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Joop Adema
Cevat Giray Aksoy
Yvonne Giesing
Panu Poutvaara

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Joop Adema
LMU Munich and ifo Institute

Yvonne Giesing
LMU Munich, ifo Institute, CESifo and IZA

Cevat Giray Aksoy
EBRD, King's College London, CEPR and IZA

Panu Poutvaara
LMU Munich, ifo Institute, CESifo, CReAM and IZA

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ABSTRACT

The Effect of Conflict on Refugees' Return and Integration: Evidence from Ukraine*

What is the causal effect of conflict on refugees' return and integration? To answer this question, we launched a panel survey of Ukrainian refugees across Europe in June 2022 and combined it with geocoded conflict data. Most refugees plan to return, and initial return intentions strongly predict actual return. Those who initially plan to settle outside Ukraine integrate faster. Increased conflict intensity in the home municipality discourages return there, but not to Ukraine as a whole. It also has no effect on the likelihood of working. Liberation of the home district increases return, while increased pessimism about the outcome of the war reduces return intentions.

Corresponding author:
Panu Poutvaara
Ifo Institute
Poschingerstr. 5
81679 Munich
Germany

E-mail: poutvaara@ifo.de

1   Introduction

The number of refugees worldwide rose from 27 million in 2021 to 35 million by the end of 2022, the largest annual increase ever recorded.[1] This increase was largely driven by refugees from Ukraine, who, along with Syria and Afghanistan, account for more than half of the world's total refugee population (UNHCR, 2023a). Whether refugees return is important for both their countries of origin and their host countries. The return of refugees to their home countries is crucial for reconstruction efforts, as they often bring valuable skills and resources. For host countries, the potential return of refugees can alleviate the social, economic and political pressures that large influxes can create, such as strained public services, competition for jobs, and challenges to social cohesion. When refugees choose to return, this not only alleviates these challenges, but also promotes a more sustainable approach to migration management.

Although many refugees, particularly those in neighboring countries, initially intend to return when conditions are safe, a substantial number ultimately choose to remain in their host countries (Alrababa'h et al., 2023; UNHCR, 2023b). However, there is a lack of systematic evidence on how refugees' intentions to return change over time, how accurately these intentions predict actual return, and the impact of conflict in refugees' home regions on their return plans, actual return, and integration. This evidence gap arises from the limited availability of longitudinal data that track refugees over time and across countries. The analysis of cross-sectional data is often insufficient to determine the causal effect of conflict on return (intentions), as unobserved heterogeneity among individuals may depend on the intensity of conflict prior to departure.

To address these issues, we launched a longitudinal survey of Ukrainian refugees across Europe in June 2022, following Russia's full-scale invasion of Ukraine on February 24, 2022, which led to the largest refugee crisis in Europe since World War II. We repeatedly ask respondents about their current location, return plans, and integration outcomes, and link this information to geocoded data on conflict intensity in their home municipality. This allows us to estimate the causal effect of local conflict on actual return, return plans, and integration outcomes. In addition, by collecting refugees' expectations about the duration and resolution of the war, we examine how changes in these expectations affect the same set of outcomes.

Our descriptive findings indicate a strong desire among Ukrainians to return home. Initially, around two thirds of Ukrainian refugees intended to return either soon or when it becomes safe, and one in ten planned to settle permanently abroad. Return plans strongly predict actual return: 33 percent of those who initially intended to return soon did so, while none of those who planned to settle permanently outside Ukraine returned. The realized return rate was 2.7 percentage points per 100 days. The net increase in plans to settle outside Ukraine was 1.6 percentage points per 100 days.

Controlling for individual, survey week, and host country fixed effects, we find that the liberation of one's home district increases the probability of returning to one's home municipality by 5.8 percentage points, and a one standard deviation increase in conflict intensity reduces the probability by 1.6 percentage points. We find that the latter has no statistically significant effect on returning to anywhere in Ukraine, suggesting that severe

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[1] There are also 5.4 million asylum seekers and 62.5 million internally displaced persons. For a comprehensive global overview, see UNHCR (2023a).

conflict may redirect returns to safer regions within the country. In terms of integration outcomes, the liberation of one's home municipality is associated with a lower likelihood of participating in training, consistent with a shorter time horizon in the destination country, which reduces incentives to invest in host-country specific human capital (Chiswick and Miller, 1994; Cortes, 2004; Adda *et al.*, 2022). However, we find no significant effect of conflict in the municipality of origin on various integration outcomes, such as employment, host country language proficiency, and social or subjective integration.

We examine the robustness of our results through several checks. We show that alternative specifications or allowing for spatial correlations in the error structure do not change the results. We also show that the results are largely robust to alternative ways of constructing the treatment, for example when including linear measures of conflict in the principal component analysis. When extending the radius to include deaths further away from one's home municipality, results become insignificant, highlighting that we capture the effect of local conflict rather than at a larger scale. Finally, we check effect heterogeneity and confirm that the results remain similar when, for example, we omit those individuals who come from areas that were already occupied before 2022.

Over time, Ukrainian refugees became less optimistic about their country's victory and the prospect of Russia's withdrawal from all occupied territories by the end of 2024. Our results show that as individuals became more pessimistic, they also became 4.7 percentage points more likely to plan to settle outside Ukraine. However, there is a remarkable resilience in the return plans of the population as a whole. Between September 2022 and January 2023, 71 percent of the panel participants expected Ukraine to regain all of the occupied territories by the end of 2024. By October-November 2023, however, this optimism had fallen to 35 percent. Despite this decline in confidence about territorial liberation, the propensity to return to Ukraine or make plans to do so — either immediately or when conditions are deemed safe — decreased considerably less on the same sample, from 66 percent to 54 percent. Meanwhile, the proportion of respondents who have decided to settle outside Ukraine has increased by 7 percentage points.

Turning to individual-level heterogeneity in return and return plans, 43 percent of those who returned reported that the partner staying behind was the main reason to return, or one of the two main reasons. Results are similar in a regression framework: having a partner back in Ukraine helps to explain 33 percent of total returns in panel regressions. As men aged 18 to 60 are not allowed to leave Ukraine, with certain exceptions, having a partner staying behind concerns almost exclusively female refugees. We also find that men are more likely to plan to settle outside Ukraine. Given the small number of men in our sample, results for men are more uncertain than results for women.

Our results regarding the return intentions of Ukrainian refugees contrast with previous research, which shows that refugees are less inclined to return to their home countries than those who migrate for economic reasons (Cortes, 2004; Camarena and Hägerdal, 2020). This prompts the question: what explains the strong return intentions of Ukrainian refugees?

First, in contrast to civil wars, external threats often catalyze a stronger sense of national identity (Kulyk, 2016; Gehring, 2021; Abramenko *et al.*, forthcoming). A stronger sense of national identity can greatly increase the emotional cost of living outside one's country. Second, the effective resistance to the Russian invasion has increased Ukrainians' trust in their government and military. This increased trust could not only motivate those who remained in Ukraine to stay, but also induce those who left to return. Moreover, such

confidence in government and military institutions could foster optimism about the future of Ukraine. Third, support from the international community, along with the potential for EU accession and NATO membership, is expected to reinforce this optimism. If these factors are strong, they could encourage a large share of Ukrainians to return home.

To explore these potential mechanisms, we use data from the Gallup World Polls and surveys conducted by the Razumkov Center in Ukraine both before and after the full-scale invasion. These two datasets have the advantage of allowing us to examine how trust, confidence in the government and military, and optimism changed after Russia's full-scale attack. An analysis of refugees would not allow us to answer this question, as they were surveyed only after Russia's full-scale attack. Linking trust, confidence, and optimism to the desire to emigrate sheds light on the strength of each mechanism. Our analysis reveals a sharp decline in the share of Ukrainians desiring to live outside Ukraine between 2021 and 2022 (26 percentage points), which cannot be explained by selective outmigration. A sharp increase in confidence in the government and the military and increased optimism help explain 41 percent of the decrease in the desire to emigrate from 2021 to 2022 among Ukrainians living in Ukraine, and a stronger sense of national identity 22 percent. Although these percentages are calculated from two different datasets and cannot be summed directly, they suggest that improved confidence, optimism, and national identity play an important role in the decrease in Ukrainians' desire to emigrate.

Related literature and our contributions

Previous research on refugee crises has established that post-conflict return rates among refugees are low, with returning individuals doing so with significant delays (Camarena and Hägerdal, 2020; Beaman *et al.*, 2022). Factors such as destroyed housing, deteriorating security conditions at home, and personal experiences of violence are identified as major obstacles to return migration (Balcilar and Nugent, 2019; Serdar and Orchard, 2020; Beaman *et al.*, 2022; Alrababa'h *et al.*, 2023). However, this evidence is based on refugees fleeing undemocratic regimes or civil wars, often persecuted by their own governments. Our study extends the current research by examining a case in which refugees are forced to leave a democratic country because of external aggression. This particular focus allows us to uncover new insights into the mechanisms of refugee return and their integration under these circumstances.

In addition, our paper is related to the larger literature that examines the decision to return and the timing of return migration, pioneered by Borjas and Bratsberg (1996). Dustmann (2003) notes that the optimal migration duration of temporary migrants may be a non-monotonic function of the wage differential between home and host country. Adda *et al.* (2022) studies skill acquisition in the host country and how shocks to duration affect skill and wage profiles. Görlach (2023) examines how return and repeat migration depend on financial constraints in the context of Mexican migration to the United States. We add to this literature by showing how conflict in the home country affects the timing of return.[2]

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[2]Previous literature has highlighted the importance of return migration for the development and reconstruction of the country of origin in terms of innovation (Choudhury, 2016) and entrepreneurship (Massey and Parrado, 1998; Demurger and Xu, 2011; Krasniqi and Williams, 2019). Return migration and contacts with the diaspora can also foster trade (Parsons and Vézina, 2018; Bahar *et al.*, 2022), investment (Mayda *et al.*, 2022), and political change (Chauvet and Mercier, 2014; Barsbai *et al.*, 2017). Hence, we provide evidence on the return intentions of Ukrainian refugees, which is crucial for policymakers both in Ukraine and in refugees' destination countries.

Within the scope of conflict-related studies, prior research has largely examined the effects of past exposure to violence, highlighting its negative consequences on various life outcomes (for example, see Chamarbagwala and Moran (2011), Shemyakina (2011), Leon (2012), Rodriguez and Sanchez (2012), Verwimp and Van Bavel (2014), Akbulut-Yuksel (2014)). However, Becker *et al.* (2020) and Aksoy *et al.* (2024) show that experiences of forced migration can lead to increased investment in education. We contribute to this literature using rich panel data that allows us to link return migration, changes in return intentions, and refugees' investments in the host country with detailed local conflict data and expectations about the outcome of the war.

Finally, our research also relates to the broader body of work examining the determinants of refugees' labor market integration.[3] Previous studies have shown that immigrant networks (Edin *et al.*, 2003; Damm, 2009; Beaman, 2012), language training (Arendt *et al.*, 2022), job search assistance (Battisti *et al.*, 2019), and positive attitudes of natives (Aksoy *et al.*, 2023) have a positive influence on refugee integration success. Our study adds to this literature by examining how ongoing conflicts in refugees' home municipalities impact their integration efforts in host countries.[4]

Our context differs from other refugee scenarios where return is either forced through deportation or made impossible by persecution. Moreover, Ukrainian refugees have autonomy in making decisions about their integration, unlike other refugee groups who often encounter temporary work restrictions or are required to participate in mandatory integration and language courses. Consequently, there is more to learn from the decisions made by Ukrainian refugees compared to those made by refugees who face legal restrictions or are prevented from making choices.

The paper is organized as follows: Section 2 describes the data, followed by Section 3, which provides descriptive statistics. Section 4 presents the main empirical specification. Section 5 discusses the main results of conflict on return, return intentions, and a range of integration outcomes. Section 6 explores how expectations about the conflict at large shape return intentions. Section 7 aims to better understand why so many Ukrainians want to return, compared to other refugees, through the lens of migration aspirations among Ukrainians in Ukraine before and after the Russian invasion. Section 8 concludes the paper.

2 Data

2.1 Survey of Ukrainian Refugees in Europe

We collaborated with the survey company Verian (formerly Kantar Public) to conduct a six-wave online panel survey of Ukrainian refugees across Europe. For the first wave (hereafter: baseline) survey, respondents aged 18 and over were recruited via Facebook ads, and for subsequent waves, contact was made via email. The baseline was conducted between 14 June 2022, and 22 December 2022. On average, respondents completed the survey 194 days after leaving Ukraine. The survey was completed by 11,783 respondents with Ukrainian

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[3]For a comprehensive review, see Strang and Ager (2010) and Becker and Ferrara (2019).

[4]Two recent studies are relevant to our paper. Zaiour (2023) documents that drug-related violence in Mexico increases naturalization rates of Mexican immigrants in the US, but does not affect labor market outcomes and human capital investment decisions. Bassetto and Freitas Monteiro (2024) finds that terrorism in the home country reduces return intentions and increases employment.

citizenship, of whom 6,299 agreed to participate in future waves.[5] Figure A1a shows the distribution of Ukrainian refugees across European countries and Figure A1b shows the sampling rate across European destinations, dividing the number of baseline respondents by the number of Ukrainians registered for temporary protection in December 2022.[6] All major host countries have a sampling rate of at least 1 in 1000 refugees. Those who agreed to be recontacted were asked by email to complete five follow-up surveys between September 2022 and November 2023. The follow-up emails explicitly asked respondents who returned to Ukraine to complete the survey. Participants received a 3 Euro voucher to encourage participation and minimize attrition rates in each survey wave. Table A1 details the specific times and number of observations for each wave and Figure A2 graphically shows the distribution of interviews over time.[7] A total of 18,202 interviews were completed, with 2,674 individuals participating in at least two interviews that are at least 30 days apart.

The first survey wave includes questions on migrants' demographic characteristics, past and present employment status, their current living situation, and intentions to return. Specifically, we explore the intention to return through the following question: *What are your plans regarding returning to Ukraine?* Response options include: (i) *I intend to go back very soon*; (ii) *I intend to go back at some point later when I feel it is safe to return*; (iii) *I do not intend to go back and plan to settle outside Ukraine*; (iv) *Do not know yet*; (v) *Prefer not to answer*.

Furthermore, we ask respondents to indicate where in Ukraine they lived before leaving Ukraine. Specifically, we ask for the region in a drop-down menu and municipality (*hromada* in Ukrainian) in a write-in field.[8] To match respondents to local conflict measures (see below), we parse the fill-in field for municipality of origin and match 82 percent of Wave 1 respondents to a unique municipality of origin. Figure A3 shows where our participants are from. The largest sampling rates (as a share of the 2021 population) can be found in high-conflict regions in the east and in the south, as well as in Lviv and Kyiv.[9]

In the five follow-up waves, respondents were also asked about their current location, their expectations about the war, and a range of integration outcomes. Importantly, we ask respondents about their main activity (e.g., working, studying, or unemployed), the number of Ukrainian and local friends in the destination country, whether they are taking a language course, two questions on host country language skills (speaking and reading), and subjective integration. We combine the questions on language skills and subjective integration in principal component analyses (PCAs). For more information on the Verian survey and its detailed questions, see Appendix A.1. We construct two primary samples. First, we consider the full baseline survey sample. Second, we construct a sample of long differences between each individual's last response and their response in the baseline survey

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[5]In all analyses, we exclude the small proportion of respondents (101 in the baseline survey) who do not hold Ukrainian citizenship.

[6]Due to the timing of our recruitment period, our sample is not representative of Ukrainians leaving in 2023. Ukrainians who applied for temporary protection in 2022 accounted for 80 percent of all registrations by the end of 2023, according to Eurostat (2023).

[7]Table A2 shows the participation frequency of each respondent across the survey waves.

[8]The regions include 24 *oblasts*, the Autonomous Republic of Crimea, the city of Kyiv and the city of Sebastopol. As of 2022, Ukraine has 27 regions, 137 districts and 1469 municipalities.

[9]As there is no representative data on the exact origin of refugees within Ukraine, we cannot exactly assess how representative our sample is in terms of origins.

(hereafter: long differences sample). The average number of days between the interviews in this sample is 268, with a minimum of 30 (by construction) and a maximum of 506.

2.2 Conflict data

ACLED and UCDP

To obtain measures of local conflict intensity, we use the Armed Conflict Location Event Data Project (ACLED) (Raleigh *et al.*, 2010) and the Uppsala Conflict Data Program's Georeferenced Event Dataset (UCDP-GED) 23.1 (Sundberg and Melander, 2013) databases.

ACLED and UCDP automatically collect news reports of conflict data that are human-coded using standardized methods and, if possible, geocode the event. ACLED includes the primary actor, the type of conflict and the number of reported fatalities, among others. UCDP-GED is also an event-level dataset, but with the strict inclusion criterion that at least one death should have been recorded.[10] In many cases, death tolls are estimates and may vary between UCDP and ACLED for the same event. Death tolls may not be known, or may be measured with error. Furthermore, the events may also be included in less severe instances (especially for ACLED), but on average may provide a reasonable summary measure of conflict. Although this introduces some measurement error, Ukrainian refugees may be no better informed than what ACLED and UCDP can infer from news reports. Because of these concerns, we use both the number of events as well as the number of deaths from both ACLED and UCDP in the following analysis. Between February 24, 2022 and November 7, 2023 (the last day of the sixth wave of our survey) ACLED recorded 85,298 events and 61,446 fatalities, while UCDP recorded 11,099 events and 157,015 fatalities. The latter includes statistical corrections for the number of Ukraine-wide casualties, which we disregard in our analysis. In the following analysis, we only use events that are exactly geocoded or geocoded at the municipality level. This drops less than 1 percent of the events in ACLED and 15 percent of the events in UCDP.

To calculate a measure of conflict intensity in a municipality between two dates, we calculate the number of events and deaths per 30 days and take the $log(x + 1)$ transformation. As this gives us four different measures (events and deaths in ACLED and UCDP) measuring the intensity of local conflict, which are strongly correlated,[11] we combine them through a principal component analysis and obtain the standardized first principal component $Conflict_{mt_1t_2}$.[12] We illustrate the distribution of our measure of conflict at the municipal level in Figure A4. This Figure shows the conflict intensity between the first and last interview in our long differences sample. Conflict during this period is concentrated in a band along the front line, as well as along the border with Russia, and in Kyiv, Dnipro, and other bigger cities where Russian missile and drone strikes have brought devastation.

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[10]Raleigh and Kishi (2019) compare different conflict datasets and show that in the case of the 2018 conflict in Donbass, Ukraine, ACLED and UCDP give more plausible results than automated conflict datasets. Therefore we do not use these datasets. They also find that ACLED captures more events that only appeared in non-English speaking media than UCDP, which is an advantage of ACLED in the current context.

[11]Pairwise correlations range from 0.69 to 0.77.

[12]On the long differences sample, the eigenvector of the first principal component are 0.47 for ACLED events, 0.50 for ACLED deaths, 0.55 for UCDP events, and 0.47 for UCDP deaths.

We construct a daily dataset of the location of the frontline using the maps created by the Institute for the Study of War (ISW). ISW's maps visualize the state of the war based on publicly available information sourced from news outlets, social media and satellite imagery. Importantly, these maps include a line that approximates the front line of the conflict. We categorize a district (*Raion* in Ukrainian) as either *under Ukrainian control*, *on the frontline*, or *occupied*. For subsequent analysis we calculate the change in the frontline status between the two interview dates for each respondent. As we are particularly interested in the effects of the liberation of one's district of origin, we calculate whether a district has been continuously under full Ukrainian control, whether one's district has been fully liberated, or whether it has been continuously on the frontline or occupied by Russia between two survey dates. We do this at the district level, as the proximity of conflict matters to the perceived threat of conflict proximity. Most of the variation occurred up to September 2022 in Kharkiv region and up to November 2022 in Kherson region. Figure A5 shows the changes in occupation status between the first and last interview in our long differences sample. On the long differences sample, 8 percent of individuals originate from districts that were liberated, whereas 18 percent of individuals originate from districts that were continuously occupied or on the frontline.

