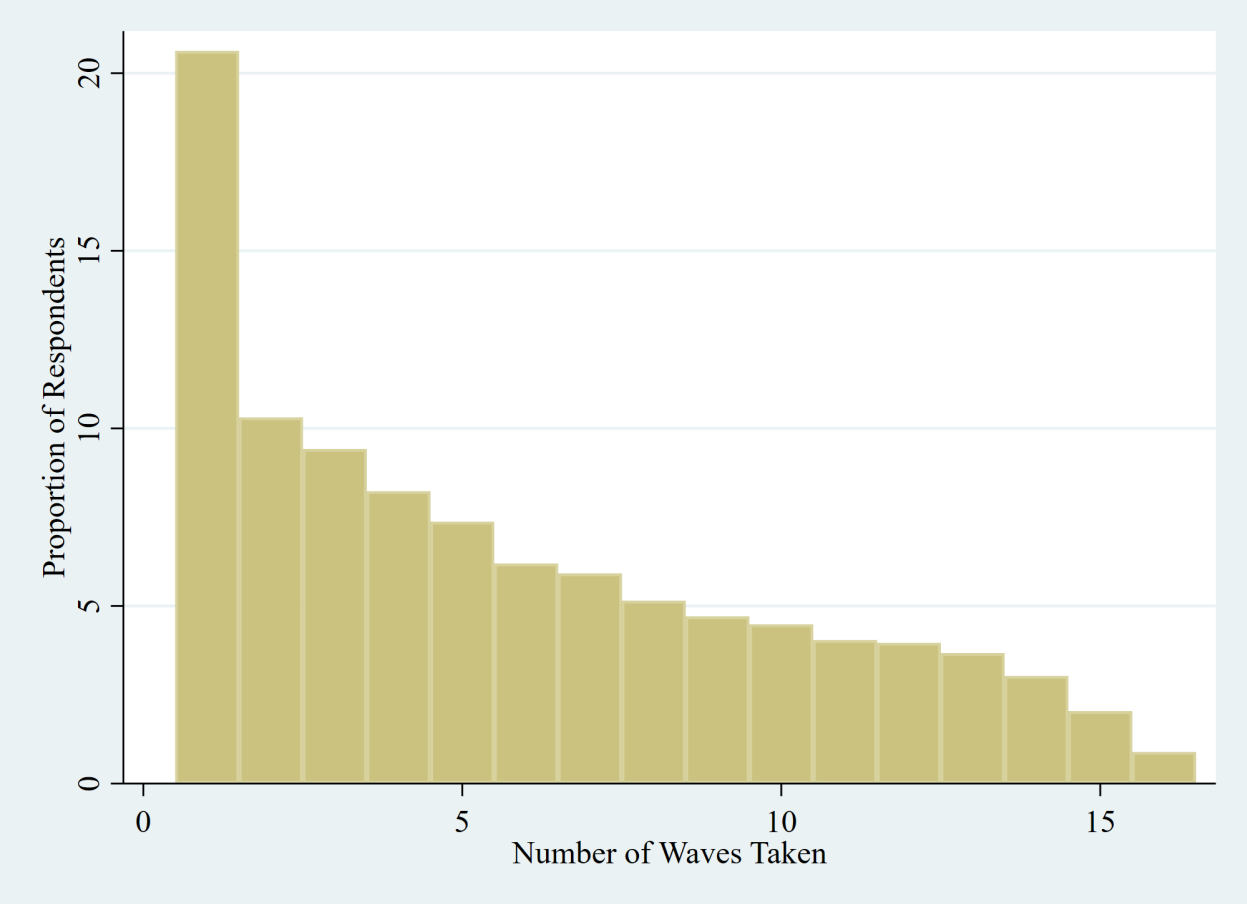

(a) Migration Route: English Channel to the UK




(b) Strait of Dover

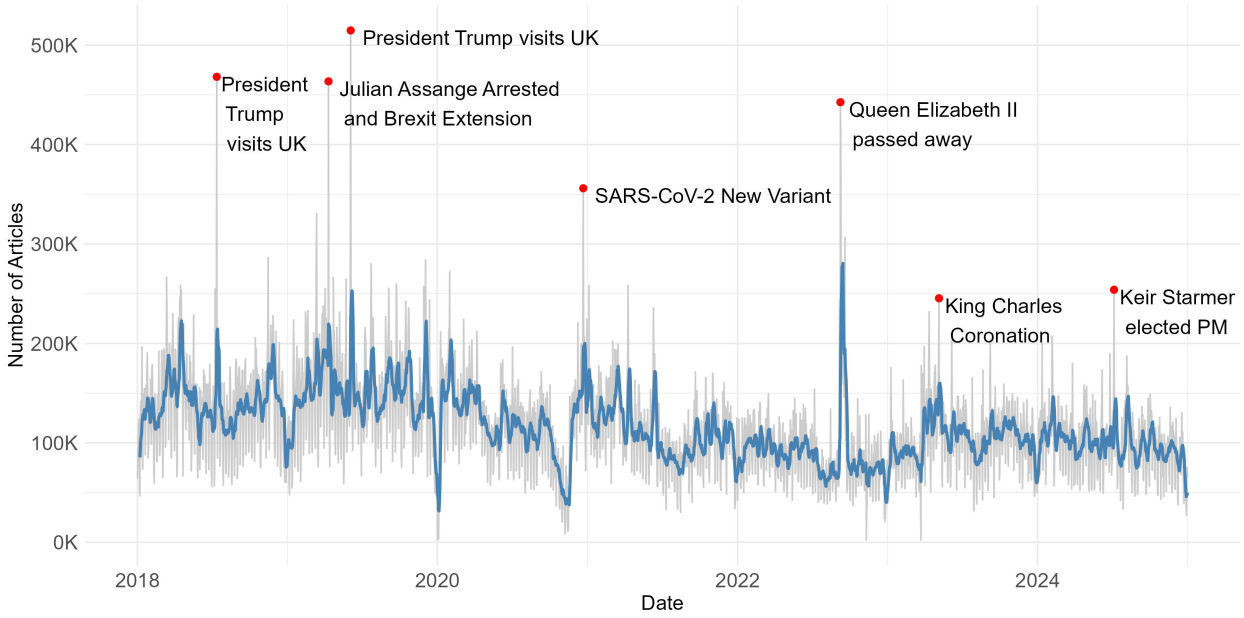
Notes: This figure maps the locations of recorded migrant fatalities during cross-Channel journeys between 2018 and 2024. Panel (a) shows incidents across the broader English Channel route connecting the northern French coast and southern England. Panel (b) zooms into the Strait of Dover, illustrating the dense clustering of incidents near this key crossing corridor.
Sources: Migrant Fatalities – IOM Missing Migrants Project.

