

War beyond borders: how military conflict in Ukraine shapes refugees' settlement intentions abroad

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This study investigates whether military conflict intensities in refugees' home regions continue to shape their lives after arrival in a safe haven. While war and local conflict are well-established drivers of initial displacement, it remains unclear whether ongoing conflict influences settlement decision once refugees have escaped the immediate threat. We address this question using longitudinal data from the IAB-BiB/FReDA-BAMF-SOEP Survey of Ukrainian refugees in Germany, linked to high-frequency conflict data from Ukraine following the 2022 Russian invasion. Our findings show that both short- and long-term conflict intensities significantly affect refugees' intentions to settle permanently abroad, with short-term shocks exerting a markedly stronger influence. Emotional responses to acute violence appear to disrupt more deliberative planning, consistent with ecological models of refugee distress. In contrast, long-term conflict intensity effects are weaker and diminish with time spent in the host country, suggesting processes of adaptation or habituation. We also find important heterogeneity: male refugees and those migrating for economic or family reasons are particularly sensitive to conflict dynamics, whereas those with family left behind are generally less inclined to settle permanently. Contrary to expectations, prior war exposure does not moderate current settlement intentions, pointing to possible acclimatization or avoidance strategies among highly exposed individuals. Overall, our results highlight the importance of integrating both emotional and evaluative processes into sociological models of refugee decision-making. They also highlight how even after arrival in safety, evolving home-country violence continues to shape refugees' settlement trajectories.

Introduction

The global number of forcibly displaced people has surged in recent years, with Russia's invasion of Ukraine significantly contributing to this trend. By late 2024, an estimated 3.7 million people were internally displaced within Ukraine and over 5 million had fled abroad (UNHCR, 2025a). In response, EU member states activated the 'Temporary Protection Directive' (2001/55/EC), granting Ukrainians legal stay, access to welfare, and work rights. Germany emerged as the main destination, hosting 1.3 million displaced persons by 2025, followed by Poland with about 1 million (UNHCR, 2025b).

Taking this unprecedented displacement as a case, this study contributes to broader debates on the long-term effects of war on refugees and the processes shaping integration. We ask whether military conflict intensity in refugees' regions of origin continues to influence their preferences to settle permanently abroad—

even after reaching safety. Initial survey data show that many Ukrainians intended to return (e.g., IOM-UN Migration, 2023; Van Tubergen *et al.*, 2024b), yet these intentions appear to weaken over time (Brücker *et al.*, 2023). This pattern reflects findings from integration research: as displaced persons settle, they build social ties, acquire language skills, and become familiar with institutions—factors that typically reorient them toward long-term residence (de Haas and Fokkema, 2011; de Vroome and van Tubergen, 2014; Gherghina, Plopeanu, and Necula, 2020; Toruńczyk-Ruiz and Brunarska, 2020). While such integration processes suggest a gradual shift in preferences driven by host-country conditions, a growing literature shows that refugees also maintain strong emotional, informational, and familial ties to their home countries (e.g., Ghosn *et al.*, 2021; Löbel and Jacobsen, 2021) and periods of heightened conflict in the home country have been linked to psychological distress among refugees abroad, including anxiety, helplessness, and

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depression (e.g., Keita and Schewe, 2021; Sønderskov *et al.*, 2021). These psychological strains can hinder social and economic integration (e.g., Ager and Strang, 2008; Bassetto and Freitas Monteiro, 2025), and prolonged uncertainty may further obstruct integration processes (Phillimore and Cheung, 2021; Lapshyna, 2025).

Against this backdrop, this study examines whether, and to what extent, ongoing military conflict in refugees' home regions—the very cause of their displacement—continues to shape their settlement preferences abroad. While it is expected that intense conflict may delay return, it is far less obvious that it would also shift preferences toward permanent settlement in the destination country. Some scholars argue that such reorientations occur over time, as the feasibility of return diminishes with infrastructure destruction and institutional collapse, inducing shifts in location preferences and increased relative attractiveness of the host country (Bassetto and Freitas Monteiro, 2025). Yet, an immediate shift in settlement preferences in response to recent conflict escalation would point to emotional or psychological mechanisms—responses that remain undertheorized and empirically underexplored.

Short-term shifts in settlement intentions may nevertheless carry long-term consequences: they can influence migrants' motivation to invest in country-specific human and social capital, thereby affecting integration trajectories (Cortes, 2004; de Vroome and van Tubergen, 2014; Bassetto and Freitas Monteiro, 2025). Despite its relevance, little is known about how real-time military dynamics shape refugees' settlement preferences. Most existing work focuses on host-country drivers (e.g., de Vroome and van Tubergen, 2014), while changing conditions in countries of origin are often overlooked. Only few studies have linked conflict exposure to return intentions (e.g., Ghosn *et al.*, 2021; Beaman, Onder, and Onder, 2022; Alrababah *et al.*, 2023), and even fewer assess how escalating violence may shift preferences while refugees are already in safety.

To address this gap, we draw on data from the IAB-BiB/FReDA-BAMF-SOEP Survey of Ukrainian Refugees in Germany—a register-based, probability-sampled panel capturing the early post-arrival experiences of refugees who fled Ukraine in the initial months after the Russian invasion (Brücker *et al.*, 2023). Unlike prior studies that examine settlement intentions after prolonged periods abroad (Al Husein and Wagner, 2023; Alrababah *et al.*, 2023), our data allow us to analyze intentions formed within the first year after arrival. While intentions do not always translate into behaviour, they provide meaningful insights into how refugees envision their future and offer early indicators of integration potential (de Haas and Fokkema, 2011; Özer *et al.*, 2025).

We link individual-level data on settlement intentions to time-varying, exogenous measures of military

conflict intensity in refugees' prewar regions of residence (county, *oblast* in Ukrainian), based on geocoded fatality data from the Armed Conflict Location & Event Data Project (ACLED; Raleigh *et al.*, 2010). Specifically, we distinguish between 'short-term conflict intensity', defined as the cumulative number of conflict-related fatalities in the respondent's home county over the three days preceding the interview, and 'long-term conflict intensity', defined as the cumulative number of fatalities from the respondent's arrival in Germany up to the interview date. Although the entire country has been subject to military attacks since the onset of the full-scale invasion, the intensity of conflict has varied substantially across time and space (Kosyakova, Kogan, and van Tubergen, 2025). This combination of exogenous variation in conflict exposure and quasi-random timing of interviews enables a natural experiment-inspired design, allowing us to estimate the effect of conflict on settlement preferences under plausible identification assumptions. While this does not constitute a randomized treatment in the strict sense, it approximates causal inference by comparing otherwise similar individuals interviewed at different times, under varying levels of conflict exposure in their home regions. We further explore the persistence of conflict effects, variation across refugee subgroups, and potential mechanisms underlying the relationship between conflict and settlement intentions.

Theoretical framework

Home country military conflicts and the intention to stay abroad

Many refugees flee their home countries due to military conflicts, seeking protection from existential threats abroad. As discussed above, refugees often remain emotionally and informationally connected to their country of origin, and ongoing conflict can continue to shape their sense of safety and belonging—even after reaching physical safety. However, while the psychological impacts of renewed violence are well documented, its influence on settlement preferences abroad remains poorly understood.

Much of the existing literature focuses on how conflict shapes initial displacement decisions (e.g., Bohra-Mishra and Massey, 2011; South, Trent, and Han, 2024; Kosyakova *et al.*, 2025), or explores hypothetical return scenarios, asking whether refugees would consider returning if safety conditions improved. For example, observational studies (Kaya and Orchard, 2020) and survey experiments on Syrian refugees in Lebanon (Ghosn *et al.*, 2021; Alrababah *et al.*, 2023), Germany and Turkey (Al Husein and Wagner, 2023) suggest that improved safety conditions could motivate a return. Other studies link return intentions to

refugees' prior experiences of violence (Kaya and Orchard, 2020; Ghosh *et al.*, 2021) or their perceptions of current conditions in the origin country (Arababab *et al.*, 2023). This work underscores the centrality of origin-country dynamics in shaping return considerations—but leaves open the question of whether and how such dynamics shape intentions to remain abroad.

A notable exception is the recent study by Bassetto and Freitas Monteiro (2025), which finds that higher rates of terror attacks in origin countries increase refugees' intentions to settle permanently abroad. However, their focus lies on refugees from contexts like Afghanistan and Syria, where persecution and state collapse create strong ex-ante incentives for permanent resettlement (Brell, Dustmann, and Preston, 2020). Ukrainian refugees differ in critical ways: they are fleeing Russian military aggression—not their own government—and many either hope to return or remain undecided (Brücker *et al.*, 2023). Moreover, at the time of our data collection (summer 2022 and winter 2023), their long-term legal status in Germany remained uncertain. Temporary protection was initially limited to March 2024 and only gradually extended (Brücker *et al.*, 2023), while transition to regular labour migration required fulfilling income and employment criteria (The Expert Council on Integration and Migration, 2024). In this context of legal ambiguity and temporary protection, individual settlement intentions are crucial: those planning long-term residence are more likely to invest in host-country-specific capital such as language skills, employment, and social ties (e.g., de Vroome and van Tubergen, 2014; Wachter and Fleischmann, 2018; Damelang and Kosyakova, 2021)—factors that, in turn, facilitates more secure status acquisition.