2.3   Other Data

To further explore the mechanisms underlying our findings, we use data from the Gallup World Poll and IKDIF/Razumkov. These datasets consist of survey responses collected in Ukraine both before and after the outbreak of the war. They provide insights into how the intentions and beliefs of Ukrainians who remained in the country have evolved. A more detailed description of these data can be found in the Appendices A.2 and A.4.

2.4   Selection and attrition

Our online survey leverages Facebook Ads for recruitment, providing an advantage with its wide reach, precise targeting, and cost-effectiveness. This platform allows us to quickly access diverse and hard-to-reach populations affected by conflict, facilitating timely and efficient data collection. The anonymity provided by online engagement enhances participant safety and encourages candid responses. Despite challenges such as digital access and sample representativeness, the use of Facebook Ads for surveys allows for rapid survey rollout and data collection, establishing it as a powerful method for conducting research in complex areas such as refugee migration and conflict. More than 15 million Ukrainians used Facebook on a monthly basis in early 2022 (Datareportal, 2022), reaching more than 41 percent of the population over the age of 13.

To examine the representativeness of our sample, we compare the observable characteristics of our sample with administrative data from Eurostat on Ukrainians who received a Temporary Protection Status (TPS) (Eurostat, 2023). Table A3 shows how the baseline survey sample and the long differences sample differ from Ukrainians who applied for Temporary Protection Status. Overall, our sample matches the characteristics of temporary protection beneficiaries reasonably well. Women and middle-aged respondents are more likely to respond to our survey, while refugees in Czechia are less likely to do so.

Second, response in the follow-up waves could be nonrandom, biasing our aggregate statistics and estimated treatment effects. To understand what determines response, we estimate logit regressions of follow-up response on initial return intentions and measures of conflict. Table B1 presents the main results of this analysis. Columns 1 to 3 show that weaker return intentions predict responding to more waves, ever responding to a follow-up wave, and being part of the long difference sample. Those who plan to settle outside Ukraine are 28 percent more likely and those who plan to return very soon are 28 percent less likely to be in the long difference sample than those who plan to return when safe. Since more concrete return intentions predict a lower probability of a follow-up response, these results suggest that we are underestimating return rates due to selective attrition. In addition, column 4 shows that our three main measures of conflict intensity do not strongly predict follow-up response. A one standard deviation increase predicts only a 12% higher probability of being part of the long differences sample. We discuss how selective attrition might affect our results in Section 4.

To better represent the Ukrainian refugee population in descriptive statistics and regressions, we use two types of weights. To make the long differences sample more representative of our first wave population, we weight with inverse probability weights based on the predicted probabilities from column 3 of Table B1. To make the sample more representative of the whole Ukrainian refugee population in Europe, we construct population weights based on the probability of observing a respondent in each sex-age-host country bin using the EU temporary protection status data.[13]

3   Descriptive statistics

We weight the baseline wave of the Verian survey with population weights and compare the sample to the nationally representative 2019-2021 Gallup World Poll surveys in Ukraine in Table A4. Since men aged 18-60 are generally not allowed to leave the country, we show characteristics for men and women separately in Table A4. There are some notable differences between migrants and the general population. Individuals with a partner are more likely to have migrated, as are women (but not men) with children. In addition, those with tertiary education and those living in urban areas are more likely to have migrated.

Table A5 shows descriptive statistics of the values of all covariates used in the long differences estimation sample, as well as the baseline sample without missing covariates. 19 percent of baseline survey respondents originate from districts on the frontline and 6 percent originate from districts behind the frontline. 8 percent of respondents in the long differences sample originate from territories that were liberated after June 2022, 18 percent from territories still under occupation, and 3 percent originated from territories already occupied before the large-scale Russian invasion. The average number of days in the destination country

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[13]For several of these bins, we have zero respondents in our survey and no data to weight. These are males 18-34 in Iceland, Luxembourg and Malta, 35-64 in Denmark and Iceland, and 65+ in Denmark, Estonia, Luxembourg, Norway and Cyprus. For a further 42 respondents, we do not have information on the exact country of destination and discard them. For Hungary, Moldova and the United Kingdom, we do not have detailed information on the number of refugees by detailed bin, so we weight these observations only for the whole country.

is 268, 6 percent left before the February 24, 2022. The average population of one's municipality is very large, because of the strong propensity to leave from large cities, such as Kyiv.

3.1   Return intentions

Most Ukrainian refugees intend to return soon or when it is safe. Table A5 shows that during the baseline wave 7 percent of respondents planned to return soon, 58 percent when it is safe, 24 percent do not know, and only 8 percent planned to settle outside Ukraine. This is in stark contrast to the return intentions of other refugee groups. Appendix Figure E1 shows that the intention to stay in Germany of refugees from different countries is above 90 percent for all refugee groups in the first, second to fifth and sixth to tenth year after arrival. Weighting the Verian survey responses with population weights changes these figures only minimally (rightmost column of Panel A of Table 1).

Figure C1 and C2 illustrate the correlates of first-wave return intentions among Ukrainian refugees. The most important predictors of intentions to return soon are having a partner left behind in Ukraine, and, not surprisingly, coming from an area not on or behind the frontline. Moreover, respondents living in Eastern and Southern European countries are more likely to plan to return soon than those living in Germany and the rest of Western Europe (including Northern Europe). Plans to settle outside Ukraine are highest among those from places behind the frontline, men, those without a partner in Ukraine, and those who speak English. Those living in Eastern European countries, except Poland, are less likely to plan to settle outside Ukraine than those living in other countries. Although those from districts behind the frontline are more likely to plan to settle outside Ukraine, conflict intensity does not affect plans to settle outside Ukraine. This may be due to the counteracting forces of the causal effect of conflict and selection. Since those from places with higher conflict intensity are more likely to be forcibly displaced, individuals from such places may be less likely to plan to settle outside Ukraine. Our identification strategy allows us to account for these selection effects.

Two natural questions arise. First, are intentions to return predictive of actual return? In the long difference sample, 7.8 percent of individuals were living in Ukraine at the follow-up wave.[14] Panel B of Table 1 shows that respondents with stronger intentions to return are more likely to have returned and that the levels of intentions to return are clearly ordered in terms of propensity to return. Of those planning to return soon, 33 percent have returned and none of those planning to settle outside Ukraine have actually returned. Weighting reduces the return rates only slightly, due to the low sampling rate of high-income destinations such as the Netherlands, Scandinavia, Switzerland, and the United Kingdom. Second, are these strong return intentions persistent? To answer this question, we turn to within-person changes in the first-differences sample. Figure C3 shows that most changes occur between

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[14]Although we ask where people are living, one might be concerned that many of them will leave Ukraine again soon. Of the 97 individuals who responded to at least three waves and returned before the last wave they responded to, 11 left Ukraine again over an average period of 168 days. Although this is a small sample, the rate of individuals leaving Ukraine again is only 7 percent per 100 days. In addition, in Wave 3 (conducted in January 2023) and Wave 4 (conducted in April 2023), we asked whether people had temporarily returned to Ukraine since their arrival. In January 2023, 14 percent had done so, and in April 2023, 30 percent had done so. This shows that the cost of returning is low. Interestingly, it is not strongly correlated with distance. Among those in Poland, only 33 percent have returned temporarily.

Table 1: Return intentions, actual return, and main outcomes

	(1) Unweighted	(2) Inverse probability weighted (IPW)	(3) IPW and population weighted
Panel A: Baseline return intentions			
Baseline return intention			
Return soon	5.4	7.1	6.5
Return when safe	56.8	56.9	56.0
Do not know	25.6	24.6	25.0
Settle outside Ukraine	9.9	8.2	8.9
Prefer not to answer	2.3	3.1	3.5
Panel B: Share returned to Ukraine			
Baseline return intention			
Return soon	33.1	30.9	27.3
Return when safe	9.2	8.5	7.6
Do not know	2.7	2.6	2.2
Settle outside Ukraine	0	0	0
Prefer not to answer	3.8	2.2	1.6
Panel C: Outcomes			
Outcome			
Returned to Ukraine	7.8	7.8	6.7
Returned to home municipality	6.0	5.8	4.7
Moved to third country	4.4	4.4	4.8
Started planning to settle outside Ukraine	7.5	6.7	7.5
Observations	2,301	2,301	2,296

Notes: Panel A shows the levels of first wave return intentions for the long differences sample. Panel B shows the share of individuals that returned to Ukraine during the last wave. Panel C reports the main outcomes on the long differences sample. Column 1 reports the unweighted numbers. Column 2 weights the statistics by inverse probability weights obtained from a logit regression as discussed in the text and presented in Column 3 of Table B1. Although Column (2) is weighted to reflect the baseline population, as the IPW model does not account for all observable and unobservable factors slight differences may occur. Table A5 shows that the raw baseline return intentions are very similar to the numbers reported in this Table. Column 3 additionally weights with population weights. As not all respondents report a destination country this drops 5 observations.

adjacent levels of return intentions. Because of the large proportion of people who report plans to return when safe, most returnees come from this level. To quantify how quickly return intentions change over time, we nonparametrically plot the evolution of return intentions on the full sample after netting out individual fixed effects in Figure 1. We find that most levels follow nearly linear trends over time. The share of individuals planning to settle outside Ukraine increased over time (1.6 percentage points per 100 days), as did the share of

individuals returning to Ukraine (2.7 percentage points per 100 days). However, the number of individuals who said they would return when it was safe to do so decreased sharply over time (4.7 percentage points per 100 days).

Figure 1: Within-individual return intentions and return over time since arrival
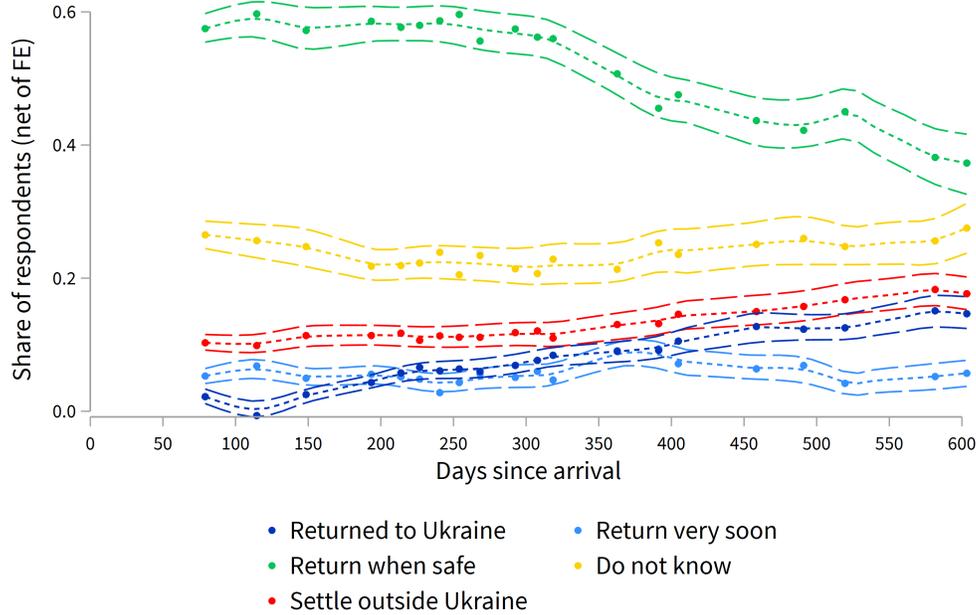
Notes: Binned scatterplot with non-parametric trend for levels of return intentions over time, net of individual fixed effects, with 90 percent confidence interval. For each level of return intentions, we perform the following procedure. First, we assign all observations to 20 equally sized bins over the number of days since arrival in the destination country of residence in the baseline survey. We residualize the outcome by regressing it on individual fixed effects and the number of days since arrival in the first destination country. We perform this procedure for 100 bootstrap samples to obtain smoothed 90 percent confidence intervals. We draw markers for (i) the mean for each of the 20 equally sized bins, (ii) a predicted mean for each bin of the number of days since arrival, (iii) a 90 percent confidence interval around the predicted mean. N = 8,752.

In the following analysis, we are interested in three main aspects of mobility and changes in return intentions. The first measure is whether a respondent returned to Ukraine. Second, we are interested in whether people returned to their home municipality.[15] Third, we are interested in people who report in the latest wave that they plan to settle outside Ukraine and did not do so in the baseline survey. Less than 5 percent of respondents moved to a country other than Ukraine. Panel C of Table 1 shows the rates of these four outcomes on the long differences sample, unweighted and weighted to reflect the baseline population and the full population under temporary protection. Although those with stronger intentions to return are more likely to respond to follow-up waves, we do not underestimate return

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[15]If one returned, in two follow-up waves (3 and 6) we asked where in Ukraine one returned. In this sample, 80 percent of those who returned did so within the same municipality.

rates. The main reason for this is that in the regressions presented in Table B1, covariates associated with return are also predictive of responding to follow-up waves. After weighting with inverse probability and population weights, 6.7 percent returned to Ukraine, 4.7 percent returned to their home municipality, 4.8 percent moved to another country, and 7.5 percent started planning to settle outside Ukraine. At the same time, 2.9 percent no longer planned to settle outside Ukraine (not shown in the table).

3.2   Integration

Refugees often have lower initial levels of integration than other migrant groups (Fasani *et al.*, 2022). However, in the baseline survey 36 percent of Ukrainian refugees had already started working. Ukrainian refugees under temporary protection could start working directly, which benefits subsequent integration (Fasani *et al.*, 2021). Moreover, 25 percent of baseline respondents speak at least some of their host country language already. An additional reason for strong initial employment could be the welcoming attitudes of Europeans to Ukrainian refugees as previous research has shown that refugees are more likely to find employment when local attitudes towards immigrants are more positive (Aksoy *et al.*, 2023). In a similar vein to Figure 1, we show the non-parametric levels of integration over time since arrival in Figure 2. The rate of Ukrainians subsequently entering the labor market is 4.0 percentage points per 100 days. However, this hides strong country-level heterogeneity. In Appendix Figure C4 we show destination country groups. Employment rates in Germany, which pursues a language-first policy, are considerably lower than in all other country groups. Over time, the increase in employment is strongest in the rest of Western Europe (+3.2pp/100 days) and Southern Europe (+2.9pp/100 days), whereas the slope is smaller and not significant at a 5 percent level for Germany (+1.3pp/100 days) and Eastern European countries (+0.9pp/100 days).[16]

Regarding other measures of integration, about 20 percent of respondents were mainly in training in 200 days after arrival, which increased by 2.0 percentage points every 100 days. Being in training as one's main activity is an important measure of demand for host-country specific skills. An important aspect of host-country specific human capital are language skills. More than 60 percent of Ukrainians had enrolled in a language course 200 days after arrival, which increased gradually thereafter (+2.5 pp/100 days).

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[16] Nevertheless, many Ukrainians work in jobs below their skill level. In wave six, we ask respondents whether their current job matches their qualifications. 38 percent of respondents aged 25 – 59 indicate that they have found a job at their qualification level (see Table C1). In Germany this is 46 percent.

Figure 2: Integration over time since arrival in the destination, net of controls
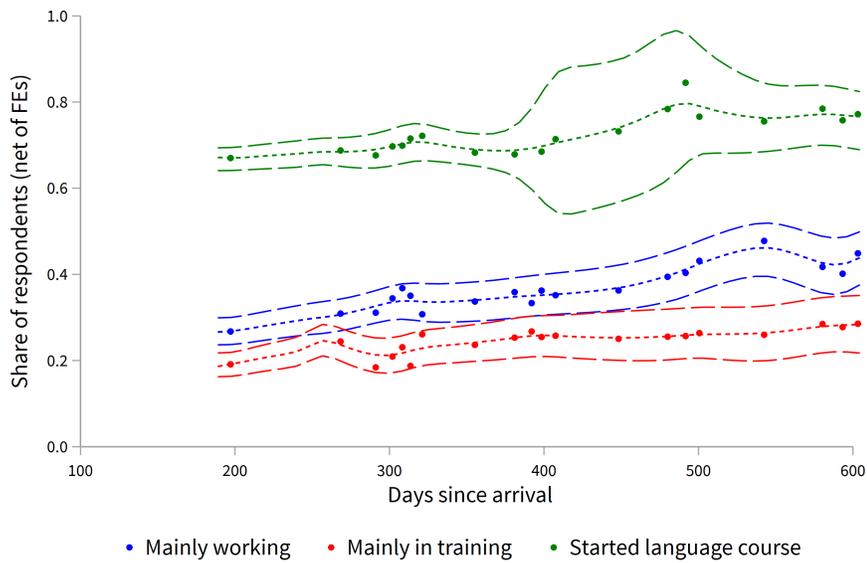
Notes: Binned scatterplot with non-parametric trend of levels of integration outcomes over time, net of individual fixed effects, with 90 percent confidence intervals. We restrict the sample to all respondents aged $25 - 59$. N = 3,837 for mainly working and mainly in training and N = 1,875 for started a language course. See Figure 1 for details about the construction of the non-parametric plots.

4   Empirical strategy

To examine the causal impact of local conflict on individuals' return (intentions) and integration outcomes, we regress changes in outcomes between two interview dates on changes in conflict intensity measured in the period between those interviews. Our method offers a significant advantage over cross-sectional analysis as it eliminates the effects of unobserved individual heterogeneity. In particular, by focusing on changes over time within the same individuals, our approach effectively isolates the direct effects of conflict from other confounding factors.

In our primary analysis, we focus on the long difference sample introduced in Section 2. We index individuals with i, their municipality (district) of origin by $m(d)$, the start of the full-scale war (February 24, 2022) with t_0, the time they left Ukraine with t_l, and the first and second wave interview dates by t_1 and t_2.

We analyze individual-level *changes* $Y_{im(d)t_1t_2}$ in outcomes between the baseline interview and the last available interview. In the analysis of migration, the outcomes are (i) whether one returned to Ukraine, (ii) whether one returned to one's home municipality, (iii) whether one moved to a country other than Ukraine, and (iv) whether one started planning to settle outside Ukraine. The results for moving to a country other than Ukraine are presented in the online appendix. When analyzing economic integration, we consider whether one is mainly in work and whether one is mainly in some form of training. When analyzing other dimensions of integration, we consider changes in having started a language course and in subjective integration. We estimate the following regression equation:

$$Y_{im(d)t_1t_2} = \alpha t + \beta_1 RegainControl_{dt_1t_2} + \beta_2 RemainOccupied_{dt_1t_2} + \beta_4 Conflict_{mt_1t_2} +$$
$$\beta_5 Conflict_{mt_0t_1} + \gamma' \mathbf{ReturnInt}_{imt_1} + \delta' \mathbf{X}_{it_1} + \theta_h + \phi_{t_1} + \psi_{t_l} + \epsilon_i \quad (1)$$

t is the time elapsed between the two interviews. $RegainControl_{dt_1t_2}$ is a binary indicator for whether or not a district has been fully liberated by Ukraine between the two survey dates, $RemainOccupied_{dt_1t_2}$ is a binary indicator if a district has been continuously occupied between the two interview dates. The reference category for these two mutually exclusive variables is Ukraine fully controlling the district during both interviews. $Conflict_{mt_1t_2}$ is the local conflict intensity per 30 days in one's municipality of origin between the two survey waves. We also control for conflict intensity *before* the first wave interview, $Conflict_{mt_0t_1}$. Controlling for this is important as conflict before the first wave and between survey waves is positively correlated ($\rho = 0.54$). Without this control, the variable $Conflict_{mt_1t_2}$ would likely also capture selection according to initial conflict. To further relax the identifying assumptions, we include the levels of first wave return intentions, $\mathbf{ReturnInt}_{it_1}$. This controls for two factors. First, it accounts for initial factors influencing return intentions by absorbing any factor that determines the first wave return intentions. Second, it accounts for the situation where outcomes, such as the decision to settle outside Ukraine, are inherently zero for those who made such plans in the baseline survey. In robustness checks, we exclude these controls and find that our results remain similar.

We also include host country fixed effects, (θ_h), which account for any unobserved, time-invariant characteristics specific to each host country that might influence the results. In

addition, we include fixed effects for the week of departure from Ukraine, (ψ_{t_l}), which control for temporal factors related to the specific week in which individuals left Ukraine (such as the intensity of the conflict at the time of departure or the availability of resources for refugees).