Figure A5—BES Wave Participation



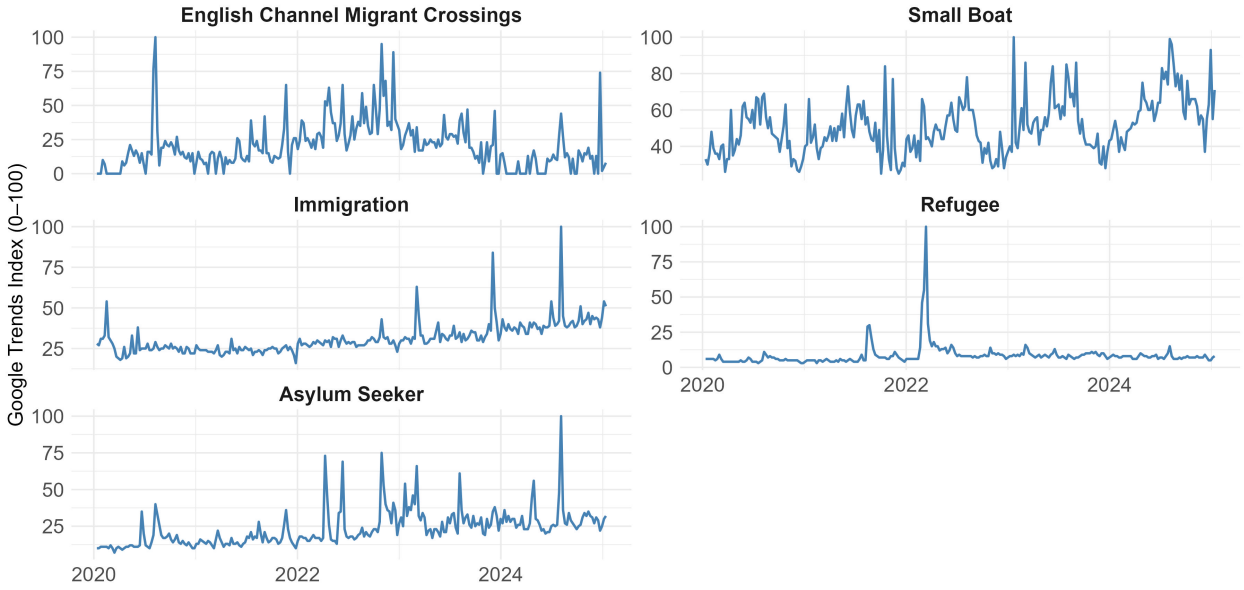

Notes: This figure shows the distribution of respondents based on the number of BES survey waves they participated in. The x-axis represents the number of waves taken, while the y-axis displays the proportion of respondents corresponding to each count.
Sources: British Election Study (Waves 14-29)

Figure A6—Number of Media Articles over time



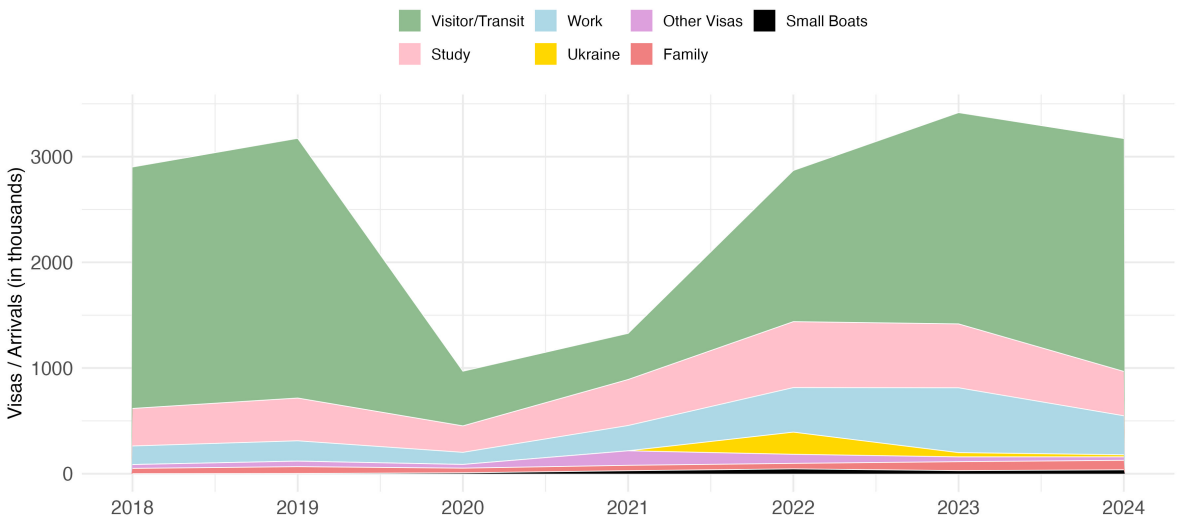

Notes: This figure presents a time series of the number of media articles published daily from 2018 to 2025. The vertical axis indicates article count (in thousands), and notable dates are annotated with major political or social events.
Sources: News Data – GDELT 1.0 Events Database.