Long-term and short-term conflict intensities and refugees' settlement intentions

Violent events in refugees' home regions can act as shocks to their location preferences by altering perceived security and increasing the relative attractiveness of the destination country (Bassetto and Freitas Monteiro, 2025). By heightening uncertainty about the feasibility of return, such shocks may consequently reinforce intentions to settle permanently abroad.

Existing work on migration decision-making often builds on the notion of bounded rationality (Simon, 1990). This literature emphasizes a stepwise and sequential process from intentions to actual behaviour under conditions of incomplete information, time pressure, and limited cognitive resources, often relying on heuristics to reach satisfactory—rather than optimal—solutions. Although first approaches exist theorizing the development of migration intentions (e.g., Coulter, Van Ham, and Feijten, 2011; Kley, 2011;

Carling and Schewel, 2018), they may fall short in capturing the dynamic and uncertain realities of refugee decision-making, which often involves immediate emotional reactions and reflective in the face of legal uncertainty, constrained options, and rapidly changing conditions in both origin and destination.

Building on these initial approaches, we argue that the temporal dimension of conflict exposure matters for how refugees process information and form settlement intentions. To capture this, we draw on dual-process theories of cognition (Kahneman, 2003; Kahneman and Tversky, 2023), which distinguish between two modes of thinking: System 1, which is fast, intuitive, automatic, and often emotionally charged, and System 2, which is slower, controlled, reflective, and deliberative. This framework enables us to theorize how short-term spikes in conflict (henceforth, short-term conflict intensities) and prolonged exposure to high-intensity violence (henceforth, long-term conflict intensities) may differently shape refugees' settlement intentions.

We propose that *short-term conflict intensities* are more likely to activate *System 1* processing. Refugees may respond emotionally or instinctively to recent violent events in their home regions, particularly when such events are salient in the media or among diaspora networks. This interpretation aligns with the ecological model of refugee distress, which views intensified violence as a persistent psychological stressor (Miller and Rasmussen, 2017; Hou *et al.*, 2020). In this context, acute conflict may heighten emotional distress by reinforcing perceptions of threat as overwhelming and uncontrollable, increasing psychological detachment from the home country and strengthening the appeal of long-term settlement abroad.

In contrast, *long-term conflict intensities* may elicit more deliberative *System 2* evaluations. Over time, refugees may reflect on structural and material destruction, the erosion of public services and institutions, and broader deterioration of living conditions in their country of origin. These assessments can gradually erode hopes for a stable future there and foster long-term pessimism about return prospects (Van Hear, 1998; Black and Gent, 2006), fostering an increased orientation toward permanent settlement in the host country. While *System 1* responses may dominate early reactions, they can be gradually tempered or reinforced by more reflective *System 2* judgments as conflict persists (Kahneman, 2003; Evans and Stanovich, 2013).

We thus conceptualize settlement intentions as forward-looking orientations shaped by both emotional impulses and reasoned evaluations, depending on the temporal dimension of conflict exposure. Specifically, if short-term conflict intensities influence intentions, this would suggest the salience of emotional, intuitive reactions and transient reflections of mood. In contrast, an

effect of long-term conflict intensities would suggest more reflective, deliberative assessments of return feasibility—indicative of imagined futures and longer-term planning horizons. Although intentions do not always translate into behaviour, they remain meaningful indicators of psychological anchoring and are predictive of integration-relevant investments, even when actual behaviours remain uncertain (de Haas and Fokkema, 2011; de Vroome and van Tubergen, 2014; Wachter and Fleischmann, 2018).

Temporal attenuation of conflict effects on refugees' settlement intentions

Refugees' responsiveness to conflict in their country of origin may diminish as displacement becomes prolonged. This adds a second temporal dimension: psychological adaptation and natural recovery processes can reduce the emotional impact of violence over time (Miller and Rasmussen, 2017). As time passes in safety, war-related events may become increasingly psychologically distant, lowering their emotional salience and perceived relevance. Meanwhile, proximate daily stressors—such as legal insecurity or precarious living conditions in the host country—come to dominate cognitive and emotional bandwidth. Hence, over time, refugees may pay less attention to developments in the country of origin or require more intense or exceptional conflict episodes to trigger a reassessment of return or settlement intentions.

This pattern aligns with broader psychological theories of adaptation, which suggest that repeated exposure to stressors leads to desensitization and higher activation thresholds (Frederick and Loewenstein, 1999; Rubin *et al.*, 2005). In the context of armed conflict, only escalating or extreme violence may generate renewed emotional responses and motivate a reconsideration of long-term plans, especially among those who have already adapted to extended displacement. This idea echoes set-point theory in psychology, which posits that individuals tend to return to a baseline level of emotional stability after external shocks (Nowok *et al.*, 2013; Luhmann and Intelisano, 2018). Applied to refugee decision-making, it implies that emotional responses to conflict fade unless renewed or intensified, contributing to a temporal decay in the effect of conflict on settlement intentions.

We therefore expect that the influence of both short-term and long-term conflict intensities on refugees' settlement intentions weakens over time, as individuals adapt psychologically and shift their focus to more immediate challenges in the host context.

Heterogenous response to the military conflict intensities by sub-groups

Building on dual-process theory, we expect heterogeneity in how refugees' settlement intentions respond to military conflict intensities. This stems from group-

based differences in the reliance on System 1 (intuitive, emotional) versus System 2 (deliberative, evaluative) processing when forming intentions. Sub-groups experiencing greater emotional strain, acute personal threat, or legal/institutional uncertainty are more likely to rely on fast, affective reasoning and may respond more strongly to short-term conflict spikes. By contrast, groups whose decisions are shaped more by long-term constraints or accumulated risk assessments are likely to engage in slower, reflective evaluations and respond more to sustained patterns of conflict. The following moderating factors influence the degree to which settlement intentions are guided by System 1 versus System 2 and thus help explain subgroup-specific responsiveness to conflict dynamics.

Gender

While women often face heightened vulnerability in refugee contexts globally (e.g., Kofman, 2019), gendered dynamics in the Ukrainian case are shaped less by general discrimination risks and more by legal and institutional constraints on male mobility (Van Tubergen *et al.*, 2024a; Kosyakova *et al.*, 2025). Due to Ukraine's general mobilization and the conscription ban on men aged 18 to 60 (The Washington Post, July 17, 2024), Ukrainian women have faced fewer barriers to migration, while men remaining in the country are subject to heightened personal risk. This policy framework creates a gendered exposure to war-related threat and restricts men's ability to flee, leading to an asymmetric distribution of risk and displacement options.

Moreover, the perceived likelihood of conscription increases with the proximity and intensity of conflict in refugees' home regions. Reports suggest that mobilization intensity varies considerably across counties and is influenced by the number of military units stationed and their staffing needs. For example, Sumy and Zaporizhzhia have seen more intensive recruitment compared with western regions due to a higher concentration of conscription-eligible individuals and military infrastructure (GSMinfo, 2024). These patterns indicate that regional variation in conflict and conscription pressure—not national-level violence *per se*—likely shapes male refugees' perceived exposure and thus their settlement intentions.

Dual-process theory helps interpret these gendered asymmetries. Because men face a more acute and personalized threat, short-term spikes in conflict in home counties are more likely to activate System 1 processing intuitive, emotional responses—which heighten sensitivity to recent violence. Women, by contrast, are less directly affected by mobilization threats and may rely more on slower, deliberative System 2 reasoning. As a result, men's settlement intentions may be more responsive to both short-term and long-term conflict

intensities, whereas women may be less responsive to direct conflict signals.

Family members left behind

The presence of close family members in conflict zones can significantly shape how refugees process ongoing violence. From a dual-process perspective, emotional ties to relatives in high-risk areas increase the salience of short-term conflict and are likely to activate intuitive, affect-driven System 1 responses. Refugees with family still in Ukraine may experience heightened distress when violence escalates near their loved ones, making them more reactive to episodic developments than those without such ties. By contrast, refugees who have no immediate family left behind may be more detached from day-to-day conflict events and more likely to rely on slower, evaluative System 2 reasoning—assessing long-term structural feasibility rather than reacting emotionally to transient violence.

These mechanisms are particularly relevant given the demographic profile of Ukrainian displacement. A large share of women and children have fled (Van Tubergen *et al.*, 2024a), while many male partners and older relatives remain in Ukraine due to the conscription ban (Kogan and Kosyakova, 2025). For refugees separated from nuclear family members, short-term conflict intensities may reinforce the urgency of reunion, potentially weakening the deterrent effect of violence on return intentions. However, the opposite mechanism is also plausible. Rather than encouraging return, escalating violence may push refugees to pursue long-term settlement abroad as a safer and more feasible strategy to achieve family reunification. In this case, conflict does not reduce—but rather reinforces—the desire to remain, particularly if legal pathways for reunification exist or are anticipated.