We incorporate the following individual-level baseline covariates $\mathbf{X}_{it_1}$ to account for differences in changes in return intentions driven by demographic factors. First of all, as most refugees are women and men could only leave under special circumstances or by paying a bribe (and thus may face stigma upon return), we are interested in whether there are gender differences in changes in return intentions. Secondly, as many refugees are women whose partners are still in Ukraine, we study whether the presence of a partner affects changes in return intentions. In a similar vein, we study the effect of children remaining in Ukraine. Third, many women are accompanied by children (88 percent of women with underage children answered in the baseline that children were the primary motive to leave Ukraine, see Table C2) and we study whether the presence of children in the household discourages return. Finally, we are interested in whether return migration may be selective in terms of education. We study the effect of both (i) a formal tertiary education (sample mean: 70 percent) and (ii) whether one indicated to speak English in the baseline survey (sample mean: 46 percent).[17] Given that the conflict-related variables are determined at either the municipality (*hromada* in Ukrainian) or district (*raion* in Ukrainian) level, we address spatial correlation by clustering standard errors at the district level.

Our long difference sample of Ukrainian refugees may exhibit selection bias for two reasons. First, the sample of individuals who respond to a Facebook ad for a survey may be different from the general population of Ukrainian refugees across Europe. To alleviate concerns that our results may be driven by this particular sample, we re-weight our regressions in a series of robustness checks using the weights introduced in Section 2.4. Second, those who choose to respond to a request for a follow-up survey may differ from baseline respondents too. First, selective attrition on the outcome could attenuate the point estimates. If returnees are less likely to answer follow-up waves, we underestimate return rates. This is somewhat alleviated by inverse probability weighting on covariates and return intentions predicting return. Second, unobserved factors could simultaneously drive attrition and return intentions. If these factors are correlated with our conflict measures, they could bias our treatment effect estimates. An example of such a concern could be that Ukrainian localities with higher conflict intensity have worse infrastructure (due to Russian attacks). If refugees return to these regions, they may be less likely to respond in the follow-up waves. This would lead to a downward bias in the coefficient of conflict in a regression of return on conflict intensity. However, if such selective attrition occurs, one would expect the conflict to affect response rates for all respondents. This is not what we find. Column 4 of Table B1 shows that conflict intensity and occupation status do not strongly affect the propensity to be in the long differences sample.

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[17]Additional factors included in X_{it_1} consist of 7 age categories (18-24; 25-34; 35-44; 45-54; 55-59; 60-64; 65 and older), a binary indicator for partnership status, a binary indicator for originating from an urban area, whether one's home municipality was occupied before February 24, 2022, whether one left Ukraine before February 24, 2022, whether one completed the baseline survey in Russian, the population of one's home municipality, and the squared-term of the population. Controlling for English skills helps to account for the possibility that a considerable share of Ukrainians who have formally tertiary education may not be able to apply their education abroad, due to missing language skills.

Figure 3: The effect of conflict and predictors of changes in return (intentions)
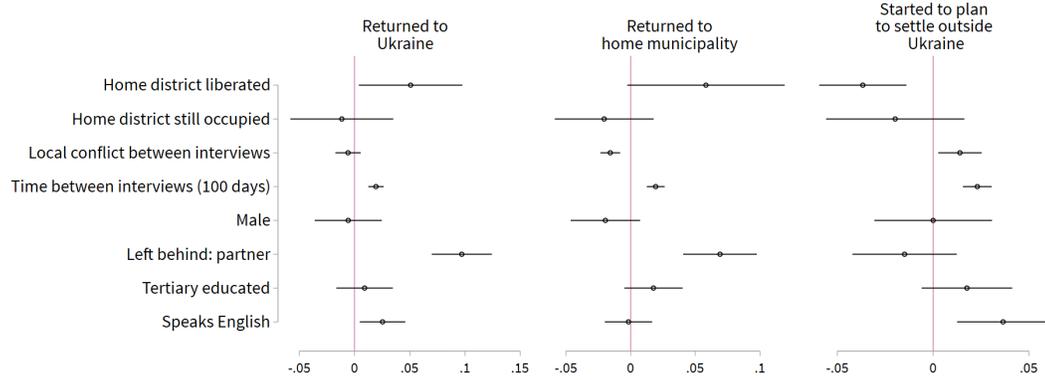
Notes: This figure shows coefficient plots of three multivariate OLS regressions as introduced in Equation 1. The outcomes (from left to right) are returned to Ukraine, returned to home municipality, and started to plan to settle outside Ukraine on conflict-related variables and personal characteristics. 95 percent confidence intervals are based on standard errors clustered on the district level. Each regression includes a wide set of control variables and fixed effects as outlined in equation 1. "Home district liberated" and "Home district still occupied" are binary indicators for full liberation of one's home district and whether one's district is at least partially occupied during both survey waves as discussed in Online Appendix A.5. The reference category are districts that have been continuously under Ukrainian control. "Local conflict between interviews" is the standardized first PCA of conflict intensity as discussed in Section 2.2. Baseline controls are initial levels of return intentions, age bins (18-24; 25-34; 35-44; 45-54; 55-59; 60-64; 65 and older), the number of days elapsed between the two waves, the population of one's home municipality, population squared and binary indicators for sex, partnership status, tertiary education, speaking English, originating from an urban area in Ukraine, being accompanied by children, having a partner left in Ukraine, having children left in Ukraine, continuing one's Ukrainian job remotely, having left Ukraine before February 24, 2022, originating from a territory that was occupied by Russia or allied forces before February 24, 2022, and answering the survey in Russian. For simplicity of exposition, not all control variables are shown in the figure. N = 2,301 (column 1 and 3); N = 1,433 (column 2).

5 The causal effect of local conflict on return, return intentions and integration

5.1 Return and return intentions

In this section, we focus on the impact of variation in conflict intensity at the local level. We analyze the effect of whether the refugee's home district is liberated, remains occupied, or is on the frontline, and the effect of the conflict in the refugee's home municipality. We examine three outcomes: whether respondents returned to their home municipalities, whether they returned to Ukraine, and whether they started to plan to settle outside Ukraine.

Figure 3 presents the results from equation (1). We find that the liberation of one's home district significantly increases the likelihood of individuals returning to Ukraine, while simultaneously reducing the propensity to make new plans to settle outside Ukraine. The similarity in the point estimates for returning to Ukraine in general and returning specifically to one's home municipality suggests that most of the increase in returns to Ukraine is due to people returning to their home municipalities after the liberation of their district. Conversely, continued occupation does not have a statistically significant impact on any of the outcomes.

Turning to the effect of conflict intensity, we find that more intense conflict in one's home municipality reduces return to one's home municipality, but not to Ukraine in general. A one standard deviation higher conflict intensity reduces return to one's home municipality by 1.8 percentage points, but return to Ukraine altogether by only 0.8 percentage points (p≥0.10).[18] Furthermore, more intense conflict in the home municipality makes it more likely that refugees start planning to settle outside Ukraine.

We also examined additional predictors of return in Figure 3. Having a partner in Ukraine increases the likelihood of returning by 9.7 percentage points. Contrary to expectations, tertiary-educated immigrants are not less likely to return. Surprisingly, proficiency in English increases the likelihood of returning. At the same time, English speakers are also more likely to consider settling outside of Ukraine for the first time. These findings suggest that, if anything, return migrants are not negatively selected from the available sample of migrants.

To alleviate concerns about non-random attrition and selection as discussed in Section 4, we weight regressions with inverse probability weights and population weights in Figure D1. We find that point estimates are quantitatively similar to those in the main results. However, after population weighting standard errors are considerably larger, which is driven by the large variation in the weights.

What factors are most influential in determining return and changing return intentions? We can assess this using our estimates and the individual-level variation in the regressors depicted in Figure 3. Having a partner remaining in Ukraine contributes 2.6 percentage points and liberation contributes 0.4 percentage points to the total return rate of 7.8 percentage points. Thus, the effect of having a partner in Ukraine accounts for 33 percent of the total returns during the sample period. This aligns with the stated reasons for returning to Ukraine: 43 percent of all returnees indicated they returned to reunite with their spouse or other relatives, as shown in Table C3. Although local conflicts do not have a statistically significant impact on the overall likelihood of returning to Ukraine, they do influence decisions to settle outside Ukraine. Local conflicts account for 1.7 percentage points of the respondents newly planning to settle abroad, which represents 22 percent of the total proportion of individuals who began planning to settle outside Ukraine.

Additionally, the choice of host country strongly predicts return intentions. Countries hosting Ukrainian refugees vary significantly in terms of income levels, labor market conditions, and the generosity of welfare benefits. Our sample is too small to analyze the effects of individual destination countries. However, when we group destination countries together, results in Figure C5 reveal that respondents in Germany were 5 percentage points less likely to return to Ukraine than those in Poland and the rest of Eastern Europe, and they were more than 6 percentage points more likely to begin planning to settle outside Ukraine. Figure C2 shows that return intentions in the baseline survey were also weakest in Western European countries. These results suggest that refugees who are less willing to plan a return to Ukraine are more likely to have chosen to relocate to Western European countries. Due to endogenous sorting, the small sample size for individual countries, and the correlation of country characteristics, we do not further examine this aspect of the analysis.

We next show how the results evolve as we progressively incorporate conflict-related factors and additional controls, as shown in Table 2. All columns include socio-demographic

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[18]This is not driven by sample composition. Figure C6 and Table C4 show that on the sample where return location is elicited, the estimate on return to home municipality is statistically significant, whereas return to Ukraine generally is not.

Table 2: The effect of conflict on return intentions

Panel A: **Returned to Ukraine**

	(1)	(2)	(3)	(4)
Home district liberated	0.042*		0.051**	0.046
	(0.022)		(0.024)	(0.028)
Home district still occupied	-0.023		-0.012	-0.015
	(0.019)		(0.023)	(0.023)
Local conflict between interviews		-0.005	-0.006	-0.008
		(0.006)	(0.006)	(0.006)
Observations	2306	2301	2301	2299
R^2	0.14	0.14	0.14	0.16
Average dependent variable	0.078	0.078	0.078	0.078

Panel B: **Returned to home municipality in Ukraine**

	(1)	(2)	(3)	(4)
Home district liberated	0.046		0.058*	0.047
	(0.033)		(0.031)	(0.036)
Home district still occupied	-0.040**		-0.020	-0.023
	(0.015)		(0.019)	(0.019)
Local conflict between interviews		-0.016***	-0.016***	-0.018***
		(0.005)	(0.004)	(0.005)
Observations	1436	1433	1433	1432
R^2	0.13	0.13	0.14	0.15
Average dependent variable	0.061	0.061	0.061	0.061

Panel C: **Started to plan to settle outside Ukraine**

	(1)	(2)	(3)	(4)
Home district liberated	-0.029**		-0.037***	-0.027*
	(0.012)		(0.011)	(0.015)
Home district still occupied	-0.008		-0.020	-0.020
	(0.022)		(0.018)	(0.018)
Local conflict between interviews		0.009	0.014**	0.016***
		(0.006)	(0.006)	(0.006)
Observations	2306	2301	2301	2299
R^2	0.13	0.13	0.13	0.14
Average dependent variable	0.075	0.075	0.075	0.075

	(1)	(2)	(3)	(4)
Baseline controls	✓	✓	✓	✓
Destination country FE	✓	✓	✓	✓
Week of interview FE				✓

Notes: This Table shows regression results of equation 1 for three different outcomes: a) whether someone has returned to Ukraine, b) whether someone has returned to his or her home municipality in Ukraine, and c) whether someone no longer plans to settle outside Ukraine. Standard errors, corrected for clustering at the district level, are shown in parentheses. Columns 1-3 differ only in the regressors for which point estimates are shown. Column 4 adds fixed effects for the week of the first and the last interview. For details on the full specification of column 3, see notes to Figure 3. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

controls. The first column in each panel includes, in addition to socio-demographic controls and initial country of refuge fixed effects, only occupation and frontline status of the home district, the second column local conflict intensity between the two waves, the third column shows these together and the fourth column includes these together and adds controls for the week of the initial and the final interview fixed effects. The latter partial out variation

due to survey timing. Throughout the columns, point estimates exhibit a notable degree of stability, with a few exceptions.

As the family situations of Ukrainians starkly differ, their reactions to positive and negative shocks in their locality of origin may also vary. Figure C7 displays a regression model from Column 3 of Table 2, augmented with an interaction between three measures of conflict and an individual-level characteristic. The results indicate that the effects of regaining control in the home district, as well as local conflict intensity, are primarily driven by those who have a partner remaining behind and by those who are tertiary educated. The influence of local conflict intensity on the likelihood of settling outside Ukraine is strongest among people with a tertiary education, possibly because they have the best labor market prospects abroad.

We also analyzed predictors of relocating to a third country, as shown in Figure C8. Individuals whose home district has been liberated are less likely to move to a third country, possibly due to an increased likelihood of returning to Ukraine. Furthermore, higher local conflict intensity correlates with a greater probability of moving to a third country, aligning with the likelihood of planning to settle abroad.

5.2   Integration outcomes

Theory suggests that refugees who do not intend to return invest more in acquiring host-country-specific human capital, such as language skills, and integrating into the local labor market (Chiswick and Miller, 1994). Figure 4 presents three sets of results on the relationship between return intentions and subsequent integration outcomes in terms of employment, training, subjective integration, and participation in language courses. The first set shows how initial return intentions and time since arrival predict integration outcomes without accounting for individual fixed effects. The second set is similar but includes interactions between time since arrival and initial return intentions. The third set further incorporates individual fixed effects. In this third set, initial return intentions do not serve as explanatory variables, as they are absorbed by individual fixed effects; instead, the focus shifts to how changes in integration outcomes between the first and the last wave vary based on initial return intentions, once individual idiosyncratic factors are controlled for.

Integration outcomes reveal a distinct pattern: individuals initially planning to settle outside Ukraine are the most integrated, while those intending to return are the least integrated. This suggests that the motivation to learn new skills relevant to the host country is strongest among those planning to settle permanently abroad. These differences are most pronounced shortly after leaving Ukraine. For subjective measures of integration, effects related to initial intentions to return and time since arrival show little variation across analyses, indicating that initial differences tend to persist. In terms of language acquisition, those planning to return soon are initially less likely to start a language course but reach similar levels after one year. The pattern for employment is more complex, with analyses not adjusted for individual characteristics suggesting a 'catch-up' in employment rates between those intending to return and those undecided. However, this catch-up effect becomes less apparent after adjusting for individual characteristics.

The effect of conflict in one's home municipality on integration outcomes is unclear, a priori. On one hand, it might encourage investment in integration by reducing return intentions. On the other hand, more intense conflict could also lead to stress and trauma,

Figure 4: The relation between initial return intentions and subsequent integration outcomes
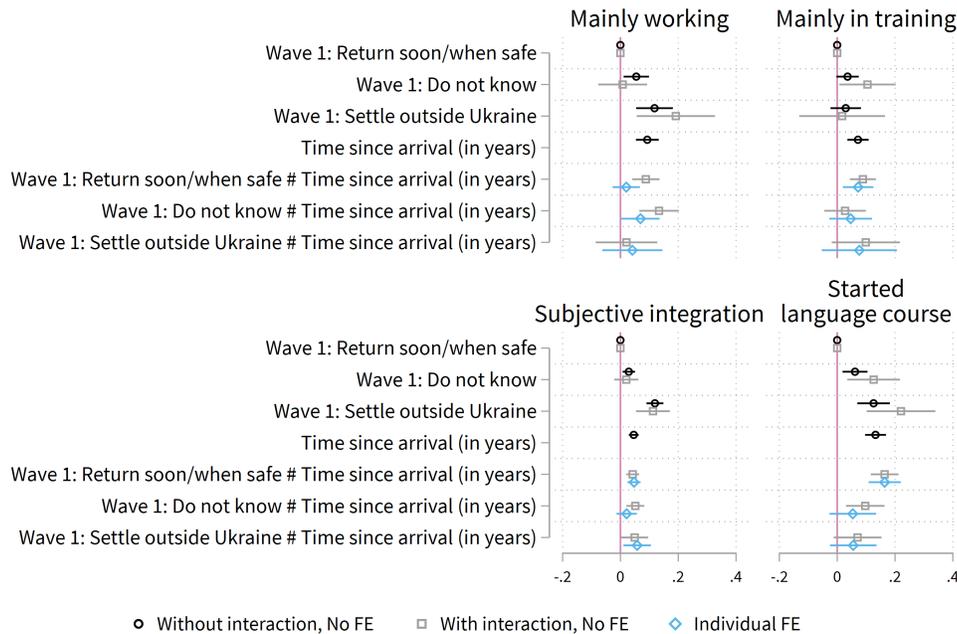
Notes: This figure shows regression results of levels of integration outcomes in wave 2 − 6 on (i) the levels of initial return intentions and the time since arrival in the first destination country and (ii) additional interactions of initial return intentions and time since arrival and (iii) individual fixed effects. We show 95 percent confidence intervals based on standard errors clustered on the district level. N = 5,200 (upper left), N = 2,765 (upper right), N = 2,856 (lower right), and N = 1,718 (lower left).

which may negatively affect labor market outcomes, subjective integration, and investment in language skills. Figure 5 displays the regression coefficients for the model introduced in equation 1 across four key measures of changes in economic, subjective, and linguistic integration. Additionally, Figure C9 shows further measures of integration outcomes between the first response in Waves 2 and 3, and the response in Wave 6.[19] Because most frontline changes occurred before Waves 2 and 3, no districts were liberated between these survey waves and Wave 6; hence, this regressor is absent in columns 3 and 4 of Figure 5. It is important to note that all reported results pertain only to respondents who did not return to Ukraine.

Our results suggest that the conflict variables have no significant effect on whether refugees are employed. The liberation of one's home district appears to make refugees less likely to participate in any kind of training, which aligns with a higher likelihood of return, reducing incentives to invest further in integration in the host country (Chiswick and Miller, 1994; Cortes, 2004; Adda *et al.*, 2022). Conversely, if one's home district remains occupied for

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[19]The other waves did not include all integration questions.

Figure 5: Conflict and different integration outcomes
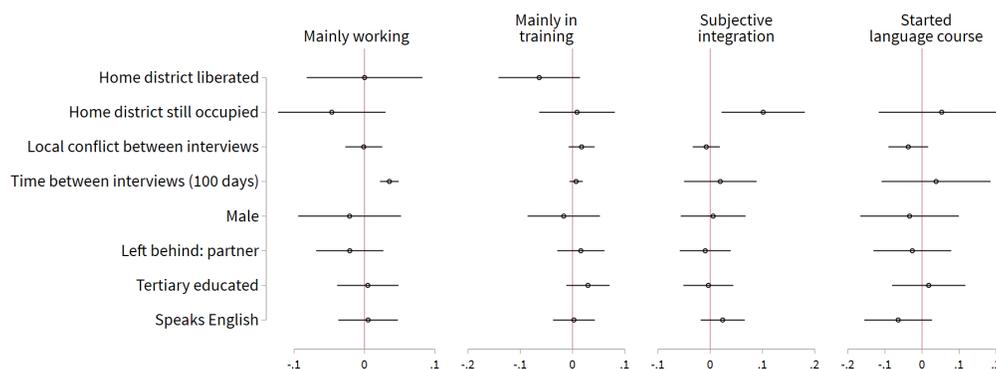
Notes: This figure shows coefficient plots of four multivariate OLS regressions. 95 percent confidence intervals are based on standard errors clustered on the district level. We restrict the sample to all respondents $25 - 59$. The outcomes in the first two columns are in levels on the long differences sample, and control for initial levels of started working or not in wave 1. N = 1,966 for both. The last two columns are changes on the sample of long differences between the earliest response in wave 2 and 3 and the response in wave 6. N = 503 and N = 544, respectively. The latter two do not include estimates for "home district liberated" as no district was liberated during the sample period. All other control variables are identical to those in Figure 3. For the coefficients on the conflict-related variables, see Table C5.

the duration of our surveys, refugees report a positive change in their subjective integration. This can be attributed to the lower return intentions among this group, which encourages investment in integration.