Figure A7—Google Trends: Weekly Search Interest in the UK (2020–2024)

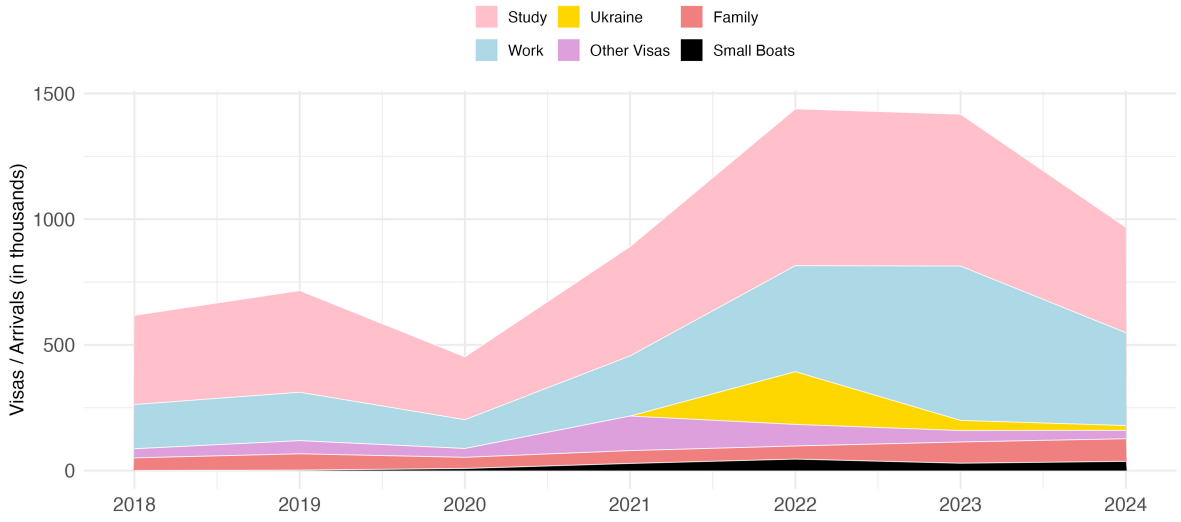



Notes: This figure presents weekly Google Trends search interest in the UK from 2020 to 2024 for six migration-related terms. Each subplot displays a separate search term indexed from 0 to 100, where 100 indicates peak search volume during the period. The terms include: "English Channel Migrant Crossings"; "Small Boat"; "Immigration"; "Refugee"; "Asylum Seeker". Search intensity is plotted as a time series with weekly resolution, showing variation in public interest across migration-related topics.
Sources: Google Trends - extracted January 2025.

Figure A8—Overall Migrant Arrivals: Entry Clearance Visas + Small Boats




(a) All Categories

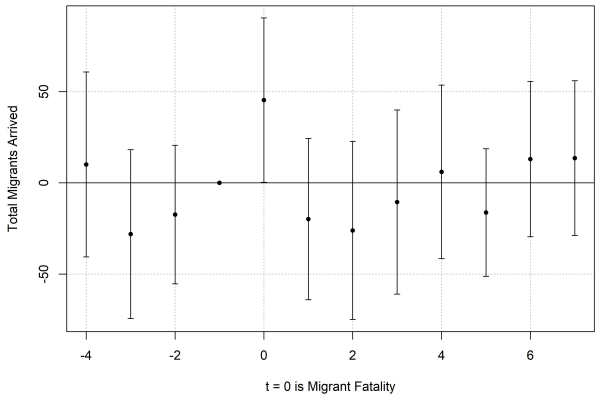



(b) All Categories excluding Visitor/Transit visas

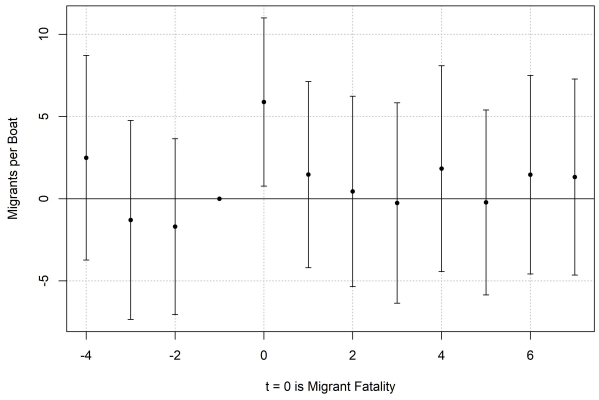
Notes: The above figure shows the annual migrant arrivals to the UK from 2018 to 2024 by visa type and small boat crossings. Categories include: "Visitor/Transit" - Total Visitor visas granted, Total Transit and other visas granted; "Work" - Total Work visas granted (Temporary work visas, Investor, business development and talent, Other work visas and exemptions); "Study" - Total Study visas granted (sponsored study and other study); "Ukraine" - Ukraine Family Scheme and Ukraine Sponsorship Scheme; "Other" - EEA Family Permits, EUSS Family Permits, BN(O) visa route; "Family" - Total Family visas and Total Dependents. Each category is represented by a stacked area plot with color-coded segments, and the vertical axis reflects the total number of arrivals in thousands.