These competing mechanisms imply that family separation moderates the relationship between conflict intensity and settlement intentions. The direction of this moderation depends on which path is perceived as more viable: return to reunite with loved ones, or remain abroad and eventually bring them to safety.

Migration motives

Additional heterogeneous effects are expected along refugees' initial migration motives, particularly whether they left Ukraine for reasons beyond immediate humanitarian concerns. While the majority cite war and persecution as primary drivers, a substantial minority also report family- or economically motivated migration. According to Brückner *et al.* (2023), 18 per cent mentioned family-related reasons and 11 per cent referred to economic conditions or poor living standards as part of their decision to flee.

These differences matter. From a dual-process perspective, humanitarian motives—such as the need for immediate protection from violence—are more likely to activate System 1 processing. Refugees who fled primarily for safety reasons may respond more strongly to short-term conflict intensities, as renewed violence resonates with prior trauma and reinforces emotional aversion to return. In contrast, those who left for economic, familial, or other non-humanitarian reasons may base settlement decisions more on long-term structural considerations—such as job prospects or the feasibility of family reunification—rather than on immediate safety concerns. As a result, short-term conflict spikes may exert a weaker influence on their intention to settle.

At the same time, refugees with non-humanitarian motives may interpret long-term conflict-induced deterioration as reinforcing their decision to stay. For example, those who left due to economic hardship may interpret war-related economic deterioration—such as inflation, job loss, or institutional collapse—as further justification for staying. Similarly, refugees with family-related motives may see ongoing violence as a reason to remain abroad and work toward family reunification, rather than returning.

In this context, migration motives beyond humanitarian concerns may moderate the relationship between conflict exposure and settlement intentions—dampening the effect of short-term violence while amplifying responsiveness to long-term structural decline.

Exposure to warfare

Another important moderating factor is the extent of pre-flight exposure to violence, which likely shapes how refugees respond to renewed conflict in their home regions. Individuals who experienced intense or prolonged warfare before leaving Ukraine may have developed greater psychological resilience and more calibrated threat assessments (Ghosn *et al.*, 2021). For them, new conflict episodes may not significantly alter settlement intentions, as their decision to flee was already informed by extensive experience with insecurity. In contrast, refugees with limited direct exposure to violence prior to flight may remain more uncertain about the risks of return and thus more emotionally reactive to conflict fluctuations after arrival.

From a dual-process perspective, these differences in past exposure moderate the balance between intuitive (System 1) and reflective (System 2) processing. High exposure may reduce emotional volatility and increase reliance on deliberative reasoning, making intentions more responsive to long-term structural deterioration rather than short-term conflict spikes. By contrast, low exposure increases the salience of new violent events, triggering stronger affective responses and making intentions more susceptible to short-term dynamics.

However, some individuals who endured prolonged conflict prior to flight—particularly those who left only once survival became untenable (Rubin *et al.*, 2005)—may still view their displacement as temporary. Their delayed departure may reflect deep place attachment or strong intentions to return, even in the face of continued violence. For these refugees, neither short- nor long-term conflict exposure may translate into a firm decision to remain abroad.

Overall, we expect that prior exposure to warfare moderates the effect of ongoing conflict on settlement intentions: it may dampen the emotional influence of short-term violence among those with high exposure, while amplifying it among those with limited pre-flight experience.

Data and method

IAB-BiB/FReDA-BAMF-SOEP survey on Ukrainian refugees in Germany

To examine how conflict intensities in refugees' home regions influence their settlement intentions, we use data from the longitudinal IAB-BiB/FReDA-BAMF-SOEP Survey on Ukrainian Refugees in Germany (Brücker *et al.*, 2023). The first wave began on 24 August 2022—exactly 6 months after the full-scale Russian invasion—and continued through early October. It targeted Ukrainian nationals aged 18–70 who arrived in Germany between 24 February and 8 June 2022 and were registered at local population offices.

Sampling followed a two-stage design. First, 100 municipalities were selected proportional to the size of the Ukrainian refugee population based on the Central Register of Foreigners (AZR). Second, 48,000 individuals were randomly drawn from municipal registration records (Steinhauer *et al.*, 2024). The study used a push-to-web mixed-mode approach, with initial invitations via post directing respondents to a web survey (CAWI). A follow-up letter included a paper questionnaire as an alternative. Around 80 per cent responded online, with an average completion time of 20 min.

The first-wave response rate was 24.5 per cent (AAPOR Response Rate 1), comparable to other studies targeting hard-to-reach populations (Cornesse *et al.*, 2022; Brücker *et al.*, 2025). The achieved sample closely matches the known population of Ukrainian refugees in Germany (AZR data), suggesting minimal selection bias (Brücker *et al.*, 2023). The second wave, conducted from January to March 2023, achieved a panel response rate of 65.0 per cent and again showed only minor demographic deviations.

Our analysis is limited to individuals who arrived in Germany on or after 24 February 2022 and who resided

Table 1 Construction of analysis sample.

	Persons	Person-wave
Original sample	11,754	18,589
Cases excluded		
PAPI respondents	2014	3015
Left Ukraine or arrived in Germany before 24 February 2022 or information is missing	696	978
Emigrated in wave 2	0	163
Settlement intentions are missing	1	4
Country of last residence is not Ukraine or information about last county in Ukraine is missing	3	5
Information on gender is missing	9	15
= Analysis sample	9,031	14,409

Source: IAB-BiB/FReDA-BAMF-SOEP Survey of Refugees from Ukraine 2022–2023.

in Ukraine prior to displacement. Respondents with missing data on their region of last residence are excluded, as conflict intensity cannot be reliably assigned to these cases. Given the need for precise interview timing to distinguish between short- and long-term conflicts exposures, we also exclude paper-based (PAPI) interviews, which lack exact completion dates. Finally, we drop cases with missing information on settlement intentions or gender. The final analytical sample comprises 14,409 observations from 9,031 individuals (see Table 1).

Dependent variable

We examine refugees' intention to settle in Germany by analyzing responses to the survey question about the expected duration of their stay in Germany. Response options included: (i) until the end of the war, (ii) up to another year at most, (iii) for a few more years, (iv) forever, and (v) don't know. We operationalize *permanent settlement intentions* as a binary variable, coded as one if respondents indicate a plan to stay forever, and zero otherwise.

Conflict intensity

The roots of the Russian-Ukrainian conflict date back to 2014, with Russia's annexation of Crimea and the outbreak of armed violence in the Donetsk and Luhansk regions. Despite intermittent ceasefires, the conflict escalated into a full-scale invasion on 24 February 2022, with widespread attacks on military and civilian infrastructure—including residential areas, hospitals, schools, and critical transport and communication systems (e.g., Sasse, 2023; Walker, 2024). By

mid-2022, the war had shifted focus to Ukraine's eastern and southern regions, with intensified strikes on ports such as Odesa and Mykolaiv. Fighting around the Zaporizhzhia nuclear power plant raised international alarm, while Ukrainian counteroffensives in late 2022 pushed combat zones eastward. Russia responded with mass mobilization. These evolving combat dynamics—many of which coincided with our survey fieldwork—generate critical temporal and regional variation in conflict exposure that we exploit in our analysis.

To assess the effects of military conflict on refugees' settlement intentions, we integrate the IAB-BiB/FReDA-BAMF-SOEP Survey with time-varying contextual data on conflict intensity at the county level in Ukraine, based on respondents' last region of residence. Ukraine consists of 24 counties, the Autonomous Republic of Crimea and two special-status cities (Kyiv and Sevastopol; see [Supplementary Figure A1](#)). Conflict intensity is measured using data from ACLED ([Raleigh et al., 2010](#)), which provides geocoded information on the timing, location and human toll of political violence and protest events. These include battles, bombings, remote violence, riots,

strategic developments and violence against civilians. For each county and day, we compute conflict intensity as the number of conflict-related fatalities.

Between 24 February 2022 and 6 March 2023—the end of the second-wave fieldwork—ACLED recorded 38,558 conflict-related fatalities across Ukraine. [Figure 1](#) illustrates the temporal variation in daily fatalities alongside the distribution of survey completions. The timing of completions indicates considerable temporal variation in exposure to conflict. [Supplementary Figure A1](#) presents the spatial distribution of cumulative conflict intensity across counties.