Conflict intensity in the home municipality does not appear to systematically affect integration outcomes. Individuals from regions with higher conflict intensity are slightly less likely to have started a language course, although this result is only statistically significant at the 10 percent level. When weighting the regressions with inverse probability and population weights, as shown in Figure D2, the effects of conflict intensity on subjective integration and language course participation appear slightly stronger.

5.3   Robustness

To further establish the robustness of our results, we examine how different specifications and approaches to treatment construction affect the results. First, we show that allowing for spatial correlation in the error structure does not substantially change the results in Section 5.1 (Figure D3). In addition, we show several alternative specifications in Figure D4. Excluding return intentions or previous conflict, or including region fixed effects and the shortest distance to Russia or the frontline during the second interview do not change the results substantially. An exception is the inclusion of region fixed effects, which changes the estimated effect of "Home district still occupied" on "Started to plan to settle outside Ukraine". The effects of conflict on integration outcomes also remain largely unchanged across specifications, as reported in Figure D5.

In addition, we show that the results are largely robust to alternative ways of constructing the treatment. In Figures D6 and D7 we use the four measures of conflict underlying the first principal component used as our primary measure of conflict, both in logs (as used in the PCA) and linearly. Although not always statistically significant, the results for conflict intensity in logs always have the same magnitude as in the PCA. The linear results give much more weight to places with very high conflict. With the exception of return to Ukraine, we find similar results for the linear specification. Despite the fact that the effect is negative and significant for return to home, the effect on return overall is positive for all four measures (and statistically significant for one). In Figure D8, we test whether the results change when we use conflict not only in the home municipality, but also in municipalities within a r kilometer radius. We find that the effect of conflict intensity becomes insignificant when using radii of 100 kilometers, confirming that we are capturing the effects of local conflict rather than a larger scale.

To confirm that the effect of conflict is not only driven by respondents from areas on or behind the frontline, we exclude the respondents from areas on the frontline or occupied in the first wave in Figure D9. We find that the effect of local conflict on returning to one's home municipality is even stronger among respondents from districts not on or behind the frontline since the first survey. Additionally, we exclude the 6 percent of respondents who left Ukraine before 2022 and the 7 percent of respondents who came from areas already occupied by Russia before 2022 in Figure D9, as these respondents may be very different from the rest of the refugee population. We find that the results hardly change, even if we exclude all three groups at the same time. Figure D10 breaks down the effects of different types of events as recorded in ACLED. The results point in a similar direction; airstrikes, which are able to target locations far behind the frontline, most strongly reduce return.

6   Beyond local conflict: the role of expectations about the war

Expectations about the outcome of the war can play an important role in return plans and in investments in host-country specific human capital. To quantify these effects, we collected panel data on individuals' expectations about the outcome of the war. Initially, most Ukrainians were very optimistic about Ukraine's chances of winning the war without ceding any territory. From September 2022 to January 2023, 71 percent expected Ukraine to win and liberate all occupied territories by the end of 2024. In October and November 2023, this decreased to only 35 percent. Figure 6 shows how expectations about the outcome of the war by the end of 2024 changed between the survey waves from September 2022 to January 2023 and the survey wave in October and November 2023. Ukrainian refugees became considerably more pessimistic about a quick victory, and more likely to expect the war to still be ongoing at the end of 2024. Despite the increase in pessimism, the propensity to return to Ukraine or make plans to do so — either immediately or when conditions are deemed safe — decreased only slightly on the same sample, from 66 percent to 54 percent. At the same time, the proportion of respondents who have decided to settle outside Ukraine has increased from 13 percent to 20 percent.

Figure 7 documents that expectations about the outcome of the war have become less optimistic over time across survey waves in a close-to-linear fashion. The share of Ukrainian refugees who plan to return or have already returned has also declined over time, but at a much lower rate. While the shares planning to return and expecting Ukraine to win by the end of 2024 without losing any territory were about the same at the beginning, by November 2023 the share expecting Ukraine to win by the end of 2024 without losing any territory was considerably lower.

Figure 6: Sankey diagram of changes in expectations about the outcome of the war until the end of 2024
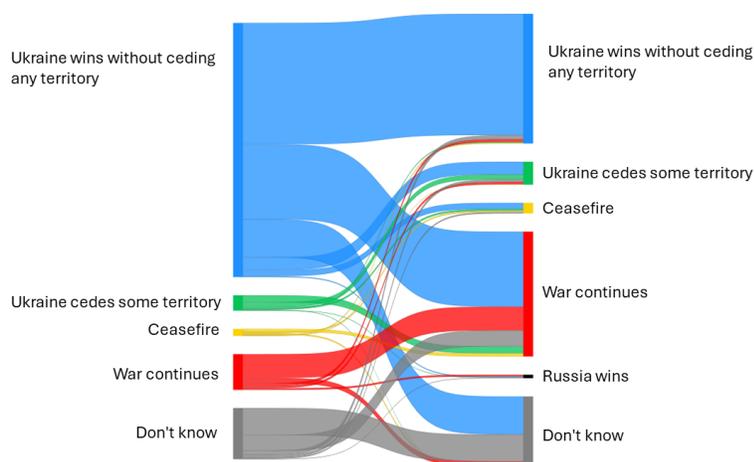
Notes: This figure shows individual-level changes in expectations about the outcome of the war by the end of 2024. The sample consists of differences between the first interview in the second and third wave (September 2022 – January 2023) and the interview in the sixth wave (October – November 2023). The average number of days between the interviews is 285 days. N = 834.

Return intentions are strongly correlated with the expected outcome of the war, as shown in Figure C10. Only 9 percent of respondents who expect Ukraine to win by the end of 2024 plan to settle outside Ukraine. In contrast, 21 percent of those expecting territorial concessions or a ceasefire, and 26 percent of those who anticipate the war lasting until 2025 or longer, plan to settle outside Ukraine.

To test the strength of the relation between changes in expectations and our main outcomes of interest, we regress returning to Ukraine, planning to settle outside Ukraine, and being employed on changes in expectations about the war. As the share of respondents expecting fighting to end by the end of 2024 with ceasefire or Ukraine ceding any territory is small throughout our survey period, we pool the changes in Panel A of Figure C10 in three categories: whether one always thought that Ukraine would win and liberate all occupied territories by the end of 2024 or newly thinks so in the last wave (the reference category), whether the respondent no longer expects that Ukraine would win and liberate all occupied territories by the end of 2024, and whether the respondent never thought that Ukraine would

Figure 7: The percentage of people expecting Ukraine to win by the end of 2024 gradually decreases over time

• Ukraine wins without ceding territory by the end of 2024
• Returned, or plans to return soon or when safe
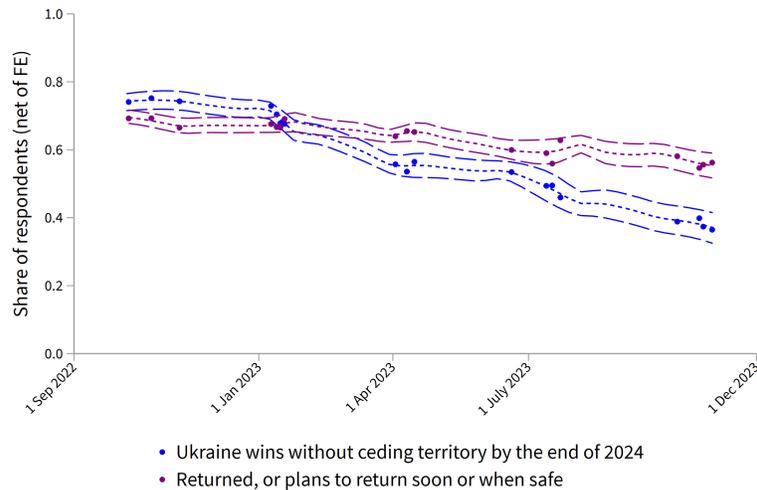
Notes: Binned scatterplot with non-parametric trend of the share of respondents expecting Ukraine to win the war by the end of 2024 over time and the total share of respondents who returned, plan to return soon or when safe, net of individual fixed effects, with 90 percent confidence interval. The binned scatterplot is based on 20 bins. For an explanation of the construction of this Figure, see notes to Figure 1. Based on waves 2 − 6. N = 5,669.

win and liberate all occupied territories by the end of 2024. We show the coefficients from the regression analysis in Table 3. We find that negatively updating war expectations or always being pessimistic increases plans to settle outside Ukraine by almost 5 percentage points. This is a sizeable effect, as the sample mean is 7.4 percent. Surprisingly, negatively updating expectations or always having pessimistic expectations does not correlate to returning to Ukraine. This could either indicate that there is no effect of expectations on return, or that any such effect is offset by returnees negatively updating their expectations. However, Table C6 shows that return to Ukraine in a previous wave does not predict more pessimistic expectations about the outcome of the war, after controlling for prior expectations. We do not find statistically significant effects on employment.

Expecting Ukraine no longer to win by the end of 2024 contributes to 1.4 percentage points of the increase in respondents planning to settle outside Ukraine. Furthermore, those who have consistently been pessimistic about Ukraine's victory by the end of 2024 are more likely to have started planning to settle outside the country than those who have been consistently optimistic. This difference accounts for about 2 percentage points in the share of respondents who are newly planning to settle permanently outside Ukraine. These findings indicate that changes in expectations about the war's outcome explain twice as much of the shift toward settling outside Ukraine (46 percent) as the intensity of local conflict does (22 percent; see Section 5.1).

Table 3: The relation between changes in expectation and changes in return intentions

	(1) Returned to Ukraine	(2) Started to plan to settle outside Ukraine	(3) Found work
Does not think anymore Ukraine would win	0.009 (0.016)	0.047*** (0.016)	0.027 (0.020)
Never thought Ukraine would win	-0.009 (0.013)	0.048*** (0.016)	0.008 (0.019)
Time between interviews (100 days)	0.023*** (0.006)	0.010* (0.005)	0.023*** (0.007)
Observations	1668	1668	1668
R^2	0.087	0.078	0.009
Average dependent variable	0.070	0.074	0.118

Notes: Regression results of changes in return intentions on changes in expectations about the outcome of the war. The reference group is "Always thought or newly thinks Ukraine would win". For the full set of control variables, see notes to Figure 3. The sample is composed of long differences between the first and the last interview among waves 2 − 6, on the sample of individuals who answered at least two follow-up waves 30 days apart. The outcomes in the first two columns are identical to those in Figure 3, whereas the third column is a binary indicator for whether the individual is working in the later wave, but not in the earlier. The mean number of days between survey waves is 242. Standard errors are clustered at the individual level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

7   What could explain strong return intentions? Evidence from Ukrainians in Ukraine

Since refugees were only surveyed after leaving Ukraine, analyzing their responses alone is insufficient to assess the relative importance of the mechanisms discussed in the introduction—increased confidence in the government and military, optimism about the future, and strong national identity. To further evaluate the mechanisms behind high return intentions, we analyze representative surveys of Ukrainians in Ukraine. We utilize Gallup World Polls and surveys conducted by the Ilko Kucheriv Democratic Initiatives Foundation (IKDIF) in collaboration with the Razumkov Center, both before and during the full-scale war in 2022 and 2023.

Figure 8 illustrates the competing forces that influence Ukrainians' decisions to emigrate. A traditional perspective, represented by a red arrow, suggests an increased propensity to emigrate and a decreased willingness to return due to the costs of conflict exposure. In contrast, blue arrows represent factors that counteract this trend: strengthened national identity, increased trust in government and military capabilities, and greater optimism. These mechanisms are likely to influence both the decision to emigrate and the decision of refugees to return.

Although the figure focuses on Ukraine, the interplay of national identity, trust in government and military, and optimism could similarly affect responses to conflict in various contexts. In some cases, the influences of these factors—national identity, confidence in the government and military, and optimism about the future—might be reversed. For example,

in the context of a civil war, all these factors could encourage emigration and discourage returning.

Figure 8: The effect of the Russian invasion on the desire to live in Ukraine is ambiguous.

7.1 The full-scale war reduced desire to emigrate from Ukraine

The Gallup World Poll (GWP) is an annual survey conducted across more than 150 countries that provides nationally representative data. Each year, the GWP conducts repeated cross-sectional surveys, interviewing around 1,000 individuals per country on a variety of topics. These surveys gather information on topics such as migration aspirations, views and attitudes towards the government, and the socio-demographic characteristics of respondents. The advantage of the Gallup World Polls is their ability to compare changes in attitudes in Ukraine with those in other countries, including Russia and other Eastern European countries.

Figure 9A illustrates the share of individuals desiring to emigrate permanently over time as recorded in the Gallup World Polls for Ukraine, Russia, and five other country groups. Between 2015 and 2021, the share of the population with a desire to emigrate was higher in Ukraine than in any other European country group. Following the large-scale Russian military offensive, there was a notable shift in the emigration intentions among Ukrainians: the share of Ukrainians wanting to emigrate permanently dropped from 35.3 percent in July 2021 to 9.5 percent in September 2022, before rising slightly to 12.9 percent by August 2023.

Figure 9: Desire to emigrate, optimism, and confidence in government and military
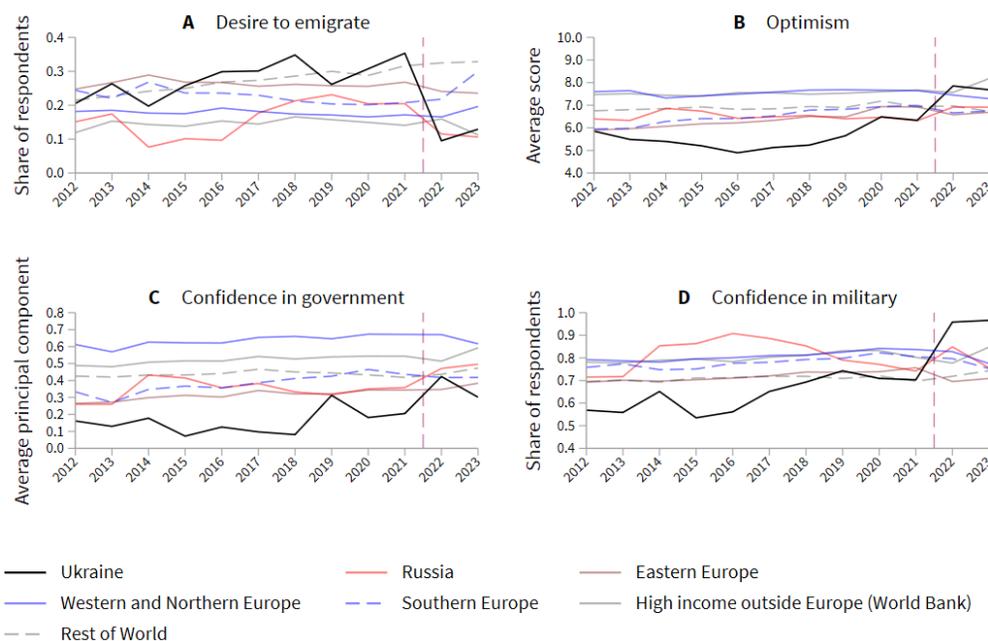
Notes: (A) illustrates the share of respondents desiring to emigrate. (B) shows the average optimism score which measures how good the respondent expects their life to be in absolute terms in five years (ranging from 0 for the worst possible to 10 for the best possible life). Importantly, this is asked in absolute terms, not relative to the current situation. (C) shows the measure of confidence in the government as constructed in (Guriev *et al.*, 2021). The separate components of this measure are shown in Figure E2. (D) shows the share of respondents who have confidence in the military. We exclude respondents from regions in Ukraine in all years that were partially or fully occupied by Russia during the 2022 and 2023 survey interviews.

In 2022 and 2023, a lower share of respondents expressed a desire to emigrate from Ukraine than from Western and Northern European countries. Figure E3 illustrates that the decrease in the desire to emigrate from Ukraine from 2021 to 2022 is the largest year-to-year change ever recorded in the Gallup World Poll (GWP). Importantly, this decrease cannot be attributed to selective outmigration. Figure E4 demonstrates that the decrease remains similar even after accounting for the observable characteristics of the respondents.

Furthermore, Appendix A.3 discusses four scenarios of selective outmigration based on outmigration rates and responses to the Verian survey. Figure E5 indicates that in all four scenarios, only a small part of the decline in Ukrainians' desire to emigrate can be explained by the selective out-migration of those with a stronger desire to emigrate. Specifically, even under the assumption that all emigrants from Ukraine had a preference to live abroad, the decrease in emigration desire between 2021 and 2022 remains substantial at 19 percentage points.

7.2 The role of confidence in government and military, optimism, and national identity

The finding that Ukrainians' desire to emigrate permanently decreased significantly during the war starkly contrasts with theories of international migration that consider conflict a major push factor for emigration (Massey *et al.*, 1993; Bohra-Mishra and Massey, 2011; Adhikari, 2013). Concurrently, Panels B-D of Figure 9 reveal that Ukrainians have grown more optimistic about life in Ukraine and more confident in the government and military. The year-on-year increases in optimism and confidence in both the government and the military are also exceptionally large, as shown in Figure E3.

An Oaxaca-Blinder decomposition, presented in Table E1, suggests that these increases account for much of the change in the desire to emigrate between 2021 and 2022. Increases in confidence in government, confidence in the military, and overall optimism explain 41 percent of this gap, while other covariates account for only 5 percent, leaving 54 percent unexplained. Interestingly, these patterns remain similar when comparing 2021 to 2023, although the share explained by these three factors drops to 32 percent. A notable difference is that the increase in confidence in government explains half as much in 2023 as in 2022, aligning with literature that suggests rally-around-the-flag effects typically only temporarily boost government confidence (Mueller, 1970; Dinesen and Jæger, 2013).

The unexplained gap might be partially due to a stronger national identity. To explore this possibility, we utilized additional survey data from the Razumkov Center, which inquires about respondents' pride in being Ukrainian and their migration plans. These data reveal that 55 percent of Ukrainians were very proud to be Ukrainian in August 2022, and 50 percent felt the same in August 2023, an increase from 27 percent in 2021 (see Figure E6). Consistent with findings from the Gallup World Poll, most respondents express a desire to build their future in Ukraine, as shown in Figure E7. National identity is strongly correlated with plans to build a future in Ukraine, as indicated in Figure E8. Assuming the relationship between national identity and plans to build a future in Ukraine remains constant, the observed increase in national identity could explain 22 percent of the decline in the desire to emigrate.

8 Conclusion

We analyzed the return intentions and integration outcomes of Ukrainian refugees in a panel survey across Europe. In the baseline survey in 2022, the majority of respondents planned to return to Ukraine soon or when it is safe, and 10 percent planned to settle permanently outside Ukraine. Return intentions are remarkably stable and strong predictors of actual return. Among all respondents, the realized return rate was 2.7 percentage points and the net increase in plans to settle outside Ukraine was 1.6 percentage points over 100 days. High local conflict intensity between survey waves deters refugees from returning to their home municipality, but not to Ukraine as a whole. The liberation of one's home district increases the probability of returning to Ukraine by 5.1 percentage points. Those refugees who planned to settle outside Ukraine integrate faster, but subsequent conflict intensity in the home municipality and the liberation of the home district do not change most integration outcomes. However, there is suggestive evidence that the liberation of one's home district

reduces the likelihood of having training as one's main activity. This is consistent with higher return intentions reducing incentives to invest in integration in the host country.

What explains the remarkably high intention to return among Ukrainian refugees? At the individual level, family ties are an important reason for return. Most men between the ages of 18 and 60 are not legally allowed to leave Ukraine. Our back-of-the-envelope calculation suggests that having a partner left behind can explain one third of realized returns, which is consistent with self-reported main reasons for return. At the individual level, becoming more pessimistic is associated with a 4.7 percentage point higher probability of planning to settle outside Ukraine. Changes in war expectations are not associated with changes in employment. At the population level, data from the Gallup World Poll show that the desire to emigrate permanently among Ukrainians living in Ukraine has also declined sharply. The share of Ukrainians desiring to emigrate permanently dropped from 35 percent in 2021 to 9 percent in 2022. Selective emigration of refugees can explain only a small part of the observed decline. Among Ukrainians who remain in Ukraine, increased confidence in the government, confidence in the military, optimism, and a stronger national identity play an important role in explaining the observed decline in the desire to emigrate.