Sources: Entry Clearance Visa Statistics - UK Home Office; Small Boats - Small Boat Arrivals – UK Home Office

Figure A10—Event Study: En-Route Migrant Fatality



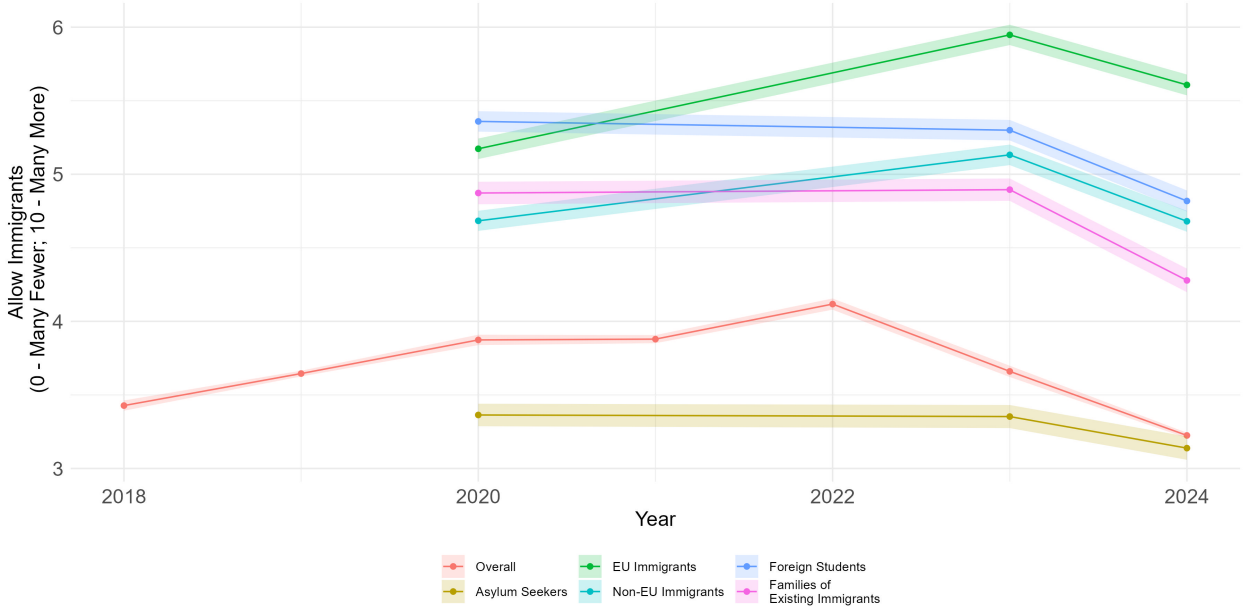

(a) Total Migrants Arrived




(b) Migrants per Boat

Notes: This figure presents event study plots showing changes in small boat migration activity around the occurrence of a migrant fatality. Panel (a) plots the estimated effects on the number of migrants arriving per day, and Panel (b) plots the effects on the number of migrants per boat. Each point represents the estimated coefficient for a given day relative to the day before the fatality (t = -1), with vertical lines indicating 95 per cent confidence intervals.
Sources: Small Boat Arrivals – UK Home Office; Migrant Fatalities – IOM Missing Migrants Project.

Figure A11—Attitudes towards Future Migrants over time




Notes: This figure displays the average yearly attitudes towards allowing more or fewer immigrants across different categories between 2018 and 2024. The vertical axis ranges from 0 (many fewer immigrants) to 10 (many more immigrants). Distinct colored lines represent responses for overall immigration and for specific migrant categories: EU immigrants, non-EU immigrants, asylum seekers, foreign students, and families of existing immigrants. Shaded areas around lines indicate confidence intervals.
Sources: British Election Study Internet Panel (Waves 14–29).

# D Robustness

This sub-section presents a series of robustness checks to assess the validity, generalisability, and sensitivity of our core results. We examine potential confounders, functional form assumptions, geographic exposure, instrumental variables, and survey timing effects.

Table B1—Impact on Ideology and Media Consumption

| | L-R Scale | Polarization Scale | I(Reads News) |
|---|---|---|---|
| | (1) | (2) | (3) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 0.000 | 0.001 | -0.003 |
| | (0.001) | (0.002) | (0.003) |
| Mean DV | 0.496 | 0.357 | 0.494 |
| Controls | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes |
| Observations | 359688 | 359688 | 468593 |

Notes: This table reports the estimated effect of recent small boat migrant arrivals on political ideology and media consumption using individual-level panel data from the British Election Study. Column 1 examines self-reported ideological position on a left-right scale (0 = Left, 10 = Right). Column 2 uses a polarization index measuring ideological distance from the center. Column 3 captures whether individuals report consuming news regularly. All regressions include LAD-by-wave and individual fixed effects, as well as standard demographic controls. The key independent variable is the two-day lagged sum of migrant arrivals.
Sources: British Election Study Internet Panel (Waves 14–29).