In our empirical analyses, we distinguish between short-term and long-term conflict intensity. *Short-term conflict intensity* captures the cumulative number of fatalities in a respondent's home county during the three days preceding the interview ($t-3d$). *Long-term conflict intensity* is measured as the cumulative number of fatalities from the respondent's arrival in Germany up to the day before their interview. To reduce measurement error and ensure respondents were likely aware of the events referenced, fatalities on the interview day are excluded from both measures. Descriptive statistics indicate an average of 23 fatalities ($SD=49$) for the short-term

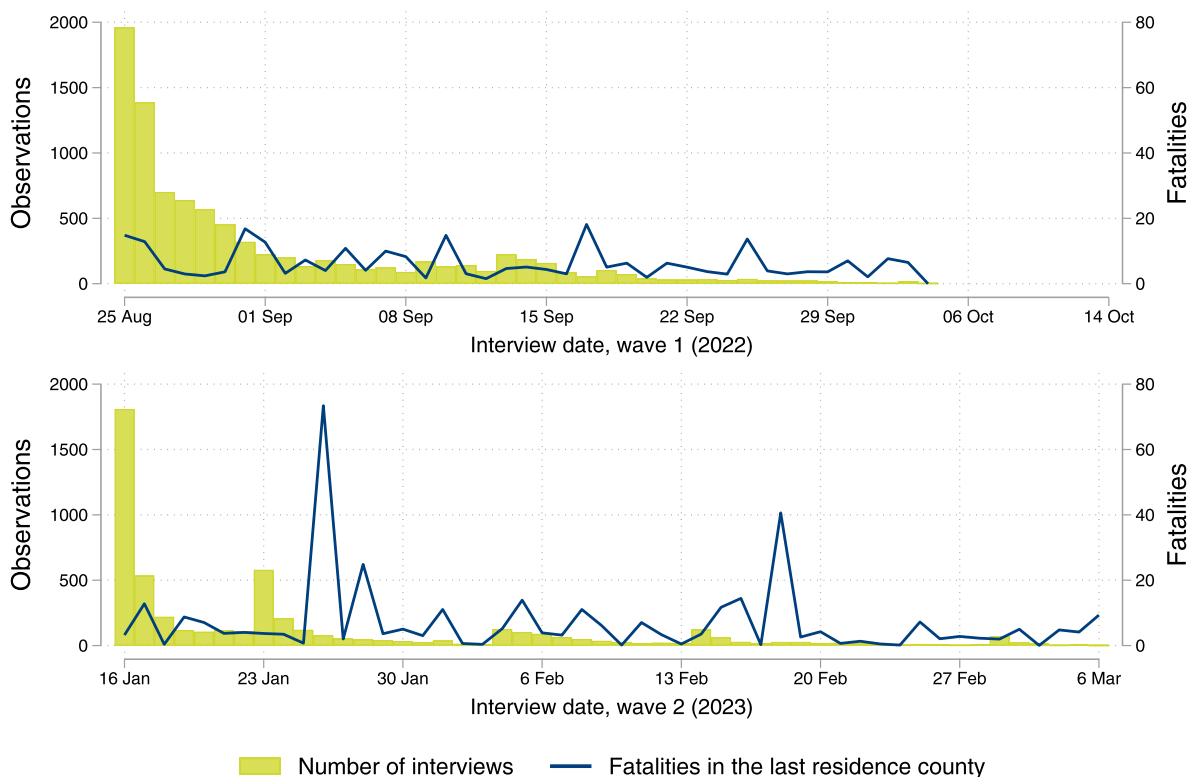


Figure 1 Conflict intensity by fatalities in Ukraine during the field period of the first and second wave and distribution of number of interviews, by interview date. *Source:* IAB-BiB/FReDA-BAMF-SOEP Survey of Refugees from Ukraine 2022–2023, linked to ACLED data

Table 2 Summary statistics on independent variables

Variable	N	Mean	SD	Min/Max
Dependent variable				
Permanent settlement intentions	14,409	26.01	—	0/1
Cumulated fatalities				
Short-term conflict intensity	14,409	22.73	48.90	0–763
Long-term conflict intensity	14,409	1,663.31	2,310.71	0–11,777
Moderator variables				
Female	14,409	0.83	—	0/1
Core family members in Ukraine	14,373	0.35	—	0/1
Child in Ukraine	14,379	0.12	—	0/1
Partner in Ukraine	14,396	0.27	—	0/1
Migration motives beyond purely humanitarian concerns	14,256	0.28	—	0/1
Cumulated fatalities in the last residence county since the war outbreak before arrival in Germany	14,409	230.42	398.22	0/5,858
Controls				
Months since arrival	14,409	6.60	2.78	0–13
Number of children (<aged 17)	14,382	1.20	1.08	0–10
In partnership	14,406	0.62	—	0/1
Age	14,396	40.13	13.21	18–71
Educational attainment:	14,405			
Low secondary or less		0.02	—	0/1
Upper secondary		0.17	—	0/1
Post-secondary non-tertiary		0.09	—	0/1
Tertiary bachelor level or less		0.16	—	0/1
Tertiary master level or more		0.56	—	0/1
Relative economic position in Ukraine before flight	14,388			
Below average		0.18	—	0/1
Average		0.55	—	0/1
Above average		0.27	—	0/1
Worked before arrival	14,400	0.83	—	0/1
Resided in Germany before	14,409	0.02	—	0/1
Federal state in Germany	14,409		—	0/1
Schleswig-Holstein		0.02	—	0/1
Hamburg		0.06	—	0/1
Lower Saxony		0.05	—	0/1
Bremen		0.01	—	0/1
North Rhine-Westphalia		0.22	—	0/1
Hesse		0.07	—	0/1
Rhineland-Palatinate		0.05	—	0/1
Baden-Wuerttemberg		0.08	—	0/1
Bavaria		0.19	—	0/1
Saarland		0.01	—	0/1
Berlin		0.13	—	0/1
Brandenburg		0.01	—	0/1

(continued)

Table 2 Continued

Variable	N	Mean	SD	Min/Max
Mecklenburg-Western Pomerania		0.02	—	0/1
Saxony		0.03	—	0/1
Saxony-Anhalt		0.03	—	0/1
Thuringia		0.03	—	0/1
Interview month and year	14,409		—	0/1
August 2022		0.42	—	0/1
September 2022		0.20	—	0/1
October 2022		0.00	—	0/1
January 2023		0.29	—	0/1
February 2023		0.07	—	0/1
March 2023		0.01	—	0/1

Note: Variation in the sample size (column 2) is due to the differences in missing data across variables. In the multivariate model, we control for missing values in the variables of interest.

Source: IAB-BiB/FReDA-BAMF-SOEP Survey of Refugees from Ukraine 2022–2023, linked to ACLED data.

measure, and 1,663 fatalities (SD = 2,310) for the long-term measure (see Table 2).

Method

To estimate the effects of conflict intensity in refugees' last residence county on their intentions to settle permanently abroad, we estimate two Linear Probability Models (LPM).¹ These models relate the likelihood of reporting a permanent settlement intention to short- or long-term conflict fatalities in the respondent's home region:

$$Y_{ict} = \alpha_0 + \alpha_1 \text{Cum.Fatalities}_{c(t-3d)} + \alpha_2 X_{it} + \lambda_f + \lambda_m + \varepsilon_{ict}, \quad (1)$$

$$Y_{ict} = \alpha_0 + \alpha_1 \text{Cum.Fatalities}_{c(t-t_0)} + \alpha_2 X_{it} + \lambda_f + \lambda_m + \varepsilon_{ict}, \quad (2)$$

where Y_{ict} denotes an indicator for permanent settlement intentions of respondent i from the last residence county c on a specific survey completion date t . $\text{Cum.Fatalities}_{c(t-3d)}$ approximates the short-term conflict intensity and captures cumulated fatalities in last residence county three days (d) before the survey completion date. $\text{Cum.Fatalities}_{c(t-t_0)}$ represents cumulative fatalities from the individual's arrival in Germany up to interview date, indicating long-term exposure.

The vector X_{it} denotes individual-level controls including age, age squared, partnership status, number of children, months since arrival, level of education, financial status before migration, and indicators for previous employment in Ukraine, and any prior residence in Germany, as well as the moderator variables used in the

interaction analyses (see below). Fixed effects for the federal state in Germany (λ_f) and survey completion month and year (λ_m) control for local and temporal variations that could affect settlement intentions. ε_{ict} is the error term. Robust standard errors are clustered at the individual level.

To examine how the effect of conflict intensity varies across subgroups, we conduct a series of moderation analyses. First, we test gender differences, reflecting different levels of perceived threat and risk sensitivity. Second, we assess whether having close relatives—especially children or partners—remaining in Ukraine moderates responsiveness to conflict. Third, we construct an indicator for whether respondents cited non-humanitarian reasons to leave Ukraine (in addition to security threats), allowing us to test whether initial motivations shape how conflict information is processed. Finally, we measure pre-flight exposure to violence using cumulative fatalities in the respondent's last residence county between 24 February 2022 and their arrival in Germany, approximating the intensity of conflict experienced prior to displacement.

Table 2 presents the descriptive statistics of all variables used in the analyses. Missingness ranges between 0 and 1 per cent. To preserve the full analytical sample, we applied single imputation, replacing missing values with the lowest observed value of the respective variable and introducing dummy indicators to flag imputed cases. Robustness checks confirm that the main conclusions remain unchanged when we use list wise deletion (see Supplementary H).