Our findings provide insights into the causal effects of conflict on refugee return and integration outcomes, offering guidance for policymakers in refugee-hosting countries. The data show that Ukrainian refugees exhibit a significantly higher desire to return compared to other refugee groups previously studied in Germany, regardless of their length of stay. For instance, only 7 percent of Syrian refugees registered in the Middle East and North Africa have voluntarily returned to Syria by March 2023 (UNHCR, 2023c), and only 14 percent of Syrian refugees in Germany express a desire to return to Syria if it becomes as safe as before the civil war (Al Husein and Wagner, 2023). A critical difference is that Ukrainians were fleeing a democratic country facing external aggression, while most refugees flee internal conflicts or persecution by their own governments. This distinction has vital implications for host countries as they develop plans to support voluntary returns and formulate integration policies for future conflict scenarios. It underscores the importance of enhancing government legitimacy, fostering refugees' trust in their government, and promoting national identity to attract refugees back to their home countries.

Despite the potential victory in the war against Russia, Ukraine faces considerable challenges. The Ukrainian population was declining even before the Russian invasion, with deaths outnumbering births annually since 1991. Moreover, confidence in the judiciary remains low and corruption is pervasive, factors that could deter returns. The critical challenge for Ukraine is to leverage the common purpose fostered by the war to drive broader institutional and cultural changes. By addressing these push factors, Ukraine can make returning more appealing and stabilize its demographic trends.

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Appendix

Table of Contents

A Detailed Description of Data

A.1 Verian Survey "Voice of Ukraine"

The survey includes a wide range of background variables relating to demographics, employment status, and municipality of origin. Importantly, to elicit return intentions we ask individuals the following question on return intentions in every wave:

Return intentions *What are your plans regarding returning back to Ukraine?* With the following answer options:

- I intend to go back very soon

- I intend to go back at some point later when I feel it is safe to return

- I do not intend to go back and plan to settle outside Ukraine

- Do not know yet

- Prefer not to answer

In addition to aforementioned question and various demographic variables, we use several other questions directly in the main text:

Started working *Did you start working in the country you are currently residing in, yes or no?*

Current location and return *In which country are you currently located?* [drop-down menu]

Respondents answer this question from a list of countries. In the second wave, this list also includes Ukraine, which enables us to identify those who have returned to Ukraine.

In the follow-up waves, we ask several additional questions:

Expectations about the outcome of the war *What do you find the most likely outcome of the war by the end of 2024?* With the following answer options:

- Ukraine wins and Russia withdraws from all territory it currently occupies

- Ukraine cedes some territory to Russia as part of peace agreement

- There is ceasefire

- Russia wins and annexes big parts of Ukraine

- The war continues

- Do not know

- Prefer not to answer

Expectations about the duration of the war *When do you expect the war in Ukraine to end?* With the following answer options:

- Within 3 months

- In 4 to 6 months

- In 7 to 12 months

- In 1-2 years

- I expect the war to continue more than 2 years

- Do not know

- Prefer not to answer

Work-related integration (wave 1 and 6) *Did you start working in the country you are currently residing in?* With the following answer options:

- Yes

- No

Work-related integration (wave 2) *Which of these descriptions best apply to what you have been doing for the last four weeks?* With the following *non-exclusive* answer options:

- In paid work – working remotely in Ukraine (employee, self-employed, working for your family business)

- In paid work – working in the current country of residence (employee, self employed, working for your family business)

- In any kind of schooling or training (including language courses)

- Unemployed and actively looking for a job

- Unemployed and not actively looking for a job

- Doing unpaid housework, looking after children or other persons

Work-related integration (wave 3-6) *Have you started working?* With the following *exclusive* options:

- In paid work – working remotely in Ukraine (employee, self-employed, working for your family business)

- In paid work – working in the current country of residence (employee, self employed, working for your family business)

- In any kind of schooling or training (including language courses)

- Unemployed and actively looking for a job

- Unemployed and not actively looking for a job

- Doing unpaid housework, looking after children or other persons

Language course participation *Have you started a course to learn the language of your host country?* With the following answer options:

- Yes

- No

We use the following two questions on self-assessed language skills in a principal components analysis:

Linguistic integration I *Please evaluate your own language skills in your current country of residence. I can understand the main points in simple newspaper articles on familiar subjects when reading in the local language.* With the following answer options (recoded to):

- Very well (4)

- Well (3)

- Moderately well (2)

- Not well (1)

- Not well at all (0)

Linguistic integration II *Please evaluate your own language skills in your current country of residence. In a conversation, I can speak in the local language about familiar topics and express personal opinions.* With the following answer options (recoded to):

- Very well (4)

- Well (3)

- Moderately well (2)

- Not well (1)

- Not well at all (0)

We use the following three questions on subjective integration in a principal components analysis:

Subjective integration I *How often do you feel like an outsider in the current country of residence?* With the following answer options (recoded to):

- Never (4)

- Rarely (3)

- Sometimes (2)

- Often (1)

- Always (0)

Subjective integration II *How well integrated do you feel in the city/town you currently live in?* With the following answer options (recoded to):

- Not at all integrated (0)

- Very little integrated (1)

- Moderately integrated (2)

- Integrated (3)

- Well integrated (4)

Subjective integration III *Do you feel welcome in the city/town you currently live in?* With the following answer options (recoded to):

- Never (0)

- Rarely (1)

- Sometimes (2)

- Often (3)

- Always (4)

Social integration with Ukrainians *How many Ukrainian friends/family members do you have in the city you currently live in?* With the following answer options:

- Nobody

- 1-2

- 3-5

- 6-10

- 11-15

- 16-20

- More then 20

Social integration with locals *How many friends among **Nationality of country of residence** do you have in the city you currently live in?* With the following answer options:

- Nobody

- 1-2

- 3-5

- 6-10

- 11-15

- 16-20

- More then 20

Data cleaning and processing

To determine an individual's place of residence before they evacuated during the war, the baseline wave of the survey asks: (i) which region they lived in before February 24, 2022, and (ii) the specific locality through a write-in field. Eighteen percent of respondents did not answer the latter question. To match individuals with the municipality (hromada) of their residence before the war, we utilize geospatial data on Ukraine's administrative divisions as of 2020 from the United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA) (United Nations, 2023). The average municipality has 30,800 inhabitants, and the median has 13,200. Larger cities comprise a single municipality. The spatial files encompass all 1,469 municipalities (hromada), nested in 137 districts (raions) across 27 regions and six macro-regions. These localities generally align with administrative divisions, but for 550 individuals, the localities had to be manually matched to municipalities within the specified regions. Localities were classified into municipalities using the Ukrainian government website https://gromada.info/. However, since not all region-municipality pairs are unique, we were unable to assign a unique municipality to 12 respondents, and thus classified their municipality as missing.

Table A1: Survey waves, number of respondents and timing

	Number of responses	First month	Last month
Wave			
1	11,783 (6,299 panellists)	June 2022	December 2022
2	1,005	September 2022	December 2022
3	1,610	January 2023	January 2023
4	1,411	April 2023	April 2023
5	1,218	July 2023	July 2023
6	1,175	October 2023	November 2023
Total	18,202	June 2022	November 2023

Notes: Number of respondents by wave and first and last interviews month per wave.

Table A2: Number of waves per respondent

	Number of respondents
Number of waves	
1	9,067
2	1,048
3	586
4	385
5	441
6	256
Total	11,783

Notes: Number of unique respondents by the number of waves they have answered. As the second wave has been fielded before the end of the baseline survey wave, not all respondents had the opportunity to answer in all six waves, but five instead.

Table A3: Demographic characteristics of the baseline and long differences sample compared to Temporary Protection beneficiaries

	Dataset		
	Baseline	Long differences	TPS (Eurostat)
Female	0.88	0.88	0.78
18 - 34	0.26	0.27	0.38
35 - 64	0.65	0.68	0.53
65 and older	0.08	0.06	0.08
Czechia	0.05	0.04	0.10
Germany	0.23	0.25	0.18
Italy	0.05	0.05	0.03
Poland	0.28	0.27	0.36
Spain	0.04	0.04	0.04
Other	0.33	0.33	0.29
N	11,783	2,674	4,377,305

Notes: Gender, age, and destination country distribution of all baseline survey respondents, those in the long difference sample and beneficiaries of Temporary Protection Status (TPS) by December 2022. Data on TPS registrations originates from Eurostat table *migr_asytpsm*. For a more detailed table, including variables absent in the TPS of our survey samples, please see Appendix Table A4. For descriptive statistics of the long difference and baseline samples, see Table A5.

Table A4: Demographic characteristics of the baseline sample and the Ukrainian population before 2022

	Male		Female	
	Verian	GWP	Verian	GWP
	mean	mean	mean	mean
Age 16-24	0.14	0.12	0.06	0.10
Age 25-34	0.26	0.24	0.30	0.14
Age 35-44	0.18	0.23	0.21	0.15
Age 45-54	0.13	0.17	0.19	0.15
Age 55-59	0.04	0.06	0.08	0.09
Age 60-65	0.16	0.06	0.08	0.12
Age 65+	0.09	0.13	0.08	0.24
With partner	0.67	0.60	0.54	0.49
With children under 18	0.31	0.37	0.56	0.33
Tertiary educated	0.57	0.19	0.66	0.16
From urban settlement	0.67	0.45	0.70	0.40
Observations	1359	1260	9996	1776

Notes: Descriptive statistics for the baseline sample (weighted with population weights) compared to the Gallup World Polls (weighted with survey weights) in Ukraine 2019 – 2021, for men and women separately.

Table A5: Demographic characteristics of the baseline and long differences estimation samples

	Baseline		Long differences	
	Mean	S.D.	Mean	S.D.
On the frontline	0.19	0.39		
Behind the frontline	0.06	0.24		
Home district liberated			0.08	0.27
Home district still occupied			0.18	0.39
Local conflict between interviews			0.00	1.00
Days since arrival	185	71		
Time between interviews (100 days)			2.68	1.39
Male	0.11	0.31	0.11	0.31
Left behind: partner	0.25	0.43	0.27	0.44
Left behind: children	0.17	0.38	0.17	0.37
With children under 18	0.57	0.50	0.61	0.49
Tertiary educated	0.66	0.47	0.71	0.45
Speaks English	0.39	0.49	0.47	0.50
Spoke destination-country language upon arrival	0.25	0.19	0.25	0.19
Age 16-24	0.05	0.21	0.04	0.20
Age 25-34	0.20	0.40	0.22	0.41
Age 35-44	0.27	0.45	0.32	0.47
Age 45-54	0.22	0.41	0.23	0.42
Age 55-59	0.08	0.27	0.06	0.23
Age 60-65	0.10	0.30	0.09	0.28
Age 65+	0.08	0.27	0.05	0.21
Married or partner	0.56	0.50	0.57	0.49
From an urban settlement in Ukraine	0.76	0.43	0.77	0.42
Continued job in Ukraine remotely	0.15	0.36	0.17	0.38
Left before the 24th of February	0.06	0.24	0.06	0.24
Survey language: Russian	0.10	0.29	0.07	0.26
District occupied before 2022	0.03	0.16	0.03	0.18
Population municipality [1000s]	1059.38	1070.95	1078.35	1083.12
Wave 1: Return soon	0.07	0.25	0.05	0.23
Wave 1: Return when safe	0.58	0.49	0.57	0.50
Wave 1: Settle outside Ukraine	0.08	0.28	0.10	0.30
Wave 1: Do not know	0.24	0.43	0.26	0.44
Wave 1: Prefer no answer	0.03	0.16	0.02	0.15
Observations	9052		2301	

Notes: Descriptive statistics of all regressors in the baseline and long differences estimation sample for whom information on the municipality of origin is non-missing. Local conflict between interviews is standardized and therefore has mean zero and a standard deviation of one.

Figure A1: Number and sampling rate of Ukrainian refugees

(a) Number of Ukrainian refugees across Europe
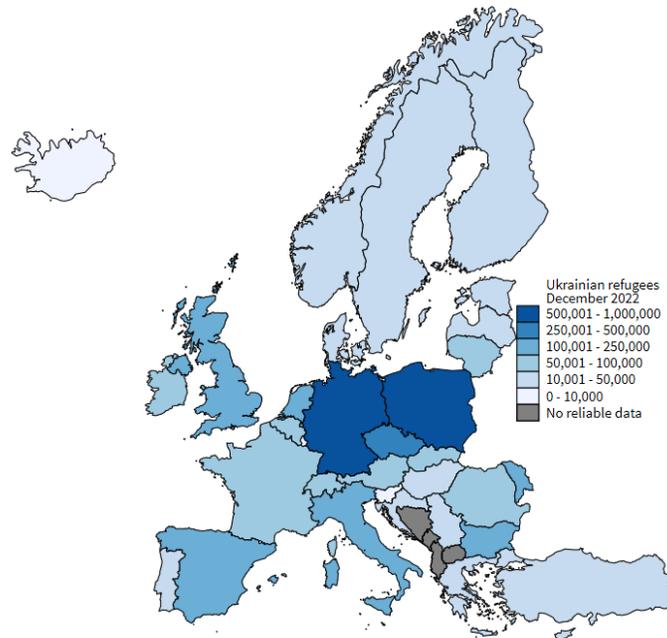
(b) Sampling rate of Ukrainian refugees across Europe
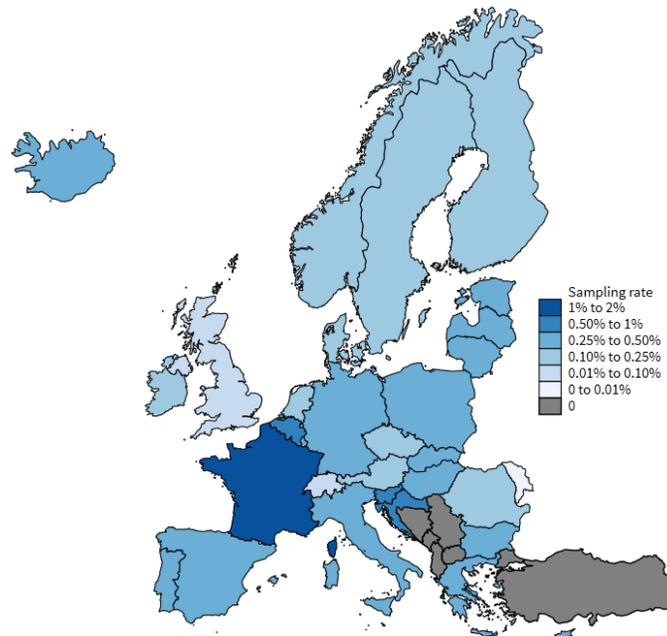
Notes: Panel (a) shows the number of Ukrainian refugees who are beneficiaries of Temporary Protection Status by December 2022, by host country. Data from the Eurostat table *migr_asytpsm*. Panel (b) shows the sampling rate of Ukrainian refugees from across European countries. Obtained by dividing the total number of respondents in the baseline wave by initial destination country by the total beneficiaries in December 2022 from the Eurostat table *migr_asytpsm*.

Figure A2: Distribution of the dates of interview
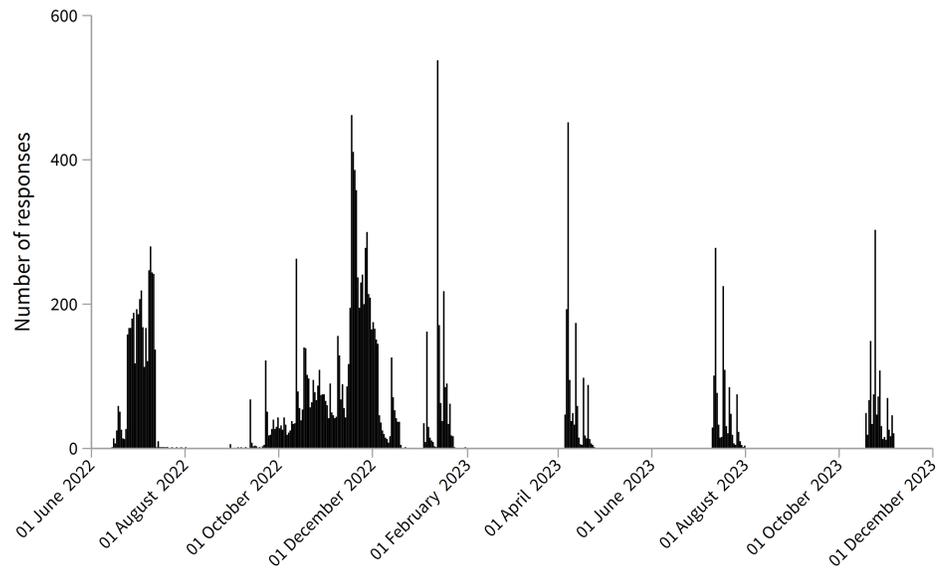
Notes: Temporal distribution of interviews of all six waves. Every bin represents one day. N = 18,202.

Figure A3: Origin municipalities of respondents
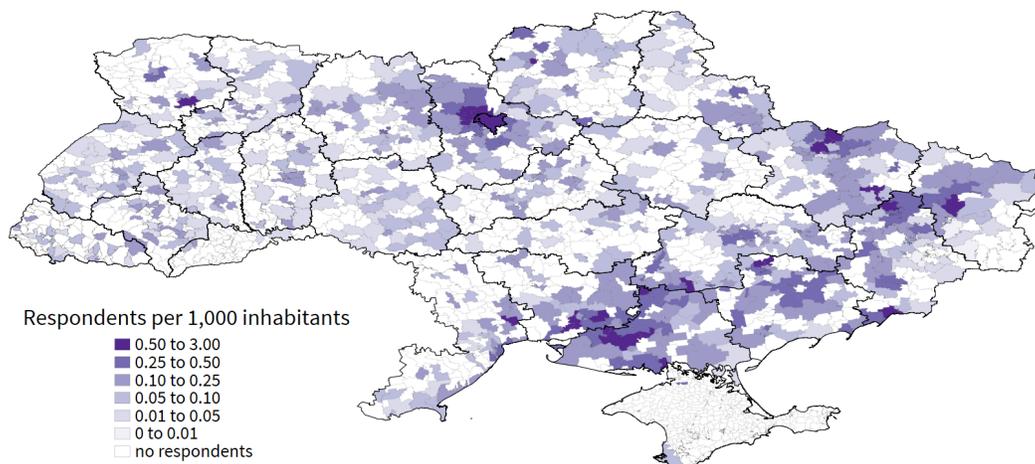
Notes: Distribution of respondents by municipality of origin in Ukraine. Excludes those respondents for whom no home municipality could be uniquely determined. N = 9,655.

A.2 Gallup World Poll

We use the Gallup World Polls (GWP) conducted from 2012 to 2023 to gather data on Ukrainians' emigration aspirations, perceptions, and confidence in the Ukrainian government and other institutions. The GWP annually surveys a nationally representative sample of approximately 1,000 individuals in a majority of countries worldwide. Interviews in Ukraine after Russia's full-scale attack were conducted in September 2022, and in July and August 2023. These surveys allow us to compare Ukrainian refugees surveyed in the Verian survey with Ukrainians who remained in Ukraine.

Additionally, the presence of numerous pre-war waves and the ability to compare these with other countries provide valuable insights. For our analysis, we restrict the sample to the 142 countries (including Ukraine) that were surveyed by Gallup both in 2012 and in 2022 after February 24, and/or in 2023. We categorize all other countries, except Ukraine and Russia, into five mutually exclusive groups. As GWP does not conduct surveys in every country every year, we interpolate missing values at the country level before aggregating them into country groups. For Ukraine, the only missing data of interest was the question regarding the desire to emigrate in 2020. Specifically, we investigate this desire using the following question:

Desire to emigrate *Ideally, if you had the opportunity, would you like to move permanently to another country, or would you prefer to continue living in this country?* With the following answer options:

- Move permanently

- Prefer to stay

- Don't know

- Refused to answer

We recode the desire to emigrate to 1 if the respondent answers "yes", to 0 if the respondent answers "no" or "don't know," and to missing if the respondent answers "prefer not to answer". In addition to the aforementioned question and various demographic variables, we use several other questions from GWP:

Optimism *Please imagine a ladder, with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. Just your best guess, on which step do you think you will stand in the future, say about five years from now?*

Confidence in Government We follow Guriev *et al.* (2021) and perform a Principal Components Analysis (PCA) and obtain the first principal component of the following four questions with yes, no, do-not-know, and refuse-to-answer as answer options:

- *In this country, do you have confidence in each of the following, or not? How about national government?*

- *In this country, do you have confidence in each of the following, or not? How about judicial system and courts?*

- *In this country, do you have confidence in each of the following, or not? How about honesty of elections?*

- *Is corruption widespread throughout the government in this country, or not?*

Confidence in Military *In this country, do you have confidence in each of the following, or not? How about the military?* with yes, no, do-not-know, and refuse-to-answer as answer options.