First, we examine whether small boat arrivals influence broader political attitudes or media engagement, which could confound our main results. Specifically, Table B1 tests whether arrivals affect respondents' left–right ideological self-placement (Column 1), political polarization (measured as distance from the ideological midpoint; Column 2), or reported news consumption (Column 3). In all cases, the estimated effects are small and statistically insignificant. These findings suggest that recent migration events do not shift general political orientations or increase media engagement, lending support to our interpretation that the observed attitudinal responses to small boat arrivals are specific to immigration and not driven by broader changes in political awareness or sorting.

Second, we assess whether results are driven by respondents who may be directly exposed to small boat arrivals, we re-estimate our main models after excluding all observations from the South East of England—a key arrival region. Table B2 shows that the main patterns remain robust. Even outside this high-exposure area, recent small boat ar-

Table B2—Excluding Surveys from South East

| | Allow More Migrants (std) | Immigration Getting Higher (std) | I(MII Immigration) |
|---|---|---|---|
| | (1) | (2) | (3) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.026*** | 0.106** | 0.031*** |
| | (0.009) | (0.053) | (0.010) |
| Mean DV | | | 0.054 |
| Controls | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes |
| Observations | 244646 | 118822 | 207694 |

Notes: This table replicates the main specification after excluding survey responses from the South East region of England, where small boat arrivals are most concentrated. Column 1 reports effects on attitudes toward allowing more migrants. Column 2 shows perceived trends in immigration. Column 3 reports whether respondents identified immigration as the most important issue (MII). All outcomes are standardized or binary as indicated. Regressions include LAD-by-wave and individual fixed effects, as well as demographic controls.
Sources: British Election Study Internet Panel (Waves 14–29). Small Boat Arrivals – UK Home Office.

rivals are associated with a statistically significant decline in support for allowing more migrants (Column 1), an increase in perceptions that immigration is rising (Column 2), and a higher likelihood of selecting immigration as the most important issue (Column 3). Overall, these results indicate that the observed public reactions are not driven solely by geographic proximity to arrival zones and likely reflect broader national responses to high-profile migration events.

Third, to ensure that our findings are not sensitive to the functional form of the migration variable, we re-estimate our main model using two alternative specifications. Column 1 of Table B3 applies the inverse hyperbolic sine (IHS) transformation to recent small boat arrivals, which accommodates zero values while approximating a log-linear relationship. Column 2 uses the natural logarithm of (1 + arrivals). In both cases, we continue to find a statistically significant negative association between migration events and support for allowing more migrants.

Also, Table B4 Panels A and B examine an alternative measure of migration intensity: the number of migrants per boat, which may serve as a more vivid signal of crowding, disorder, or risk. Panel A uses the unweighted average, while Panel B applies a weighted version. The results show substantially larger negative effects compared to total arrivals, particularly within the first three days. For instance, a two-day increase in migrants per boat is associated with a 0.158 standard deviation decline in support for immigration

Table B3—Future Migration Attitudes: Alternative Estimators

| | Allow More Migrants (std) | |
|---|---|---|
| | (1) | (2) |
| IHS($\sum_{t-1}^{t-2}$ Migrants Arrived) | -0.0022*** | |
| | (0.0005) | |
| log($\sum_{t-1}^{t-2}$ Migrants Arrived) | | -0.0025*** |
| | | (0.0005) |
| Controls | Yes | Yes |
| Individual FE | Yes | Yes |
| LAD x Wave FE | Yes | Yes |
| Observations | 287247 | 287247 |

Notes: This table assesses the robustness of the relationship between small boat arrivals and migration attitudes using alternative transformations of the key independent variable. Column 1 uses the inverse hyperbolic sine (IHS) of the two-day lagged number of migrant arrivals, while Column 2 uses the logarithmic transformation. The dependent variable is standardized support for allowing more migrants. All models include individual fixed effects, LAD-by-wave fixed effects, and standard demographic controls.
Sources: British Election Study Internet Panel (Waves 14–29). Small Boat Arrivals – UK Home Office.

(Panel A, Column 1), and 0.175 under the weighted specification (Panel B, Column 1). Although the effects attenuate over time, they remain statistically significant across the full eight-day window. These findings suggest that the perceived density or danger of crossings may amplify public concern, possibly by evoking humanitarian or security-related imagery.

Despite their salience, high-density crossings tend to receive episodic media attention—often in connection with exceptional events such as capsizing or rescue operations. In contrast, total arrivals are more regularly reported, such as 'record arrivals yesterday' or '20,000 crossing this year.' These cumulative framings likely make total arrivals a more stable and continuous signal of migration flows. Accordingly, while migrants per boat may influence public sentiment in specific contexts, total arrival numbers offer a more consistent basis for assessing how real-world migration events shape public opinion. Together these results confirm that the negative relationship holds under alternative functional forms, reinforcing the robustness of our findings.

To ensure the robustness of inference, Table B5 explores four alternative clustering strategies: by individual, individual-by-date, district (LAD), and LAD-by-date. Each approach captures different sources of potential correlation—across repeated observations

Table B4—Future Migration Attitudes: Alternative Measures

| | Allow More Migrants (std) | | | | | | |
|---|---|---|---|---|---|---|---|
| | (1) Past 2 Days | (2) Past 3 Days | (3) Past 4 Days | (4) Past 5 Days | (5) Past 6 Days | (6) Past 7 Days | (7) Past 8 Days |
| **Panel A: Migrants per Boat (Total)** | | | | | | | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.158*** | -0.142*** | -0.122*** | -0.125*** | -0.102*** | -0.083*** | -0.063** |
| | (0.033) | (0.028) | (0.026) | (0.027) | (0.026) | (0.026) | (0.026) |
| **Panel B: Migrants per Boat (Weighted)** | | | | | | | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.175*** | -0.178*** | -0.173*** | -0.189*** | -0.182*** | -0.179*** | -0.171*** |
| | (0.038) | (0.035) | (0.035) | (0.038) | (0.039) | (0.041) | (0.042) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 287247 | 287247 | 287247 | 287247 | 287247 | 287247 | 287247 |