Model diagnostics indicate low multicollinearity (VIF), except for some federal state and education dummies. The high VIF for age and age-squared is expected

Table 3 Settlement intentions in Germany and short- and long-term conflict intensity in the last residence county in Ukraine, by survey wave

Variable	Share, in percent	Mean of short-term conflict intensity	Mean of long-term conflict intensity
<i>Permanent settlement intentions in wave 1</i>			
No	75.24	21.98	1,260.79
Yes	24.76	28.05	1,535.58
<i>t</i> -test of mean differences		<i>t</i> -test = 5.87, <i>P</i> = 0.000	<i>t</i> -test = 6.66, <i>P</i> = 0.000
<i>Permanent settlement intentions in wave 2</i>			
No	71.89	19.51	2,095.43
Yes	28.11	26.77	2,556.27
<i>t</i> -test of mean differences		<i>t</i> -test = 4.17, <i>P</i> = 0.000	<i>t</i> -test = 5.08, <i>P</i> = 0.000

Note: Percentages in column 1 refer to the share of respondents within each wave, summing to 100 per cent. Values in columns 2 and 3 are averages of conflict fatality counts (not percentages) among respondents in each group.

Source: IAB-BiB/FReDA-BAMF-SOEP Survey of Refugees from Ukraine 2022–2023, linked to ACLED data.

and acceptable, as both terms are needed to capture the non-linear age effect on settlement intentions.

For a discussion of the identification strategy and the distinction between across- and within-person estimation, see [Supplementary Appendix D](#).

Results

Settlement intentions of Ukrainian refugees in Germany

[Table 3](#) presents descriptive statistics on the permanent settlement intentions of Ukrainian refugees in Germany across the two survey waves. In the initial months following Russia's full-scale invasion (Wave 1), approximately 25 per cent of respondents expressed an intention to remain in Germany permanently. One year into the conflict (Wave 2), this proportion increased slightly to 28 per cent. While this average change appears minor, it does not fully capture individual-level dynamics. We observe some switching: 27 per cent of respondents who initially reported permanent settlement intentions revised them by Wave 2, while 12 per cent of those with initially temporary intentions switched to expressing permanent settlement intentions (see [Supplementary Figure A2](#)).²

[Table 3](#) also provides preliminary indications that conflict intensity in the home region is related to settlement intentions. Individuals who intend to settle permanently in Germany are, on average, exposed to higher short- and long-term conflict intensities in their regions of origin prior to the interview than those without permanent intentions. This correlation is consistent with the idea that greater conflict intensity at home may

encourage refugees to seek long-term safety and stability abroad.

Effect of short- and long-term conflict intensities on refugees' settlement intentions

[Table 4](#) reports the results from multivariate analyses estimating the effects of short- and long-term conflict intensities in refugees' home regions on their intention to settle permanently in Germany (for full models, see [Supplementary B](#)).

We begin with short-term conflict intensity. The analysis reveals a positive and statistically significant effect of the number of fatalities in the respondent's last residence county within the three days prior to the interview and the probability of expressing a permanent settlement intention—providing support for our expectations. Specifically, an increase of 100 fatalities raises the probability of intending to stay permanently by 4.89 per cent-point. To contextualize this, a one-standard-deviation increase in short-term fatalities (48.90 fatalities, [Table 2](#)) corresponds to a 2.39 per cent-point increase. Even at the average short-term fatality level (22.72 fatalities), the effect amounts to roughly 1.11 per cent points—comparable in magnitude to the estimated effect of having one additional child (1.28 per cent points; [Supplementary Table B1](#)). Given that, on average, 26 per cent of respondents express permanent settlement intentions, these are substantively meaningful shifts.

Importantly, even moderate increases in short-term fatalities reflect the scale of localized escalations during our survey period, such as the September 2022 Kharkiv counteroffensive or the intensified shelling of Bakhmut in early 2023. These events routinely produced dozens

Table 4 AME of long-term and short-term conflict intensity on settlement intentions, in percentage points: in total and over months since arrival in Germany

	Effect of short-term conflict intensity		Effect of long-term conflict intensity	
	AME (SE)	AME (SE)	AME (SE)	AME (SE)
Main effect				
Cumulated fatalities (in 100)	4.89*** (0.89)		0.14*** (0.02)	
Interaction				
AME of cumulated fatalities (in 100)				
< 1 month since arrival		6.62** (2.16)		0.28*** (0.06)
4 months since arrival		5.65*** (1.21)		0.21*** (0.04)
8 months since arrival		4.69*** (0.94)		0.14*** (0.02)
12 months since arrival		3.72* (1.69)		0.07* (0.03)
Wald Test of the interaction effects		0.72		7.48**
Observations	14,409	14,409	14,409	14,409

Note: * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$. Results from linear probability model regressions. Standard errors (SE) are clustered at individual level. Beyond indicated variables all models control for months since arrival in Germany, indicator for female, number of children, indicator for having a partner, indicator for having core family member in Ukraine, age (and age squared), education level, financial status before migration, indicator for having worked before migration, indicator for having Germany experience before migration, indicator for migration motives beyond purely humanitarian concerns, number fatalities since the war outbreak before arrival in Germany, indicator for residing on rural area in Germany, fixed effects for federal state in Germany and interview month and year, as well as indicators for missing values.

Source: IAB-BiB/FReDA-BAMF-SOEP Survey of Refugees from Ukraine 2022–2023, linked to ACLED data.

of fatalities within a few days. Such fluctuations offer a concrete illustration of how sudden conflict spikes can trigger immediate emotional reactions and heightened perceptions of personal risk, aligning with the short-term (System-1) mechanism outlined in Section ‘Theoretical Framework’ and increasing the likelihood of intending permanent settlement abroad.

Turning to long-term conflict intensity—cumulative fatalities in the home county since arrival in Germany—we again observe a positive effect, though considerably smaller in size. An increase of 100 cumulative fatalities raises the probability of intending permanent settlement by 0.14 per cent points. Because long-term fatality counts are high in several regions (mean = 1,663 fatalities), even modest marginal effects accumulate: an average-level increase in long-term fatalities corresponds to a 2.33 per cent-point increase in settlement intentions. This pattern aligns with the more deliberative (System-2) pathway theorized in Section ‘Theoretical Framework’, whereby evaluations of prolonged destruction and institutional collapse gradually shift preferences toward staying.

We next examine whether these effects attenuate with time spent in Germany by interacting conflict intensities with months since arrival. For each interaction effect, we calculated average marginal effects (AME) of conflict intensities at different levels of months since arrival (see lower panel of Table 4). Short-term effects remain stable; the Wald test for the interaction term is not statistically significant, indicating that immediate responses to recent violence persist regardless of residence duration. By contrast, the interaction for long-term conflict intensity is significant: refugees become less responsive to cumulative conflict the longer they reside in Germany. This attenuation is consistent with psychological adaptation, whereby attention gradually shifts from origin-country conditions to the immediate challenges and opportunities in the host country.

Taken together, these findings show that conflict intensity affects settlement intentions primarily through transient, immediate reactions, while the influence of prolonged conflict exposure is more modest and conditional on time abroad. This aligns with research on short-term psychological responses to violence (Metcalfe, Powdthavee, and Dolan, 2011; Clark, Doyle, and

Table 5 AME of long-term and short-term conflict intensity on settlement intentions, in percentage points: Testing moderation effects

<i>Interaction</i>	Effect of short-term conflict intensity	Effect of long-term conflict intensity
AME of cumulated fatalities (in 100)	AME (SE)	AME (SE)
By gender		
Male	8.66*** (1.98)	0.19*** (0.05)
Female	4.15*** (0.97)	0.13*** (0.02)
Wald Test of the interaction effects	4.30*	1.46
By family members left behind		
No core family member in Ukraine	6.12*** (1.14)	0.16*** (0.03)
Core family member in Ukraine	2.81* (1.37)	0.09** (0.03)
Wald Test of the interaction effects	3.65	2.59
No children in Ukraine	5.21*** (0.94)	0.13*** (0.02)
Child in Ukraine	2.11 (2.14)	0.09 (0.06)
Wald Test of the interaction effects	1.79	0.64
No partner in Ukraine	5.54*** (1.03)	0.15*** (0.02)
Partner in Ukraine	2.90 (1.55)	0.07 (0.04)
Wald Test of the interaction effects	2.07	3.17
By migration motives		
Migration motives: purely humanitarian concerns	3.79*** (0.98)	0.10*** (0.03)
Migration motives: beyond purely humanitarian concerns	8.50*** (2.06)	0.24*** (0.04)
Wald Test of the interaction effects	4.39*	8.57**
By exposure to different levels of warfare		
Cumulative fatalities since the war outbreak before arrival in Germany = 0	3.70** (1.14)	0.12*** (0.03)
Cumulative fatalities since the war outbreak before arrival in Germany = 5	3.71** (1.13)	0.12*** (0.03)
Cumulative fatalities since the war outbreak before arrival in Germany = 20	3.75*** (1.12)	0.12*** (0.03)
Cumulative fatalities since the war outbreak before arrival in Germany = 82	3.92*** (1.06)	0.13*** (0.03)
Cumulative fatalities since the war outbreak before arrival in Germany = 239	4.35*** (0.94)	0.13*** (0.02)
Cumulative fatalities since the war outbreak before arrival in Germany = 794	5.88*** (1.06)	0.16*** (0.03)
Wald Test of the interaction effects	2.77	1.11
Observations	14,409	14,409

Note: *P < 0.05, **P < 0.01, ***P < 0.001. Results from linear probability model regressions. Standard errors (SE) are clustered at individual level. Beyond indicated variables all models control for months since arrival in Germany, indicator for female, number of children, indicator for having a partner, indicator for having core family member in Ukraine, age (and age squared), education level, financial status before migration, indicator for having worked before migration, indicator for having Germany experience before migration, indicator for migration motives beyond purely humanitarian concerns, number fatalities since the war outbreak before arrival in Germany, indicator for residing in rural area in Germany, fixed effects for federal state in Germany and interview month and year, as well as indicators for missing values.