Furthermore, we use the following question on corruption in business, which serves as a robustness test in the decomposition analysis in S3.1.2:

Corruption in Businesses *Is corruption widespread within businesses located in this country, or not?* with yes, no, do-not-know, and refuse-to-answer as answer options.

A.2.1 Data cleaning and processing

In further analysis, we code the desire to emigrate as 1 if the answer is "Move permanently", 0 if the answer is "Prefer to stay" or "Don't know" and we omit the individual when "Refused to answer" is chosen. In the full sample described in the next paragraph, 1.6 percent of individuals indicate "Don't know" and less than 0.2 percent of individuals indicate "Refused to answer". We adhere to the same procedure for all other variables with such an answer option structure.

For our analysis of changes by country groups in the desire to emigrate in Figure 9, we limit the sample to the 142 countries that were visited by Gallup in 2012 and in 2022 after February 24 and/or in 2023.

As GWP does not visit every country each year and the question on the desire to emigrate is not included in all country-years, we linearly interpolate the share of respondents who would like to emigrate on the country-year level for the 302 missing observations (out of 1,563) in Figure 9. To obtain yearly averages for each country group, we take the unweighted mean of the (interpolated) country-level averages. For Ukraine, only the 2020 values are interpolated because the question on the desire to emigrate was not asked.

The method of contacting respondents changed over the years in Ukraine. Until 2019 surveys were conducted face-to-face, in 2020 and 2021 by landline or mobile phone, and in 2022 only by mobile phone. In 2019, 90.4 percent of respondents either had a landline connection or a mobile phone and in 2021 99.2 percent of respondents indicated that they used a mobile phone for making phone calls. This suggests that a mobile phone-based sampling approach is able to reach a closely comparable sample of respondents as in 2021. As in 2022 respondents were contacted via mobile phone, also Internally Displaced Persons (IDPs) are included, although we have no way of identifying them. In all years, respondents could answer the survey in either Ukrainian or Russian.

In all analyses, we weight observations by nationally representative weights supplied by Gallup to calculate statistics as representative as possible. Gallup's weights variable reflects the inverse probability of selection, calculated using respondents' information and (among others) national demographics, number of phone connections per household and the number of household members.

As some explaining factors used in the Oaxaca-Blinder (OB) decomposition in Table E1 have missing responses (e.g., because of answering "don't know" or "refused to answer" on some items), the sample is limited to those respondents without missing responses for the respective questions.

A.3   Selective Migration

The large drop in desire to emigrate between 2021 and 2022 could be driven by selective out-migration of Ukrainians on observable and unobservable factors that (directly) affect migration intentions.

On observables To illustrate how the desire to emigrate, optimism, confidence in government and confidence in the military in Ukraine would have altered in 2022 if the composition in terms of age-by-gender and education-by-gender would not have changed, we residualize the outcome. For each of the four outcomes, we regress the outcome on the covariates, obtain the residuals from that regression and plot the residuals over time in Figure E4. The Figure looks qualitatively similar to Figure 9.

On unobservables To understand what part of the drop could be explained by out-migration selected on unobservables, we perform a back of the envelope calculation based on the observed migration intentions in Ukraine in GWP, observed return intentions in the Verian surveys as well as UNHCR data on population movements. As the Gallup World Poll was fielded in early September and participation was restricted to those residing in Ukraine at the time of survey, we take the information available on refugee populations on the midpoint of the interviews on 05 September 2022.

We proxy the size of the refugee populations on 05 September 2022 by the gross number of 2.4 million of border crossings to Russia and Belarus (there is no information about movements from Russia and Belarus into Ukraine) and by the 4.2 million net border crossings from Ukraine to the rest of Europe from UNHCR (Operational Data Portal, 2023). We have no information on the return intentions of 2.4 million Ukrainians who crossed the border to Russia and Belarus.

We assume that the share of minors in both refugee populations is 37 percent, in line with the share of minors among those who were granted Temporary Protection Status by 31 August 2022 (Eurostat, 2023). The pre-war adult population of Ukraine was 33.9 million of whom an estimated 12.3 percent left the country before the GWP was fielded (4.5 percent to Russia and Belarus; 7.8 percent to the rest of Europe).

Using these numbers, we can adjust the numbers in Figure 9 for potentially selective out-migration by making various assumptions about the counterfactual desire to emigrate of the refugee population based on return intentions in the Verian survey. In the following, we analyze the following four cases:

- **Case 1** We assume that the survey is representative of the adult refugee population (including those who crossed the border with Russia and Belarus) and that only those refugees who want to settle outside Ukraine are those who would have otherwise desired to emigrate.

- **Case 2** We assume that the survey is representative of the adult refugee population (including those who crossed the border with Russia and Belarus) and that those who want to settle outside Ukraine and those who do not know where to live are those who would have otherwise desired to emigrate.

- **Case 3** We assume that the survey is representative of the adult refugee population only in the countries it covers and that those who want to settle outside Ukraine and

those who do not know where to live are those who would have otherwise desired to emigrate. Furthermore, we assume that no individuals who crossed the border with Russia and Belarus plan to settle outside of Ukraine.

- **Case 4** We assume that the Verian survey is representative of the adult refugee population only in countries it covers and that those who want to settle outside Ukraine and those who do not know where to live are those who would have otherwise desired to emigrate. Furthermore, we assume that all individuals who crossed the border with Russia and Belarus plan to settle outside Ukraine.

Cases 3 and 4 represent polar opposites on desire to emigrate among Ukrainians who fled or were forcibly displaced to Russia and Belarus. Figure E5 demonstrates how the change in desire to emigrate between 2021 and 2022 would have looked for these four scenarios. We find that the observed drop of 25.8 percentage points increased to 26.0 pp in Case 1, and decreased to 22.8 pp in Case 2, 24.4 pp in Case 3 and 20.0 pp in Case 4. Even in the very conservative case 4, the drop in return intentions would still be in the 99th percentile of year-year changes shown in Fig. E5.

A.4   IKDIF/Razumkov Center Survey

To probe the strength of Ukrainians' national identity over time, we draw on publicly available data from a survey conducted by the Ilko Kucheriv Democratic Initiatives Foundation (IKDIF) together with the Razumkov Center in August 2022 and 2023 and in several earlier years.

The IKDIF/Razumkov Center surveyed individuals in person in August 2022 and 2023. In 2022, 2,024 individuals were interviewed, of whom 54 percent were female. In 2023, 2019 individuals were interviewed, of whom 55 percent were female. Both surveys included questions on national identity and on future plans. The former question has been asked in previous surveys since 2002, interviewing about 2,000 individuals per year.

National Identity *To what extent are you proud or not proud to be a citizen of Ukraine?* With the following answer options:

- Very proud
- Rather proud
- Hard to answer
- Rather not proud
- Not proud at all

Future plans *Would you like to build your future life in Ukraine?* With the following answer options:

- Yes, definitely
- Rather yes

- Hard to answer

- Rather not

- Definitely not

A.5   ISW: Frontline Data

To capture whether an individual's home region is under Ukrainian control, contested by fighting, or occupied by Russian forces, we construct a daily dataset of the position of the frontline. To construct the dataset, we draw on the (almost) daily updated maps of the war in Ukraine provided by the Institute for the Study of War (ISW) between June 2022 and November 2023 (Institute for the Study of War, The Critical Threats Project, 2023). Since the start of the war, ISW has been providing reports with maps visualizing the state of the war based on publicly available information sourced from news outlets, social media, and satellite imagery. Importantly, these maps include a line approximately indicating the frontline of the conflict. The constructed dataset is on the district level (average size of 4,406 km2) rather than the municipality level (average size of 342 km2). This makes it possible to realistically capture meaningful changes in the position of the frontline with respect to the locality of origin. As municipalities are relatively small, a municipality may be liberated but an adjacent municipality could still be on the frontline. By using the district as the level of analysis, we are better able to capture whether localities' status changes from the zone of conflict to being firmly under Ukrainian control. For instance, upon the withdrawal of Russian forces and advancements achieved by the Ukrainian military, several districts in the Kharkiv region were liberated.

We proceed by classifying districts in one of the following three categories, treating districts that are divided by a large watercourse, such as the Dnipro River, as if each side were a separate district:

1. The district is marked as "Under Ukrainian Control" if the full district is under control of the Ukrainian government.

2. The district is marked as "On the Frontline" if any area inside the district is occupied by Russian forces and any area is under control of the Ukrainian government.

3. The district is marked as "Occupied" if the full district is occupied by Russian forces.

Figure A4: Conflict intensity on the municipality level between the first and last interview days
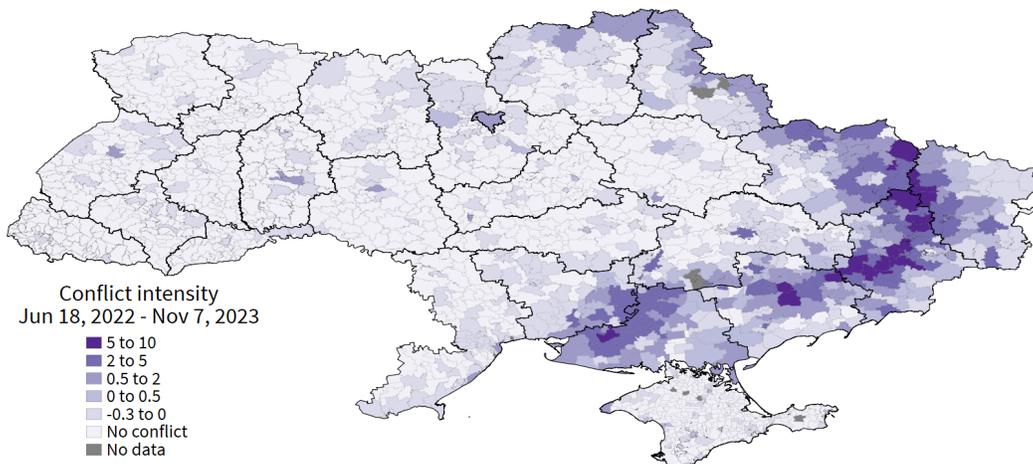
Notes: This figure shows the first principal component of conflict intensity across municipalities of origin in Ukraine.

Figure A5: Change in occupation states on the district level between the first and last interview days
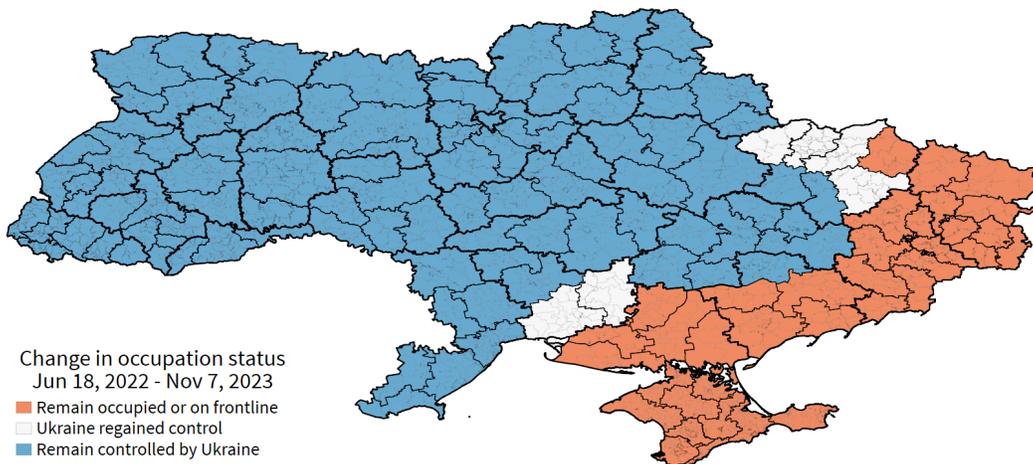
Notes: This figure shows changes in occupation status between the first baseline survey (June 18, 2022) and the last wave 6 interview (November 7, 2023) across districts of origin in Ukraine.

B   Representativeness

Table B1: Predictors of follow-up response

	(1) Number of follow-up waves	(2) Responded in at least one follow-up survey	(3) Long differences	(4) Long differences + conflict
Return very soon	0.757***	0.735***	0.718***	0.775***
	(0.059)	(0.061)	(0.063)	(0.069)
Return when safe (reference)	.	.	.	.
Do not know	1.079	1.126*	1.068	1.114
	(0.063)	(0.077)	(0.061)	(0.075)
Settle outside Ukraine	1.283***	1.242**	1.276**	1.269**
	(0.101)	(0.117)	(0.127)	(0.124)
Prefer not to answer	0.827**	0.747***	0.789**	0.943
	(0.072)	(0.082)	(0.094)	(0.110)
Home district liberated				0.970
				(0.042)
Home district still occupied				1.050
				(0.101)
Local conflict intensity				1.124**
				(0.056)
Observations	10884	10884	10884	8458
Pseudo R^2	0.04	0.03	0.04	0.03
Average dependent variable	0.559	0.237	0.204	0.263
Model:	Poisson	Logit	Logit	Logit

Notes: OLS regressions of measures of follow-up survey response. Standard errors clustered at the district level are shown in parentheses. The table shows relative risk ratios from Poisson and odds ratios from logistic regressions for three different outcomes: the number of follow-up waves a respondent answers (column 1), ever responding to a follow-up survey (column 2), and the respondent being in the long differences sample (columns 3 and 4). The reference category for initial return intentions is the intention to return when safe. Baseline controls are age bins (18-24; 25-34; 35-44; 45-54; 55-59; 60-64; 65 and older), and binary indicators for sex, partnership status, tertiary education, speaking English, originating from an urban area in Ukraine, accompanied by children, having a partner left in Ukraine, having children left in Ukraine, continuing one's Ukrainian job remotely, having left Ukraine before February 24, 2022 and answering the survey in Russian. Only individuals without missing covariate values are included in the analysis. Column 4 imputes local conflict intensity for attriters by drawing a date from the empirical distribution of follow-up response dates, and calculates measures of occupation status and conflict in the same way as for respondents. As information on the home municipality is missing for 2,426 individuals, we drop these. *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

C   Additional Results on Ukrainian Refugees

Table C1: Share of refugees working and in a job according to qualifications by destination country group

	Number of working-age individuals	Share working	Share of those working in a job according to qualifications
Country group			
Germany	290	0.26	0.46
Rest of Western Europe	185	0.41	0.34
Poland	233	0.52	0.33
Rest of Eastern Europe	193	0.53	0.44
Southern Europe	112	0.43	0.36
Total	1,013	0.42	0.38

Notes: Share of respondents working and working in a job according to qualifications by destination country group in wave six, for respondents aged 25 – 59. Only respondents who are working are asked about whether their job corresponds to their qualifications.

Table C2: Stated reasons for leaving Ukraine, by gender

	Female	Male
Under direct attack	0.19	0.19
Fear for own life	0.27	0.18
Reason of leaving: fear for children's live	0.60	0.31
Among those accompanied by minor children	0.89	0.72
Life is disturbed	0.21	0.26
Fear of fighting in military	0.00	0.04
Fear of chemical or nuclear attack	0.08	0.03
Uncertainty about the future	0.07	0.12
Fear of forced displacement by authorities	0.01	0.02
Taking the opportunity	0.01	0.06
Other	0.05	0.17
Prefer not to answer	0.00	0.01
Observations	10353	1430

Notes: Reason for leaving asked from all wave 1 responses. Respondents could choose up to two reasons.

Table C3: Stated reasons for returning to Ukraine

	Share of respondents
Reuniting with spouse or relatives	0.43
Willingness to continue education (your or your children/ grandchildren)	0.12
Professional, work-related matters	0.17
Willingness to look after a house or other property	0.03
Homesickness	0.32
Feeling that the situation in Ukraine has stabilized	0.05
Lack of funds for living abroad	0.18
Inability to find job	0.12
Insufficient support from local authorities	0.05
Difficulty adjusting to life abroad	0.09
Feeling that I am not welcome in previous country	0.03
To join the armed forces	0.01
Other reasons	0.05
Prefer not to answer	0.01
Observations	103

Notes: Reason for return stated by returnees on the long difference sample. Respondents could choose up to two reasons.

Table C4: The effect of conflict on return intentions on the restricted sample (where place of return in Ukraine is elicited)

Panel A: Returned to Ukraine

	(1)	(2)	(3)	(4)
Home district liberated	0.067***		0.079***	0.069***
	(0.019)		(0.019)	(0.023)
Home district still occupied	-0.028		-0.010	-0.015
	(0.023)		(0.031)	(0.032)
Local conflict between interviews		-0.008	-0.011	-0.012
		(0.007)	(0.008)	(0.009)
Observations	1436	1433	1433	1432
R^2	0.15	0.15	0.15	0.16
Average dependent variable	0.074	0.074	0.074	0.074

Panel B: Returned to home municipality in Ukraine

	(1)	(2)	(3)	(4)
Home district liberated	0.046		0.058*	0.047
	(0.033)		(0.031)	(0.036)
Home district still occupied	-0.040**		-0.020	-0.023
	(0.015)		(0.019)	(0.019)
Local conflict between interviews		-0.016***	-0.016***	-0.018***
		(0.005)	(0.004)	(0.005)
Observations	1436	1433	1433	1432
R^2	0.13	0.13	0.14	0.15
Average dependent variable	0.061	0.061	0.061	0.061

Panel C: Started to plan to settle outside Ukraine

	(1)	(2)	(3)	(4)
Home district liberated	-0.045***		-0.042**	-0.033
	(0.017)		(0.020)	(0.022)
Home district still occupied	-0.017		-0.017	-0.019
	(0.033)		(0.034)	(0.032)
Local conflict between interviews		0.007	0.012	0.015
		(0.010)	(0.011)	(0.010)
Observations	1436	1433	1433	1432
R^2	0.14	0.14	0.14	0.16
Average dependent variable	0.090	0.090	0.090	0.090

Baseline controls	✓	✓	✓	✓
Destination country FE	✓	✓	✓	✓
Week of interview FE				✓

Notes: This table shows results from OLS regressions for three different outcomes: a) whether someone has returned to Ukraine, b) whether someone has returned to his or her home municipality in Ukraine, c) whether someone no longer plans to settle outside Ukraine on the sample where place of return in Ukraine is elicited. See notes to Figure 3 and Table 2 for details on the specification. Standard errors, corrected for clustering at the district level, are shown in parentheses. N = * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C5: The effect of conflict on integration outcomes

	(1) Mainly working	(2) Mainly in training	(3) Subjective integration	(4) Started language course
Time between interviews (100 days)	0.032***	0.007	0.019	0.038
	(0.006)	(0.006)	(0.036)	(0.094)
Home district still occupied	-0.025	0.001	0.101**	0.053
	(0.040)	(0.027)	(0.042)	(0.075)
Local conflict between interviews	-0.006	0.012	-0.007	-0.037*
	(0.010)	(0.011)	(0.012)	(0.019)
Observations	2272	2272	503	544
R^2	0.36	0.26	0.16	0.22
Average dependent variable	0.325	0.224	0.024	0.061
Baseline controls	✓	✓	✓	✓
Destination country FE	✓	✓	✓	✓

Notes: This table shows regressions for four different outcomes on the long differences samples: a) Work as a main activity , b) Training as a main activity, c) Changes in the first PCA of subjective integration and d) changes in whether someone started a language course. See notes to Figure 5 for details on the specification and a coefficient plot including demographic covariates. Standard errors, corrected for clustering at the district level, are shown in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C6: The effect of return on expectations

	Expecting Ukraine to win
	(1)
Returned during prior wave	0.035
	(0.032)
Observations	3605
R^2	0.25
Average dependent variable	0.052

Notes: This table shows results from OLS regressions of a binary indicator for expecting Ukraine to win the war until the end of 2024 on an indicator of return during the previous survey wave. We control for the levels of war expectations in the prior wave. As this sample requires information about prior return status and about expectations, dependent variable values are from waves 3 – 6 and independent variable values are from waves 2 – 5. Standard errors, corrected for clustering at the respondent level, are shown in parentheses. N = * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure C1: Predictors of baseline levels of return intentions
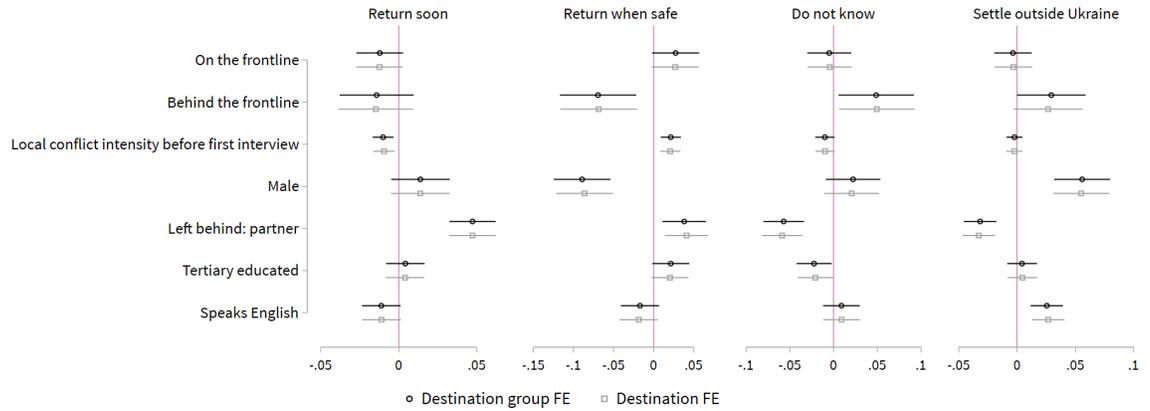
Notes: This figure shows coefficient plots of four multivariate OLS regressions using levels of return intentions as outcome variables during wave 1. We include the same control variables as in Figure 3. N = 9,041.