Notes: This table tests the robustness of the relationship between small boat migrant arrivals across different estimation approaches and time windows. The dependent variable is a standardized measure of support for allowing more migrants. Panel A reports effects using unweighted total number of migrants arrived per boat over time windows ranging from 1 to 7 days; Panel B uses a weighted sum of migrants per boat, assigning more weight to recent days. All models include individual fixed effects and local authority district by wave fixed effects. Standard errors are clustered at the survey date level. All models include individual fixed effects, LAD-by-wave fixed effects, and standard demographic controls.
Sources: British Election Study Internet Panel (Waves 14–29). Small Boat Arrivals – UK Home Office.

for the same individual, shared temporal shocks, geographic clustering, or local news cycles. The consistency of the coefficient estimates and significance levels across all four clustering strategies strengthens confidence in the validity and precision of the main findings.

**Wave Height as Instrument** Fourth, to address any potential concerns about endogeneity, we implement an instrumental variable strategy using wave height at Calais, France—the primary departure point for small boat crossings—as a source of exogenous variation in arrival feasibility. This approach helps isolate the component of arrival variation that is plausibly unrelated to unobserved shocks that could simultaneously influence migration flows and public opinion, such as changes in immigration enforcement or political developments.

For the IV to be valid, it must satisfy two conditions: relevance and exclusion. The relevance condition is confirmed in Column 1 of Table B7, where wave height strongly and negatively predicts migrant arrivals, with a first-stage F-statistic of 33.05. The exclusion restriction requires that wave height influences immigration attitudes only through

Table B5—Future Migration Attitudes: Alternative Clustering of SE

| | Allow More Migrants (std) | | | |
|---|---|---|---|---|
| | (1) Individual | (2) Individual x Date | (3) LAD | (4) LAD x Date |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.027*** | -0.027*** | -0.027*** | -0.027*** |
| | (0.007) | (0.007) | (0.008) | (0.007) |
| Controls | Yes | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes | Yes |
| Observations | 287247 | 287247 | 287247 | 287247 |

Notes: This table reports the robustness of standard errors to alternative clustering levels. The dependent variable is standardized support for allowing more migrants. Each column applies a different clustering strategy: (1) by individual; (2) by individual × date; (3) by LAD (Local Authority District); and (4) by LAD × date. All specifications include individual fixed effects, LAD-by-wave fixed effects, and standard demographic controls.
Sources: British Election Study Internet Panel (Waves 14–29). Small Boat Arrivals – UK Home Office.

its effect on small boat arrivals—not through other channels. This assumption is credible in our context: wave conditions in Calais are unlikely to directly affect UK public sentiment or political discourse. As a plausibility check, we estimate the reduced-form effect of wave height on respondents' perceptions of national issues (Table B6). We find no significant effects, supporting the claim that wave height is not systematically correlated with broader shifts in public concern.

The second-stage IV results in Column 2 show that a 1,000-person increase in small boat arrivals reduces support for future immigration by 0.057 standard deviations ($p<0.05$), roughly double the magnitude of the OLS estimate. Column 3 confirms that the reduced form relationship between wave height and immigration attitudes is negative and statistically significant.

These estimates identify a local average treatment effect (LATE) for individuals whose exposure to migration is affected by sea conditions. This is a narrower population than that captured by OLS, and the precision is lower due to the limited number of unique survey days in the BES. Since each wave spans several weeks and is fielded infrequently, the effective variation at the daily level is sparse, contributing to wider confidence intervals. The monotonicity assumption—that higher wave heights do not increase the likelihood of crossings—holds credibly in this context. Significant wave height is a widely accepted maritime indicator of sea roughness and vessel safety, and higher values are known to

Table B6—Wave Height: Exclusion Restriction

| | Getting Higher (std) | | | Getting Better (std) | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Immigration | Cost of Living | Crime | Economy | Education | NHS |
| Wave Height | -0.004 | 0.000 | 0.001 | -0.009 | 0.001 | 0.006 |
| | (0.008) | (0.007) | (0.007) | (0.008) | (0.006) | (0.004) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 139542 | 150491 | 143898 | 250075 | 99057 | 250146 |

Notes: This table tests the exclusion restriction underlying the instrumental variable strategy. It regresses wave height on various standardized outcomes unrelated to migration perceptions to verify that wave height is not systematically correlated with other attitudes or issue perceptions. Columns (1)–(3) report effects on concerns about immigration, cost of living, and crime getting higher. Columns (4)–(6) examine perceptions that the economy, education, and the NHS are getting better. All specifications include individual fixed effects, LAD-by-wave fixed effects, and control variables.
Sources: Immigration Perception - British Election Study Internet Panel (Waves 14–29); Small Boat Arrivals – UK Home Office; Significant Wave Height - ECMWF.