Source: IAB-BiB/FReDA-BAMF-SOEP Survey of Refugees from Ukraine 2022–2023, linked to ACLED data.

Stancanelli, 2020; Keita and Schewe, 2021) and with dual-process models of decision-making (Kahneman, 2003; Evans and Stanovich, 2013).

Finally, we conducted a series of sensitivity analyses using alternative specifications of the conflict intensity variable (Supplementary C). First, extending the short-term window up to eight weeks shows that effects diminish rapidly beyond one week (Supplementary Table C1), reinforcing the conclusion that conflict intensity exerts a short-lived influence that is strongest for very recent events. Second, excluding extreme conflict values (top 1 per cent) slightly increases short-term effect sizes (Supplementary Table C2). Third, squared and cubic terms for conflict intensity yield no evidence of non-linearity. We also tested logarithmic transformations of the conflict intensity variables (adding 1 or 0.1 to handle zeros, particularly in short-term measures). Although these specifications yield statistically significant results, we do not adopt them because such artificial adjustments can compromise interpretability. Fourth, categorizing conflict intensity using wave-specific percentiles and theory-driven cutoffs (Supplementary Table C3) does not reveal statistically distinct categories. Across all specifications, the estimated effects remain stable, supporting the conclusion that the relationship between conflict intensity and settlement intentions is effectively linear.

Heterogenous response to the military conflict intensities by sub-groups

Table 5 summarizes results from moderation analyses exploring whether the effects of conflict intensity on settlement intentions vary across key subgroups. We interact both short- and long-term conflict intensity measures with gender, nuclear family separation, migration motives, and pre-migration conflict exposure. For each interaction, we report AME of fatalities at different levels of the moderator variables. The Wald Test is used to assess whether the interaction terms are statistically significant.

First, we examine gender differences. Given Ukraine's general mobilization and the prohibition on conscript-age men leaving the country, we expected men to be more responsive to conflict escalation. Results support this: the short-term conflict effect is significantly stronger for men than women (8.66 vs. 4.15 per cent points; Wald Test: $P < 0.05$, two-sided test), while long-term effects show no significant gender differences. This suggests that acute spikes in violence heighten men's perceived risks and urgency to settle permanently.

Second, we assess the moderating role of family separation, although the expected direction of this effect depends on whether refugees perceive return or reunification abroad as the more feasible option. Refugees

with nuclear family members (partner or children) still in Ukraine are generally less likely to express permanent settlement intentions (−10 per cent points, see Supplementary Table B1). However, they do not respond differently to either short- or long-term conflict intensities. That is, conflict exposure affects settlement intentions similarly regardless of whether core family members remain in Ukraine. These null results persist across genders (as confirmed by three-way interaction tests; Wald test for short-term conflict intensities: 1.89, $P = 0.169$; Wald test for long-term conflict intensities: 0.92, $P = 0.336$) and remain unchanged when disaggregating by type of family member left behind (child vs. partner).

Third, we consider migrants who left Ukraine for reasons beyond purely humanitarian concerns (e.g., economic or family-related motives in addition to safety). We initially expected that these mixed-motive migrants would be less responsive to short-term conflict fluctuations, as their decisions would rely more on long-term structural evaluations—such as job prospects or the feasibility of family reunification—rather than immediate emotional reactions. Conversely, we expected that sustained long-term conflict might amplify their desire to remain, as deteriorating home-country conditions reinforce the rationale for staying. However, the results show that these refugees are highly responsive to both short- and long-term conflict intensities. While they already express stronger baseline intentions to stay (Supplementary Table A2), their settlement intentions further intensify with rising conflict levels. This suggests that both immediate threats and prolonged instability serve to reinforce the decision to settle, even among those with broader migration rationales.

Finally, we test whether prior conflict exposure moderates the effects of ongoing violence. We expected refugees with high pre-flight exposure to be less responsive to additional conflict, due to desensitization or better-developed coping strategies (Ghosh *et al.*, 2021). Yet, interactions with conflict intensity measures (both short- and long-term) turned out to be statistically non-significant. Thus, conflict sensitivity appears consistent across refugees, regardless of their initial exposure levels.

Robustness check

We conducted series of robustness checks, with detailed results reported in the Supplementary E–G.

First, we examined whether the observed effects of conflict intensity are robust when accounting for uncertainty in settlement intentions. Respondents were grouped by certainty levels (permanent vs. temporary vs. uncertain intentions). Results from pairwise LPM confirm that the effects of both short- and long-term conflict intensities persist across subgroups and are

even stronger among those with more definite intentions (Supplementary E).

Second, we addressed potential selective participation. We find no significant correlation between the timing of survey responses and conflict events in the respondents' counties of origin. Subgroup analyses show that effects are consistent across one-time and panel respondents, and wave-specific estimates confirm the direction and significance of the main effects, and additional analyses suggest that short-term conflict exposure does not bias sample retention. For long-term conflict intensity, minor attrition-related bias cannot be fully ruled out, which may lead to conservative estimates (Supplementary F).

Third, we examined possible confounding from pre-war regional characteristics and broader geographical spillovers. Results remain robust when controlling for regional population size, urbanization, migration propensities, and political attitudes, and when excluding each region one at a time in a leave-one-region-out sensitivity analysis (Supplementary G).

Together, these checks confirm the robustness of our main findings and support the conclusion that both short- and long-term conflict intensities systematically shape the settlement intentions of Ukrainian refugees.

Additional analyses: potential psychological channels

In this section, we explore potential psychological pathways through which heightened conflict intensity may influence refugees' settlement intentions. Two mechanisms are considered. First, increased conflict may trigger negative emotions such as fear, anxiety, and perceived personal risk, reinforcing the desire to remain abroad for safety reasons (cf. *egotropic threats*). Second, conflict may amplify concerns for the safety and future of significant others who remain in Ukraine, particularly during life-threatening escalations (cf. *sociotropic threats*). Our data include several indicators of emotional distress and family-related concerns (see Supplementary Table I1), which we link to short- and long-term conflict intensities (Supplementary Table I2).

We begin with proxies for emotional and psychological well-being. In line with previous literature (e.g., Schiele, 2021), better psychological well-being is associated with stronger intentions to stay. However, most indicators of well-being are not directly affected by conflict intensity in the region of origin. Two exceptions emerge: long-term conflict intensity significantly reduces overall life satisfaction and increases reported feelings of unhappiness. These findings suggest that sustained conflict exposure may contribute to psychological distress and cognitive strain (see also Keita and Schewe, 2021; Sønderskov *et al.*, 2021). From this perspective, the negative impact of long-term conflict on

well-being may paradoxically weaken the desire to remain—despite the expectation that deteriorating conditions at home would encourage settlement abroad. This tension points to a complex interplay between perceived threat and psychological resilience: while heightened conflict may increase the desire to stay for safety reasons (egotropic threat), its toll on mental well-being may simultaneously erode the motivation or capacity to pursue long-term integration.

Next, we explore sociotropic pathways by analyzing how conflict intensities shape concerns about family members left behind and plans for family reunification. Both short- and long-term conflict intensities are positively associated with concerns for relatives still in Ukraine, and these concerns are, in turn, negatively linked to permanent settlement intentions. While section 'Heterogenous response to the military conflict intensities by sub-groups' showed that individuals with nuclear family members still in Ukraine do not exhibit systematically different responses to conflict, the present findings suggest that broader emotional ties may be at play. The concerns likely extend beyond the nuclear family, encompassing other close relatives such as parents, siblings, or extended.