Figure C2: The role of destination countries in baseline return intentions
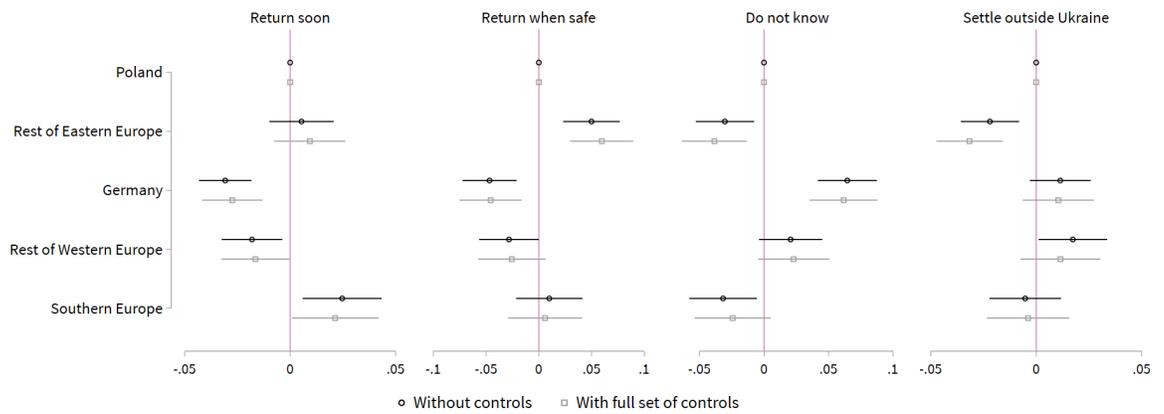
Notes: This figure shows coefficient plots of two sets of four multivariate OLS regressions of levels of return intentions as in Figure C1, replacing destination country fixed effects with country group indicators. We show the results for models without and with all controls in Figure 3. The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. We include the same control variables as in Figure 3. N = 9,041.

Figure C3: Most refugees plan to return and return intentions are predictive of actual return
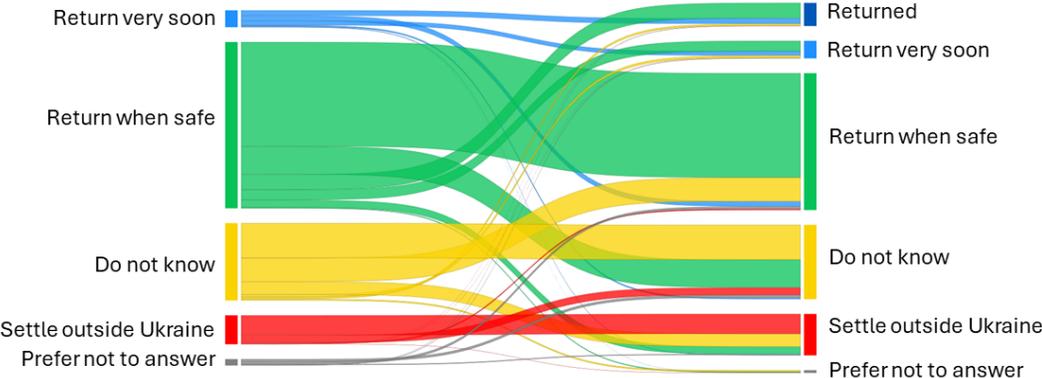
Figure C4: Employment by destination country
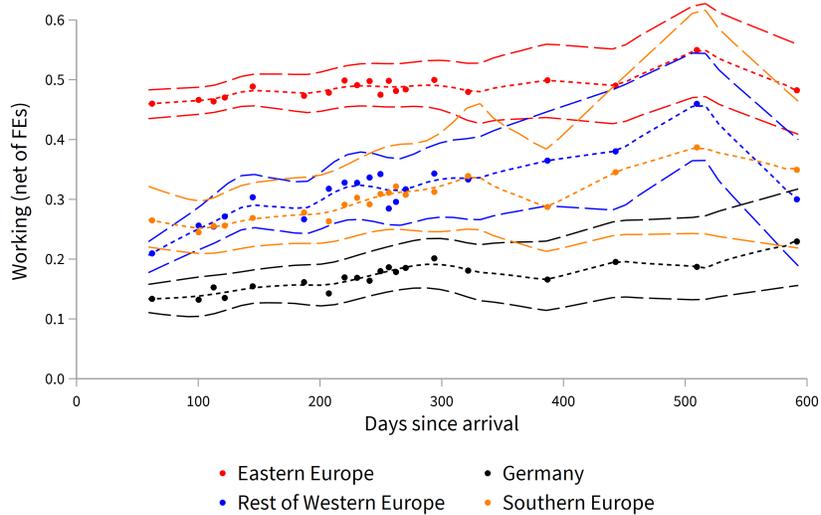
Notes: Binned scatterplot with non-parametric trend of levels of employment over time, net of individual fixed effects, with 90 percent confidence interval. To have sufficient statistical power to show patterns by country group, we combine the measures of any work and work as main activity as shown in Figure 2. To do so, we partial out level differences between any work (wave 1) and work as main activity (wave 2 to 6) through the inclusion of binary indicators when residualizing the raw outcome variables. For details on the procedure, see the notes to Figure 1. N = 3,165 (Eastern Europe), N = 1,708 (Germany), N = 742 (Rest of Western Europe), 1,318 (Southern Europe).

Figure C5: The role of destination countries in changes in return intentions
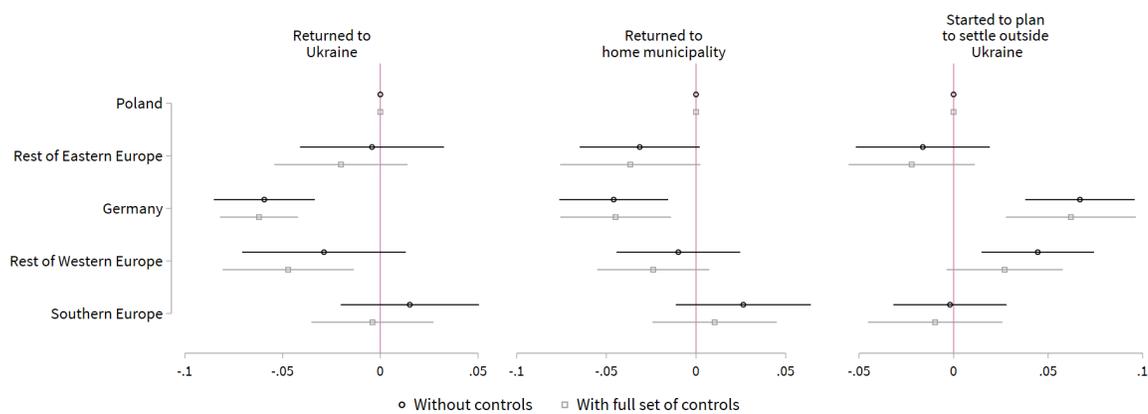
Notes: This figure shows coefficient plots of two sets of four multivariate OLS regressions as introduced in Equation 1, replacing destination country fixed effects with country group indicators. We show the results for models without and with all controls from Figure 3. The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. For details on the controls and fixed effects, see notes to Figure 3. N = 2,301 (column 1 and 3), N = 1,433 (column 2).

Figure C6: Predictors of changes in return (intentions) on the restricted sample
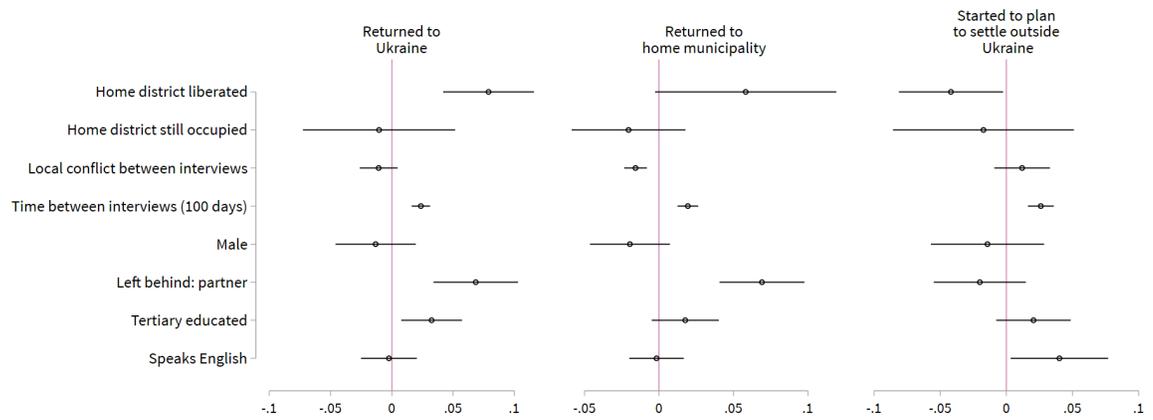
Figure C7: Heterogeneity in the effects of conflict
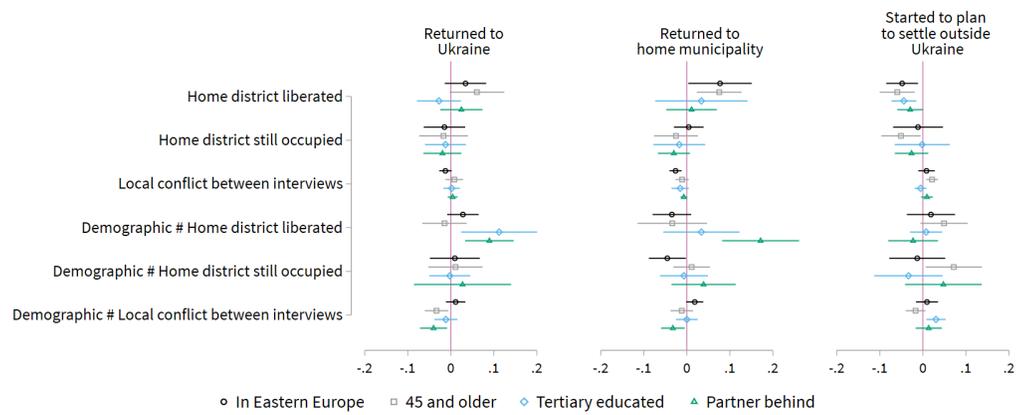
Notes: This Figure shows coefficient plots of multivariate OLS regressions for four dimensions of heterogeneity. The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. For details on the specification, controls and fixed effects, see Figure 3. N = 1,433 (column 1); 2,301 (column 2, 3 and 4)

Figure C8: Predictors of moving to a third country
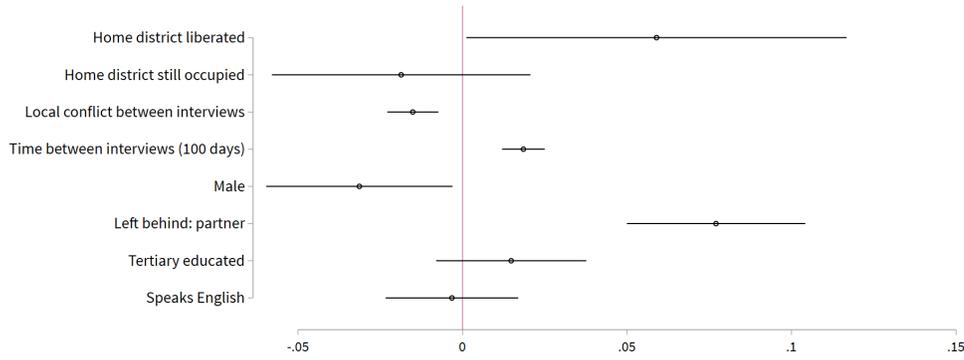
Notes: This Figure shows coefficient plots of a multivariate OLS regression of a binary indicator for moving to a different country than the initial destination country of residence or Ukraine. The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. For details on the specification, controls and fixed effects, see Figure 3. N = 2,301.

Figure C9: Conflict and additional integration outcomes
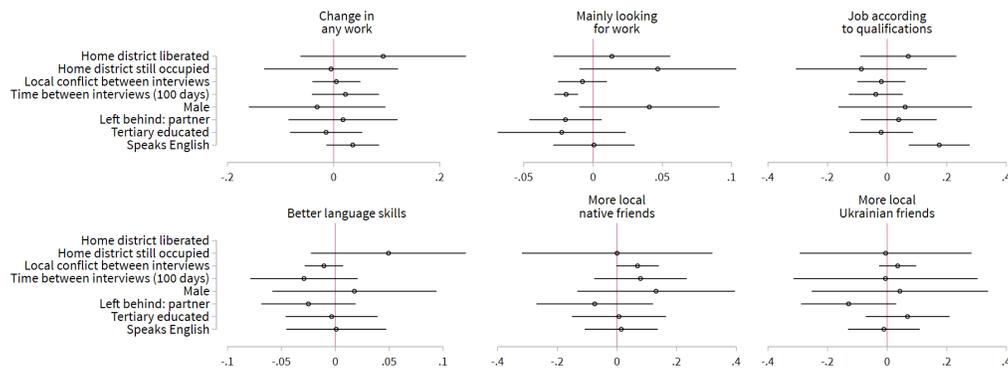
Notes: This figure shows coefficient plots of six multivariate OLS regressions. 95 percent confidence intervals are based on standard errors clustered on the district level. We restrict the sample to all respondents aged 25 − 59. "Any work" is the change in doing any work between the first and last survey of the long differences sample and can take values -1, 0 and +1 (N = 2,301). "Mainly looking for work" is a binary indicator for looking for work as a main activity in the last survey, after controlling for initial work status (N = 1,966). "Job according to qualifications" is a binary indicator for whether the respondent deems their job to fit their qualifications in wave 6 (N = 456), which is only asked to those working at the time of the survey. "Language skills" is the change in the first PCA of language skills between surveys (N = 550), "Local native friends" and "Local Ukrainian friends" are changes in the number of friends between the earliest response in wave 2 and 3 and the response in wave 6 (N = 546). The change takes value -1 if one reports less friends, 0 an equal number, and 1 if one reports more friends among natives and Ukrainians, respectively. The lower three subfigures do not include estimates for "Home district liberated" as no district was liberated during the sample period. All other control variables are identical to those in Figure 3.

Figure C10: Return intentions by expectations about the war.
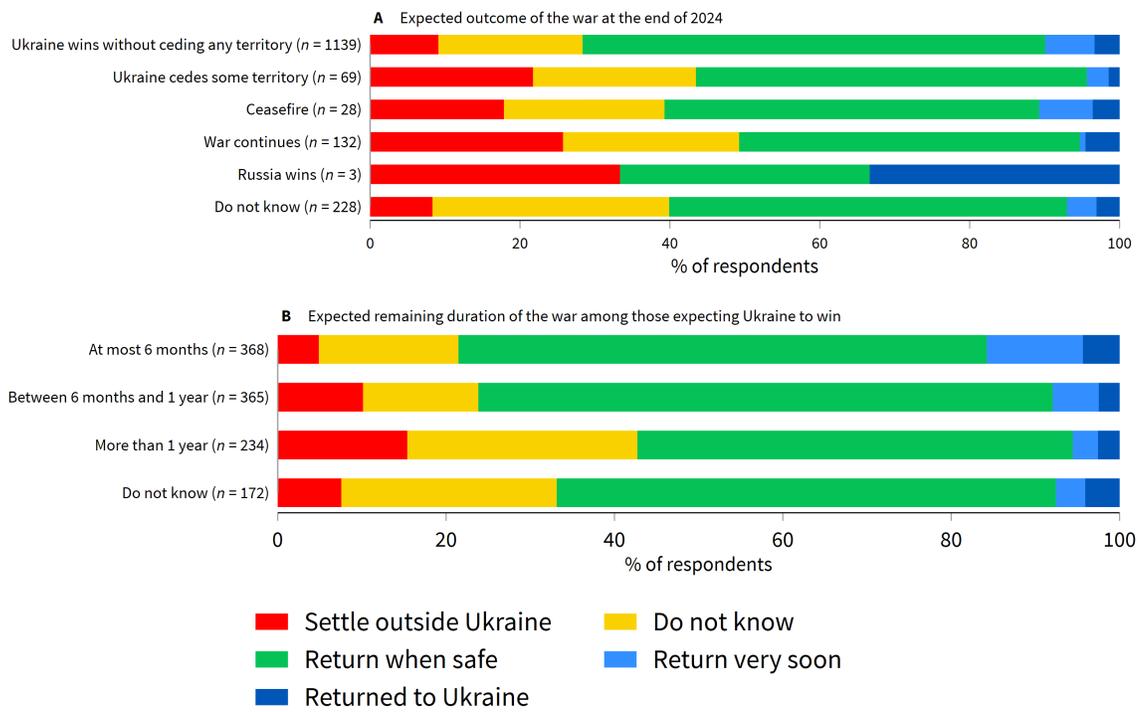
Notes: (A) shows the distribution of return intentions by expectations about the outcome of the war elicited in the second and third wave. (B) shows the distribution of return intentions by expectations about the duration of the war, contingent on expecting Ukraine to win the war without ceding territory in the third wave.

D Robustness

Figure D1: Robustness test: weighting
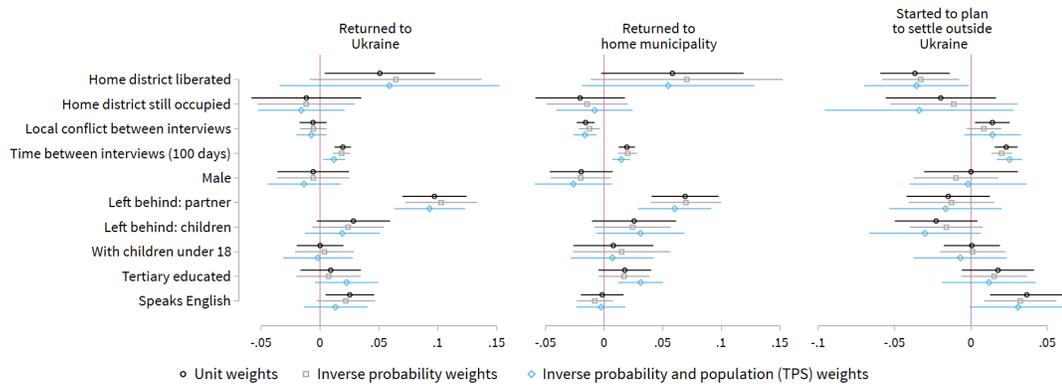
Notes: This figure shows coefficient plots of three sets of three multivariate OLS regressions as introduced in Equation 1, weighting the regressions. The black markers indicate unweighted regression results as in Figure 3, grey markers weighted with inverse probability weights obtained from the logistic regression in Column 3 of Table B1, and blue markers with both inverse probability weights as well as population weights as discussed in Section 2.4. N = 2,301 for the unweighted and IPW weighted and 2,296 for the population weighted regressions. The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. For details on the controls and fixed effects, see notes to Figure 3.