Table B7—Future Migration Attitudes: IV Estimates

| | $\sum_{t-1}^{t-2}$ Migrants Arrived | Allow More Migrants (std) | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| | First Stage | IV | Reduced Form | OLS |
| Wave Height | -0.127*** | | 0.007** | |
| | (0.022) | | (0.003) | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | | -0.057** | | -0.027*** |
| | | (0.025) | | (0.008) |
| KP F Stat | | 33.05 | | |
| Controls | Yes | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes | Yes |
| LAD x Wave FE | Yes | Yes | Yes | Yes |
| Observations | 287247 | 287247 | 287247 | 287247 |

Notes: This table presents instrumental variable (IV) estimates of the impact of small boat migrant arrivals on attitudes towards allowing more migrants. Column (1) shows the first-stage regression of arrivals on wave height. Column (2) presents the IV estimate, using wave height as an instrument for migrant arrivals. Column (3) reports the reduced-form relationship between wave height and migration attitudes. Column (4) shows the corresponding OLS estimate. All specifications include individual fixed effects, LAD-by-wave fixed effects, and control variables. The Kleibergen–Paap F-statistic (KP F Stat) confirms instrument strength.
Sources: Immigration Perception - British Election Study Internet Panel (Waves 14–29); Small Boat Arrivals – UK Home Office; Significant Wave Height - ECMWF.

delay or deter departures, particularly for small and overloaded boats.

As an additional check, we also implement an alternative IV strategy using predicted daily arrivals based on wave height over the full 2018–2024 period, which are then merged with BES by interview date (Table A13, Column 1). This approach yields a smaller IV estimate (–0.031 SD), only modestly larger than the OLS effect. The narrower gap reflects two differences: first, predicted arrivals are smoothed and less noisy, and second, the broader first-stage sample may capture less salient variation, leading to a more diffuse LATE.

Table B8—Future Migration Attitudes: IV Estimates with Heterogeneity by Media Consumption

| | Allow More Migrants (std) | |
|---|---|---|
| | (1) OLS | (2) IV |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | 0.006 | -0.021 |
| | (0.011) | (0.032) |
| ... x I(Reads News) | -0.064*** | -0.069* |
| | (0.015) | (0.040) |
| KP F Stat | | 18.04 |
| F Stat (MA) | | 70.84 |
| F Stat (MA x I(Reads News)) | | 66.64 |
| Controls | Yes | Yes |
| Individual FE | Yes | Yes |
| LAD x Wave FE | Yes | Yes |
| Observations | 287247 | 287247 |

Notes: This table presents instrumental variable estimates of the heterogeneous impact of small boat migrant arrivals by media consumption on attitudes towards allowing more migrants. Column (1) shows the OLS estimate. Column (2) presents the IV estimate, using wave height as an instrument for migrant arrivals (MA) interacted with media consumption. All specifications include individual fixed effects, LAD-by-wave fixed effects, and control variables.
Sources: Immigration Perception - British Election Study Internet Panel (Waves 14–29); Small Boat Arrivals – UK Home Office; Significant Wave Height - ECMWF.

Another potential concern with our identification strategy is that national small boat arrivals are applied uniformly to all respondents, even though individuals may differ in whether they are actually exposed to or aware of these events. In particular, media consumption likely shapes the visibility and salience of such migration shocks. To address this, we construct a measure of "effective exposure" by interacting recent small

boat arrivals with an indicator for whether a respondent reports reading newspapers. This allows us to capture heterogeneous treatment intensity based on the likelihood of perceiving migration events.

Table B8, Column (2) presents IV estimates where we instrument both the main term and the interaction using predicted arrivals (based on sea conditions) and their interaction with the media consumption indicator. The results show that among news readers, small boat arrivals significantly reduce support for immigration (–0.069 SD, $p<0.1$), while no significant effect is observed for non-readers. This coefficient is quantitatively similar to the OLS estimate in Column (1), suggesting that attenuation bias is limited.

Together, these results indicate that the attitudinal effects of irregular migration are concentrated among individuals most likely to perceive such events through the media. By isolating exogenous variation in arrivals and showing that effects are only present for media consumers, we strengthen the claim that the observed shifts reflect perceptual salience rather than coincident national-level shocks. This helps rule out alternative explanations such as coordinated political messaging or policy announcements and supports the interpretation that media-mediated exposure, rather than geography or raw arrival numbers, is the primary channel shaping public responses.

Table B9—Balance Statistics

| | BES Survey Period | | | Other Period | | | |
|---|---|---|---|---|---|---|---|
| | n | mean | sd | n | mean | sd | Diff |
| Daily Migrants Arrived (Unconditional) | 260 | 37.73 | 96.33 | 2297 | 61.53 | 150.48 | -13.270 |
| Migrants per Boat (Unconditional) | 260 | 10.65 | 19.60 | 2297 | 10.74 | 18.28 | 1.269 |
| Small Boat Migration Articles (All Sources) | 260 | 34.20 | 82.09 | 2297 | 34.17 | 69.86 | 0.484 |
| Small Boat Migration Avg. Tone (All Sources) | 249 | -2.99 | 1.62 | 2215 | -3.48 | 1.75 | 0.356*** |
| Small Boat Migration Articles (Major UK Outlets) | 260 | 1.54 | 2.33 | 2297 | 1.69 | 2.45 | -0.210 |
| Small Boat Migration Avg. Tone (Major UK Outlets) | 152 | -3.48 | 1.85 | 1414 | -3.71 | 1.89 | 0.197 |

Notes: This table compares summary statistics for key variables during the BES survey period versus all other days in the analysis window. The BES survey period includes days on which the British Election Study Internet Panel was in the field (Waves 14–29). Variables include daily small boat migrant arrivals, migrants per boat, and the number and average tone of media articles referencing small boat migration from all sources and from major UK outlets. The aim is to assess the representativeness of the survey period relative to the full sample.