At the same time, we find that long-term conflict intensity significantly increases plans for family reunification, which in turn are positively linked to permanent settlement intentions. This indicates that protracted conflict not only heightens concern for loved ones, but also motivates efforts to bring them to a safe haven abroad—thereby reinforcing intentions to stay. This finding underscores the importance of family dynamics in shaping migration decisions under conditions of insecurity. Prior research has shown that family separation can reduce life satisfaction and mental health (Löbel and Jacobsen, 2021), potentially weakening integration and long-term settlement. Our findings suggest a complementary mechanism: under prolonged conflict, family separation may also intensify the desire to reunite—and thus the commitment to remain.

Discussion

This study examines whether military conflict intensities in refugees' home regions continue to shape their lives after they have reached safety abroad. While it is well-established that war and local violence are primary drivers of displacement (e.g., Bohra-Mishra and Massey, 2011; Kosyakova *et al.*, 2025), far less is known about whether ongoing conflict continues to influence refugees' intentions to settle permanently abroad once they have escaped the immediate threat of violence. This puzzle—why individuals already in safety would adjust their long-term settlement preferences in response to new waves of violence at home—carries substantial

societal relevance. For Ukraine, the potential permanent emigration of over a million displaced individuals, many of them working-age women and children (Van Tubergen *et al.*, 2024a), poses major demographic and reconstruction challenges (Kulu *et al.*, 2023). For host countries like Germany, understanding whether these refugees plan to stay long-term has significant implications for integration policies, labour market needs, and social cohesion.

Leveraging panel data from the IAB-BiB/FReDA-BAMF-SOEP Survey and time-varying county-level conflict data, we find that both short- and long-term conflict intensities in Ukraine significantly shape refugees' settlement intentions. In line with ecological models of refugee distress (Miller and Rasmussen, 2017; Hou *et al.*, 2020), short-term conflict appears particularly influential. Acute, emotionally salient events in the home country affect settlement preferences more strongly than longer-term conflict trajectories, likely due to the heightened immediacy and perceived threat they evoke. Although long-term conflict intensity also matters, its effect size is smaller and diminishes over time—suggesting processes of adaptation, recalibration, or desensitization (Frederick and Loewenstein, 1999; Rubin *et al.*, 2005).

Our results also reveal important heterogeneity. Male refugees are significantly more responsive to conflict intensities than women, likely reflecting the specific risks men face under Ukraine's conscription regime. Refugees with broader migration motives—beyond immediate humanitarian concerns—also respond strongly to conflict dynamics, even though they report higher baseline intentions to stay. For these groups, continued conflict at home reinforces concerns not just about safety, but about long-term economic, social, and familial stability.

By contrast, refugees with nuclear family members still in Ukraine report lower settlement intentions regardless of conflict exposure—highlighting the strong emotional pull of family ties. However, conflict exposure increases concern for loved ones, which in turn lowers cognitive well-being and reduces intentions to stay. Simultaneously, long-term conflict also increases plans for family reunification, which strengthens intentions to remain. These countervailing effects illustrate the complex, sometimes competing, ways in which socio-tropic threats could interact with emotional strain and family structures.

Surprisingly, we do not find evidence that pre-migration exposure to violence moderates the effect of current conflict intensities on settlement intentions. This contrasts with findings from other contexts (e.g., Ghosn *et al.*, 2021) and suggests that prior trauma does not necessarily inoculate individuals against the

psychological impact of ongoing violence. It may instead reflect avoidance or coping mechanisms among trauma-exposed groups (e.g., Miethe *et al.*, 2023). Together with the dominance of short-term conflict effects, this finding lends further support to ecological over war-exposure models of refugee (Miller and Rasmussen, 2017).

In sum, this study advances sociological understanding of refugee settlement decision-making by showing that both immediate emotional responses and, to a lesser extent, longer-term evaluative judgments shape intentions—with acute, short-term shocks often carrying disproportionate weight. Theoretically, our findings call for models that integrate both intuitive (short-term, emotional) and deliberative (long-term, evaluative) processes. While classic migration theories emphasize structural and economic drivers, our results highlight that acute conflict-related shocks can exert lasting psychological influence, even after displacement. Empirically, combining high-frequency conflict data with longitudinal panel surveys provides a powerful approach to tracing how external events shape refugee preferences in real-time—and for revealing just how volatile and contingent these intentions can be.

Several limitations merit caution. First, our data capture intentions within the first year after arrival, a phase likely dominated by immediate security concerns. Future data will be needed to track how intentions evolve and translate into behaviour. Second, although we use granular county-level conflict data, finer spatial variation (e.g., town or neighbourhood level) remains unobserved. Third, our null findings on prior war exposure may reflect measurement limitations, as we lack detailed individual-level trauma histories. Lastly, our analyses are limited to refugees who have already arrived in Germany, meaning our findings reflect variation within a selected group—those who successfully crossed international borders. While individuals from more heavily conflict-affected areas may be overrepresented among those planning to settle abroad, this does not imply that such residents are generally more likely to migrate internationally. Recent evidence suggests that many Ukrainians facing intense violence opt for internal displacement rather than cross-border flight (Kosyakova *et al.*, 2025). To fully capture the layered nature of forced mobility, future research should examine how evolving conflict shapes not only intentions but also actual mobility, return dynamics, and involuntary immobility (Carling and Schewel, 2018; de Haas, 2021). Ideally, such research would use multi-country, longitudinal data spanning borders and capturing both intentions and realized migration among different cohorts of conflict-affected populations.

Notes

1. We use Stata command `reghdfe` to absorb many levels of fixed effects, by implementing the estimator. The results using binary logit model are in line with our conclusions (see [Supplementary B](#)).
2. We conducted additional analyses on outmigration and panel attrition in Wave 2. Of the Wave 1 respondents, 59.6 per cent remained in Germany and continued participating, 1.8 per cent had emigrated, and 38.6 per cent dropped out. Emigration appears closely linked to settlement intentions: 96 per cent of those who left had previously reported temporary intentions. Among dropouts, 23 per cent had expressed permanent intentions, suggesting a slight link between initial preferences and attrition. We assess potential bias related to conflict intensity in the robustness checks.

Supplementary Data

Supplementary data are available at [ESR](#) online.

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Data availability

Replication codes for data preparation and analyses are available at <https://doi.org/10.17605/OSF.IO/BJV9H>.

Information on the IAB-BiB/FReDA-BAMF-SOEP Survey of Ukrainian Refugees in Germany, including details on how to access the data, is available at: https://doi.org/10.5684/soep.iab-bib_freda-bamf-soep.2022-2023.

References

- Ager, A. and Strang, A. (2008). Understanding integration: a conceptual framework. *Journal of Refugee Studies*, 21, 166–191.
- Al Husein, N. and Wagner, N. (2023). Determinants of intended return migration among refugees: a comparison of Syrian refugees in Germany and Turkey. *The International Migration Review*, 57, 1771–1805.
- Alrababah, A. *et al.* (2023). The dynamics of refugee return: Syrian refugees and their migration intentions. *British Journal of Political Science*, 53, 1108–1131.
- Bassetto, J. and Freitas Monteiro, T. (2025). Immigrants’ return intentions and labor market behavior when the home country is unsafe. *Journal of Labor Economics*, online first.
- Beaman, L., Onder, H. and Onder, S. (2022). When do refugees return home? Evidence from Syrian displacement in Mashreq. *Journal of Development Economics*, 155, 102802.
- Black, R. and Gent, S. (2006). Sustainable return in post-conflict contexts. *International Migration*, 44, 15–38.
- Bohra-Mishra, P. and Massey, D. S. (2011). Individual decisions to migrate during civil conflict. *Demography*, 48, 401–424.
- Brell, C., Dustmann, C. and Preston, I. (2020). The labor market integration of refugee migrants in high-income countries. *Journal of Economic Perspectives*, 34, 94–121.
- Brücker, H. *et al.* (2023). Ukrainian refugees in Germany: evidence from a large representative survey. *Comparative Population Studies*, 48, 395–424.
- Brücker, H. *et al.* (2025). Exploring integration and migration dynamics: the research potentials of a large-scale longitudinal household study of refugees in Germany. *European Sociological Review*, icaf032.
- Carling, J. and Schewel, K. (2018). Revisiting aspiration and ability in international migration. *Journal of Ethnic and Migration Studies*, 44, 945–963.
- Clark, A. E., Doyle, O. and Stancanelli, E. (2020). The impact of terrorism on individual well-being: evidence from the Boston marathon bombing. *Economic Journal*, 130, 2065–2104.
- Cornesse, C. *et al.* (2022). Recruiting a probability-based online panel via postal mail: experimental evidence. *Social Science Computer Review*, 40, 1259–1284.
- Cortes, K. E. (2004). Are refugees different from economic immigrants? Some empirical evidence on the heterogeneity of immigrant groups in the United States. *The Review of Economics and Statistics*, 86, 465–480.
- Coulter, R., Van Ham, M. and Feijten, P. (2011). A longitudinal analysis of moving desires, expectations and actual moving behaviour. *Environment & Planning A*, 43, 2742–2760.
- Damelang, A. and Kosyakova, Y. (2021). To work or to study? Postmigration educational investments of adult refugees in Germany – evidence from a choice experiment. *Research in Social Stratification and Mobility*, 73, 100610.