Sources: Small Boat Arrivals – UK Home Office; Media Coverage – GDELT; British Election Study Internet Panel (Waves 14–29)

**UK Household Longitudinal Study** To assess whether the timing of BES surveys coincides with periods of unusually high or low migration activity or media coverage, we compare key variables during BES survey periods versus all other days.[27] Appendix

[27] Figure A3 plots the daily migrant arrivals. The grey shaded area shows the period when BES surveys were conducted.

Table B9 reports the results. We find no significant differences in daily small boat arrivals, migrants per boat, or the volume of small boat-related articles—whether measured across all sources or limited to major UK outlets. The only notable difference is a slightly less negative average tone of migration coverage across all sources during BES survey periods (Column 4), which may reflect normal variation in media framing. Overall, these comparisons suggest that BES survey waves do not systematically align with periods of heightened migration or media salience, supporting the external validity of our findings.

Table B10—Correlation: Migrant Arrivals and Surveys Completed per Day

| | Number of Completed Surveys |
|---|---|
| | (1) |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.402 |
| | (0.280) |
| Mean DV | 1625.247 |
| Wave FE | Yes |
| Observations | 304 |

Notes: This table presents estimates of the relationship between small boat migrant arrivals and the number of surveys completed per day.
Sources: Small Boat Arrivals – UK Home Office; BES – British Election Study Internet Panel, Waves 14–29.

To address the concern that BES fieldwork may have been disproportionately concentrated on days with high small boat arrivals, we regress the number of completed interviews per day on recent arrival counts, controlling for wave fixed effects. Table B10 shows no statistically significant relationship, and the estimated effect is small relative to the average daily interview count (mean = 1,625). This supports the assumption that survey scheduling is orthogonal to migrant arrivals and helps rule out systematic fieldwork bias as a confounding factor.

Fifth, to complement the BES, we use data from the UK Household Longitudinal Study (UKHLS), a nationally representative repeated cross-section that samples respondents throughout the calendar year. While BES is fielded in discrete survey waves, UKHLS provides more temporally diffuse coverage. This reduces the risk that our estimates are disproportionately influenced by periods of heightened political salience or media attention when BES is conducted.

We draw on individual-level responses from Waves 8 to 14 (2018–2024) and focus on a common outcome variable across both surveys: whether immigrants are good or bad for the British economy. The item is measured on a 1–5 scale in UKHLS, reverse-coded so that higher values reflect more positive views, and then standardized. We retain respondents with valid responses to this question and a set of demographic covariates, including gender, age, marital status, employment status (whether the respondent did paid work in the past week), and smartphone ownership. We also retain the interview date, which allows us to merge this individual-level data with daily information on small boat arrivals, and UK-specific news events.

Our aim is to assess whether perceptions of the economic consequences of immigration shift in response to real-world migration events, and whether these responses vary by labour market engagement. All regressions include region and year fixed effects, as well as controls for news exposure and socio-demographics. Table B11 Panel A presents the results.

Column 1 shows a negative but statistically insignificant association between recent small boat arrivals and beliefs about immigration's economic contribution. In Column 2, we interact arrivals with a binary indicator for whether the respondent did paid work in the past week. The interaction is statistically significant and positive (+0.142 SD, $p<0.05$), while the main effect becomes more negative and significant (–0.126 SD, $p<0.05$). This suggests that the negative shift in attitudes is concentrated among those not in paid employment, consistent with theories of perceived economic threat from migration.

To benchmark these results, we estimate the same model using BES data and the equivalent survey item. The BES sample is significantly larger and includes individual and district-by-wave fixed effects. In this richer specification, we observe a stronger and statistically significant negative effect of recent arrivals on economic perceptions of immigration (–0.121 SD, $p<0.01$), again concentrated among the non-employed. The interaction with employment status is also larger (+0.182 SD, $p<0.01$), as shown in Table B11 Panel B. The smaller sample size in UKHLS likely contributes to the imprecision in point estimates, but the magnitude and direction of the effects are remarkably similar across both datasets.

Taken together, these results provide converging evidence that short-term migration shocks, such as increases in small boat arrivals, negatively influence economic attitudes toward immigration—especially among those who are out of work. This replication not only strengthens internal validity but also supports the broader generalisability of our findings beyond the BES survey design.

Table B11—Immigrants are good for the economy: UKHLS vs BES

| | Immigrants good for Britain's economy (std) | |
|---|---|---|
| | (1) | (2) |
| **Panel A: UKHLS Dataset** | | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.053 | -0.126** |
| | (0.044) | (0.062) |
| ... x I(Did Paid Work Last Week) | | 0.142** |
| | | (0.070) |
| Controls | Yes | Yes |
| Region FE | Yes | Yes |
| Year FE | Yes | Yes |
| Observations | 26681 | 26681 |
| **Panel B: BES Dataset** | | |
| $\sum_{t-1}^{t-2}$ Migrants Arrived | -0.033* | -0.121*** |
| | (0.019) | (0.021) |
| ... x I(Employed) | | 0.182*** |
| | | (0.029) |
| Controls | Yes | Yes |
| Individual FE | Yes | Yes |
| LAD x Wave FE | Yes | Yes |
| Observations | 238951 | 238951 |

Notes: This table presents estimates of the relationship between small boat migrant arrivals and public beliefs about whether immigration is good for Britain's economy, using data from two sources: the UK Household Longitudinal Study (UKHLS, Panel A) and the British Election Study (BES, Panel B). The dependent variable is standardized. Column (2) of each panel includes an interaction term with respondents' employment status.

Sources: Small Boat Arrivals – UK Home Office; UKHLS – Understanding Society: Wave 11; BES – British Election Study Internet Panel, Waves 14–29.