- de Haas, H. (2021). A theory of migration: the aspirations-capabilities framework. *Comparative Migration Studies*, 9, 8.
- de Haas, H. and Fokkema, T. (2011). The effects of integration and transnational ties on international return migration intentions. *Demographic Research*, 25, 755–782.
- de Vroome, T. and van Tubergen, F. (2014). Settlement intentions of recently arrived immigrants and refugees in The Netherlands. *Journal of Immigrant & Refugee Studies*, 12, 47–66.
- Evans, J. S. and Stanovich, K. E. (2013). Dual-process theories of higher cognition: advancing the debate. *Perspectives on Psychological Science*, 8, 223–241.
- Frederick, S. and Loewenstein, G. (1999). Hedonic adaptation. In D. Kahneman, E. Diener, N. Schwarz (Eds.), *Well-Being*. New York: Russell Sage Foundation, pp. 302–329. JSTOR. 10.7758/9781610443258.20.
- Gherghina, S., Ploeanu, A.-P. and Necula, C.-V. (2020). The impact of socio-cultural integration on return intentions: evidence from a survey on Romanian migrants. *Journal of Immigrant & Refugee Studies*, 18, 515–528.
- Ghosh, F. *et al.* (2021). The journey home: violence, anchoring, and refugee decisions to return. *The American Political Science Review*, 115, 982–998.
- GSMInfo. 2024. *It has become known in which area the most people are being mobilised and why this is happening*. available from: <<https://gsminfo.com.ua/177485-stalo-yzvestno-v-kakoj-oblastymobylyzuyut-bolshe-vsego-lyudej-y-s-chem-to-svyazano.html>> [accessed 25 May 2025].
- Hou, W. K. *et al.* (2020). Everyday life experiences and mental health among conflict-affected forced migrants: a meta-analysis. *Journal of Affective Disorders*, 264, 50–68.
- IOM-UN Migration. (2023). *Ukraine Returns Report (January 2023)*. January, available from: <<https://reliefweb.int/report/ukraine/iom-ukraine-internal-displacement-report-general-population-survey-round-11-25-november-5-december-2022-enuk>>
- Kahneman, D. (2003). A perspective on judgment and choice: mapping bounded rationality. *The American Psychologist*, 58, 697–720.
- Kahneman, D. and Tversky, A. (2023). Prospect theory: an analysis of decision under risk. *Econometrica*, 47, 263–292.
- Kaya, S. and Orchard, P. (2020). Prospects of return: the case of Syrian refugees in Germany. *Journal of Immigrant & Refugee Studies*, 18, 95–112.
- Keita, S. and Schewe, P. (2021). Out of sight, out of mind? Terror in the home country, family reunification options, and the well-being of refugees. *World Development*, 146, 105562.
- Khurshudyan, I. and Khudov, K. (2024, July 17). As mobilization rules kick in, some Ukrainian men pay to flee, dodging draft. *The Washington Post*, available from: <<https://www.washingtonpost.com/world/2024/07/17/ukraine-mobilization-draft-dodgers-russia/>>.
- Kley, S. (2011). Explaining the stages of migration within a life-course framework. *European Sociological Review*, 27, 469–486.
- Kofman, E. (2019). Gendered mobilities and vulnerabilities: refugee journeys to and in Europe. *Journal of Ethnic and Migration Studies*, 45, 2185–2199.
- Kogan, I. and Kosyakova, Y. (2025). Cherchez l'homme? The wartime migration of men in Ukraine: research note. *Journal of International Migration and Integration*, online first.
- Kosyakova, Y., Kogan, I. and van Tubergen, F. (2025). Multidimensional effects of conflict-induced violence on wartime migration decisions: evidence from Ukraine. *Journal of Peace Research*, 62, 2088–2106.
- Kulu, H. *et al.* (2023). The war, refugees, and the future of Ukraine's population. *Population, Space and Place*, 29, e2656.
- Lapshyna, I. (2025). Forced migration, uncertainty and transnationalism of Ukrainians in Germany. *Mobilities*, 21, 48–66.
- Löbel, L.-M. and Jacobsen, J. (2021). Waiting for kin: a longitudinal study of family reunification and refugee mental health in Germany. *Journal of Ethnic and Migration Studies*, 47, 2916–2937.
- Luhmann, M. and Intelisano, S. (2018). Hedonic adaptation and the set point for subjective well-being. In E. Diener, S. Oishi, L. Tay (Eds.), *Handbook of Well-Being*. Salt Lake City: DEF Publishers, pp. 219–243.
- Metcalf, R., Powdthavee, N. and Dolan, P. (2011). Destruction and distress: using a quasi-experiment to show the effects of the September 11 attacks on mental well-being in the United Kingdom. *Economic Journal*, 121, 81–103.
- Miethe, S. *et al.* (2023). Posttraumatic stress symptoms and its association with rumination, thought suppression and experiential avoidance: a systematic review and meta-analysis. *Journal of Psychopathology and Behavioral Assessment*, 45, 480–495.
- Miller, K. E. and Rasmussen, A. (2017). The mental health of civilians displaced by armed conflict: an ecological model of refugee distress. *Epidemiology and Psychiatric Sciences*, 26, 129–138.
- Nowok, B. *et al.* (2013). Does migration make you happy? A longitudinal study of internal migration and subjective well-being. *Environment & Planning A*, 45, 986–1002.
- Özer, ÖE *et al.* (2025). Expectations' predictive power regarding international return and onward migration of immigrants. *Demographic Research*, 52, 1111–1122.
- Phillimore, J. and Cheung, S. Y. (2021). The violence of uncertainty: empirical evidence on how asylum waiting time undermines refugee health. *Social Science & Medicine*, 282, 114154.
- Raleigh, C. *et al.* (2010). Introducing ACLED: an armed conflict location and event dataset. *Journal of Peace Research*, 47, 651–660.
- Rubin, G. J. *et al.* (2005). Psychological and behavioural reactions to the bombings in London on 7 July 2005: cross sectional survey of a representative sample of Londoners. *BMJ*, 331, 606.
- Sasse, G. (2023). *Russia's war Against Ukraine*. Cambridge, Hoboken: Polity Press.
- Schiele, M. (2021). Life satisfaction and return migration: analysing the role of life satisfaction for migrant return intentions in Germany. *Journal of Ethnic and Migration Studies*, 47, 110–129.
- Simon, H. A. (1990). Bounded rationality. In J. Eatwell, M. Milgate, P. Newman (Eds.), *Utility and Probability*. London: Palgrave Macmillan UK, pp. 15–18.

- Sønderskov, K. M. *et al.* (2021). Terrorism in the country of origin is linked to deterioration in the mental health of refugees. *Nature Human Behaviour*, 5, 1555–1561.
- South, S. J., Trent, K. and Han, S. (2024). Exposure to violence and migration from Mexico to the United States. *Journal of International Migration and Integration*, 25, 281–307.
- Steinhauer, H. W. *et al.* (2024). Establishing a probability sample in a crisis context: the example of Ukrainian refugees in Germany in 2022. *ASta Wirtschafts- Und Sozialstatistisches Archiv*, 18, 77–97.
- The Expert Council on Integration and Migration. 2024. Permanent residence return or circular mobility? Options for Ukrainian war refugees after temporary protection. available from: <<https://www.svr-migration.de/wp-content/uploads/2024/01/SVR-Study-Summary-Permanent-residence-return-or-circular-mobility.pdf>> [accessed 23 May 2025].
- Toruńczyk-Ruiz, S. and Brunarska, Z. (2020). Through attachment to settlement: social and psychological determinants of migrants' intentions to stay. *Journal of Ethnic and Migration Studies*, 46, 3191–3209.
- UNHCR. (2025a). *Global Trends. Forced Displacement in 2024*. United Nations High Commissioner for Refugees, available from: <<https://www.unhcr.org/global-trends-report-2024>>
- UNHCR. (2025b). *Situation Ukraine Refugee Situation (unhcr.org)*. Operational Data Portal – Ukraine Refugee Situation, available from: <<https://data.unhcr.org/en/situations/ukraine>>
- Van Hear, N. (1998). *New Diasporas: The Mass Exodus, Dispersal and Regrouping of Migrant Communities*. Seattle: Univ. of Washington Press.
- Van Tubergen, F. *et al.* (2024a). Return intentions among Ukrainian refugees in Europe: a Cross-National Study. *International Migration*, 62, 181–198.
- Van Tubergen, F. *et al.* (2024b). Self-selection of Ukrainian refugees and displaced persons in Europe. *Journal of Refugee Studies*, 37, 72–96.
- Wachter, G. G. and Fleischmann, F. (2018). Settlement intentions and immigrant integration: the case of recently arrived EU-immigrants in The Netherlands. *International Migration*, 56, 154–171.
- Walker, N. (2024). *Conflict in Ukraine: A Timeline (Current Conflict, 2022-Present)*. London: House of Commons Library.
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