Figure D2: Robustness test for integration outcomes: weighting
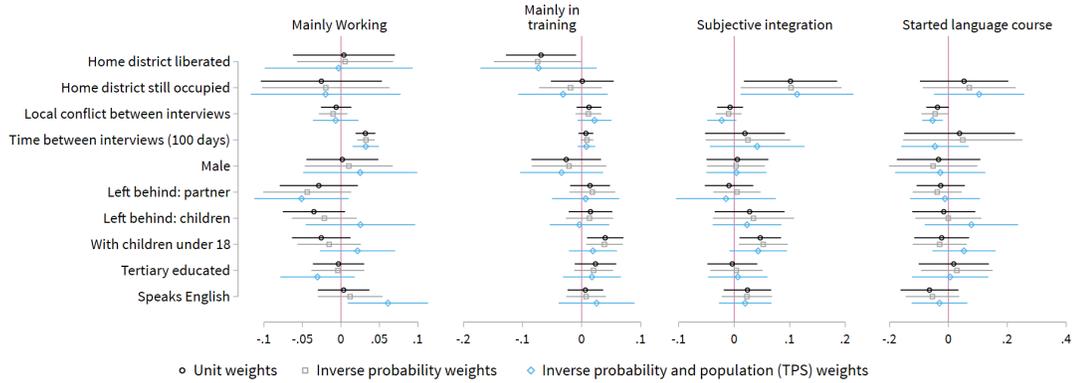
Notes: This figure shows coefficient plots of three sets of four multivariate OLS regressions as introduced in Figure 5, weighting the regressions differently. The black markers indicate unweighted regression results as in Figure 5, grey markers weighted with inverse probability weights obtained from the logistic regression in Column 3 of Table B1, and blue markers with both inverse probability weights as well as population weights as shown in Table A3. The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. For details on the controls and fixed effects, see notes to Figure 3. Number of observations for the unweighted and IPW weighted regressions from left to right: N = 1,966, N = 1,966, N = 503, N = 544, and for population weighted regressions: N = 1,962, N = 1,966, N = 499, N = 540.

Figure D3: Robustness test: spatially clustered standard errors
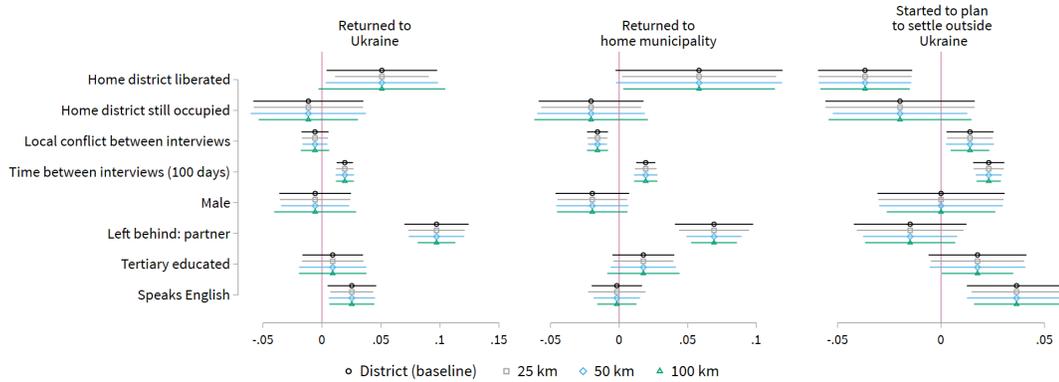
Notes: This figure shows coefficient plots of four sets of three multivariate OLS regressions as introduced in Figure 3. The Figure shows 95 percent confidence intervals constructed from standard errors allowing for arbitrary correlation at the district level (as in Figure 3), 25, 50 and 100 kilometers. Allowing for clustering at more than 100 km renders standard errors unreasonably small in some instances, suggesting a low number of effective clusters, and is therefore omitted. This is unsurprising as Ukraine's surface area is equal to about five circles with a radius of 200km. For details on the controls and fixed effects, see notes to Figure 3. N = 2,301 (column 1 and 3); N = 1,433 (column 2).

Figure D4: Robustness test: additional specifications
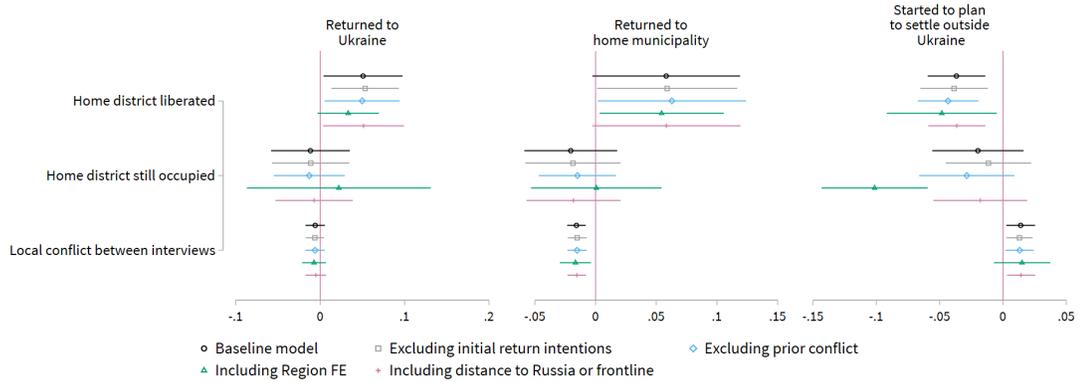
Notes: This figure shows coefficient plots of five sets of three multivariate OLS regressions as introduced in Figure 3, showing the coefficients on the conflict-related variables for four additional specifications. The first shows the baseline model, the second excludes the levels of initial return intentions, the third excludes the measure of prior conflict $Conflict_{imt_0t_1}$, the fourth includes region fixed effects and the fifth includes a measure of distance to the frontline or Russia (minimum distance) during the latest interview, for those areas under Ukrainian control. The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. For details on the controls and fixed effects, see notes to Figure 3. N = 2,301 (column 1 and 3); N = 1,433 (column 2).

Figure D5: Robustness test for integration outcomes: additional specifications
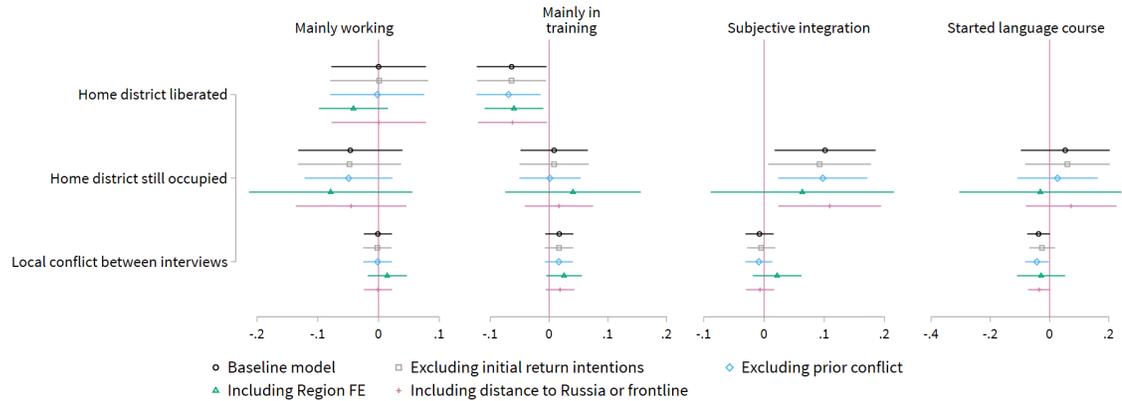
Notes: This figure shows coefficient plots of five sets of four multivariate OLS regressions as introduced in Figure 5, additionally showing the coefficients on the conflict-related variables for four additional specifications. The first shows the baseline model, the second excludes the levels of initial return intentions, the third excludes the measure of prior conflict $Conflict_{imt_0t_1}$, the fourth includes region fixed effects and the fifth includes a measure of the minimum distance to the frontline or Russia during the second wave interview, for those areas under Ukrainian control. The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. For details on the controls and fixed effects, see notes to Figure 3. From left to right: N = 1,966, N = 1,966, N = 503, N = 544.

Figure D6: Robustness test: independent conflict measures, logarithmic
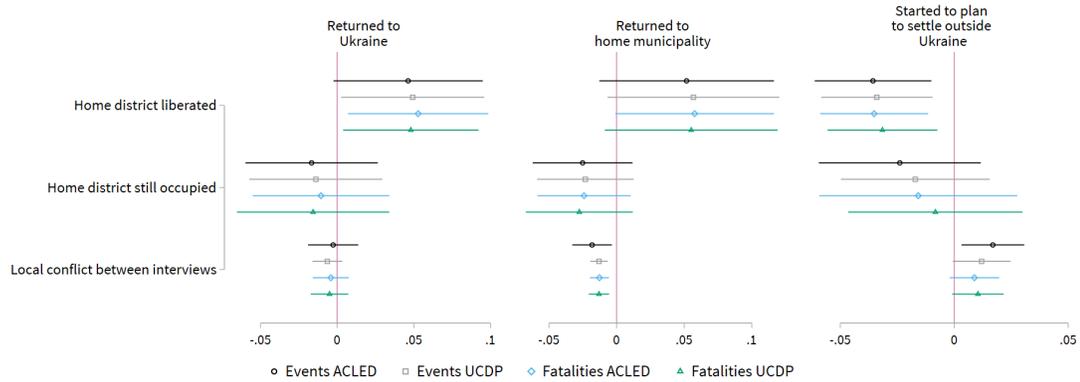
Notes: This figure shows coefficient plots of four sets of three multivariate OLS regressions as introduced in Figure 3, replacing the PCA-based measure of conflict intensity by its four individual constituents, one at the time. These are: the log (plus one) number of events in ACLED, events in UCDP, fatalities in ACLED, and fatalities in UCDP per 30 days between interviews. The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. For details on the controls and fixed effects, see notes to Figure 3. N = 2,301 (column 1 and 3); N = 1,433 (column 2).

Figure D7: Robustness test: independent conflict measures, linear
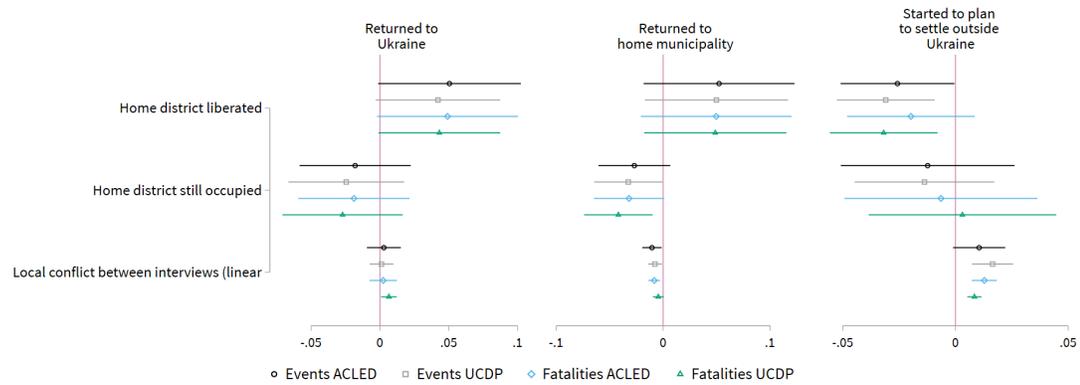
Notes: This figure shows coefficient plots of four sets of three multivariate OLS regressions as introduced in Figure 3, replacing the PCA-based measure of conflict intensity by the linear measures of four individual constituents. These are: the number of events in ACLED, events in UCDP, fatalities in ACLED, and fatalities in UCDP per 30 days between interviews. The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. For details on the controls and fixed effects, see notes to Figure 3. N = 2,301 (column 1 and 3); N = 1,433 (column 2).

Figure D8: Robustness test: radius of conflict
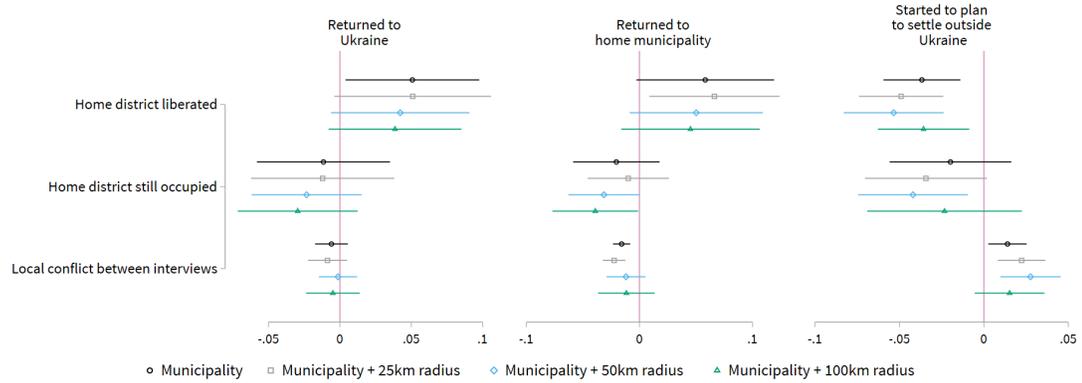
Notes: This figure shows coefficient plots of four sets of three multivariate OLS regressions as introduced in Figure 3, replacing the measure of conflict intensity with an analogous measure also including conflict in a radius around one's home municipality. We show results for conflict within municipality and within the municipality and 25, 50, and 100 kilometer radii around the municipality. The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. For details on the controls and fixed effects, see notes to Figure 3. N = 2,301 (column 1 and 3); N = 1,433 (column 2).

Figure D9: Robustness test: various sample restrictions
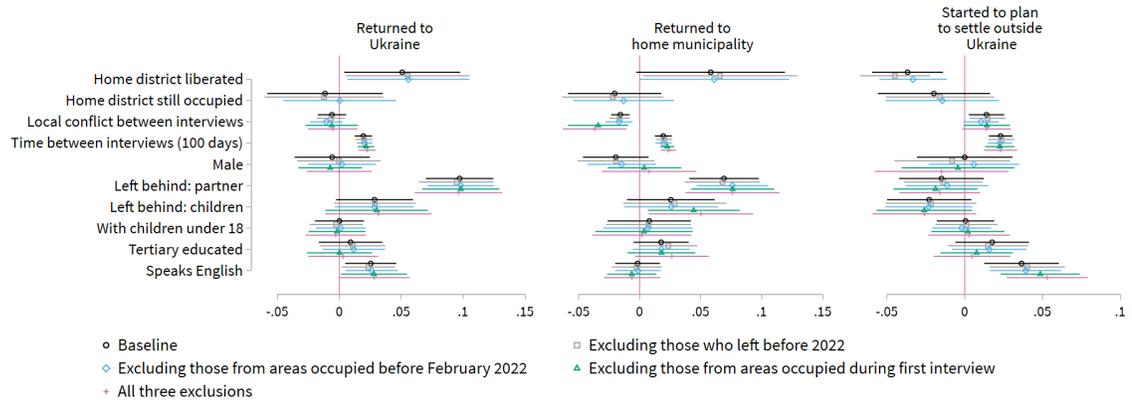
Notes: This figure shows coefficient plots of five sets of three multivariate OLS regressions as introduced in Equation 1. The black markers indicate estimates on the full sample as in Figure 3, grey markers indicate regressions without those who left Ukraine already before 2022 (146 individuals in column 1 and 3; 97 individuals in column 2), blue markers indicate regressions without those who are from areas that were already occupied before February 24, 2022 (77; 58), green markers indicate regressions without those who are from areas occupied during the first interview (610; 366) and pink markers indicate results omitting all three groups (732; 446). The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. For details on the controls and fixed effects, see notes to Figure 3.

Figure D10: Robustness test: ACLED casualty event types
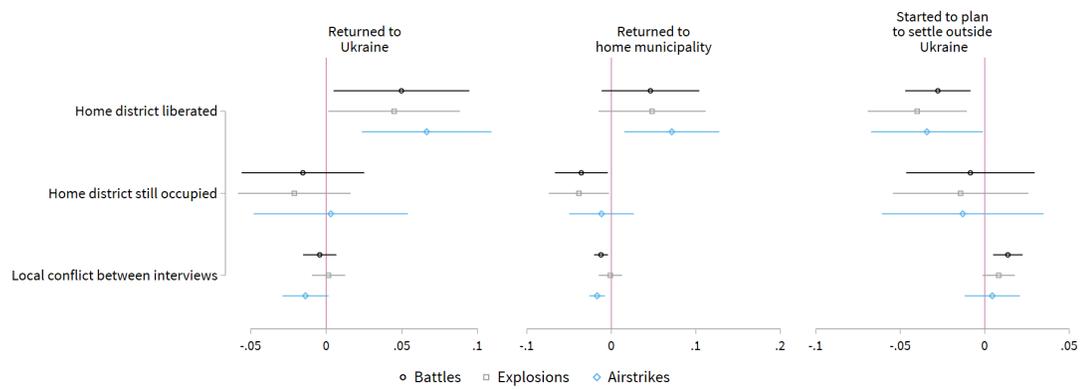
Notes: This figure shows coefficient plots of three sets of three multivariate OLS regressions as introduced in Figure 3, replacing the measure of conflict intensity with the log of the number of fatalities by event types as classified by ACLED. The figure shows 95 percent confidence intervals constructed from standard errors clustered at the district level. For details on the controls and fixed effects, see notes to Figure 3. N = 2,301 (column 1 and 3); N = 1,433 (column 2).

E   Additional Results from Other Surveys

Table E1: Oaxaca-Blinder decomposition of the gap in desire to emigrate before and after the Russian invasion

Panel A: Levels and explained and unexplained changes in desire to emigrate				
Year	2022		2023	
	Value	S.E.	Value	S.E.
2021	.383***	.019	.383***	.019
2022	.111***	.012		
2023	.		.154***	.015
Difference	.272***	.023	.229***	.024
Explained	.125***	.019	.099***	.016
Unexplained	.147***	.028	.129***	.027
Panel B: Explaining factors				
	Explained %	S.E.	Explained %	S.E.
Female	-3.1	2.7	-3.5	3.1
Age	1.7	1.7	1.4	2.0
Female × age	4.2	3.2	4.1	3.2
Children	0.1	0.4	0.1	0.3
Tertiary education	0.0	0.3	0.1	0.3
Optimism	12.7***	3.6	10.8***	3.2
Confidence in Government	14.2**	6.0	7.6**	3.3
Confidence in Military	13.7**	4.3	13.2**	4.1
Corruption in Business	2.6	1.6	0.7	0.8
Number of observations	1,329		1,243	

Notes: Based on all observations without missing responses for the desire to emigrate and for the explaining factors due to "don't know" and "prefer not to answer" responses in Ukraine in 2021 and 2022 (or 2023). The middle column in Panel A gives the level in 2021 and 2022 (or 2023), the difference and the explained and unexplained part. The middle (2022) and right (2023) column in Panel B gives the percentage of the gap explained by each of the explaining covariates, and its standard error. As the Oaxaca-Blinder approach decomposes the difference in desire to emigrate between 2021 and 2022 (or 2023) into contributions due to shifts in covariate values between 2021 and 2022 (or 2023), the contribution of each of the explaining factors can take negative values. The rightmost column gives the standard deviations of the estimates in the middle column. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure E1: Return intentions of refugees in Germany by time since arrival and origin country
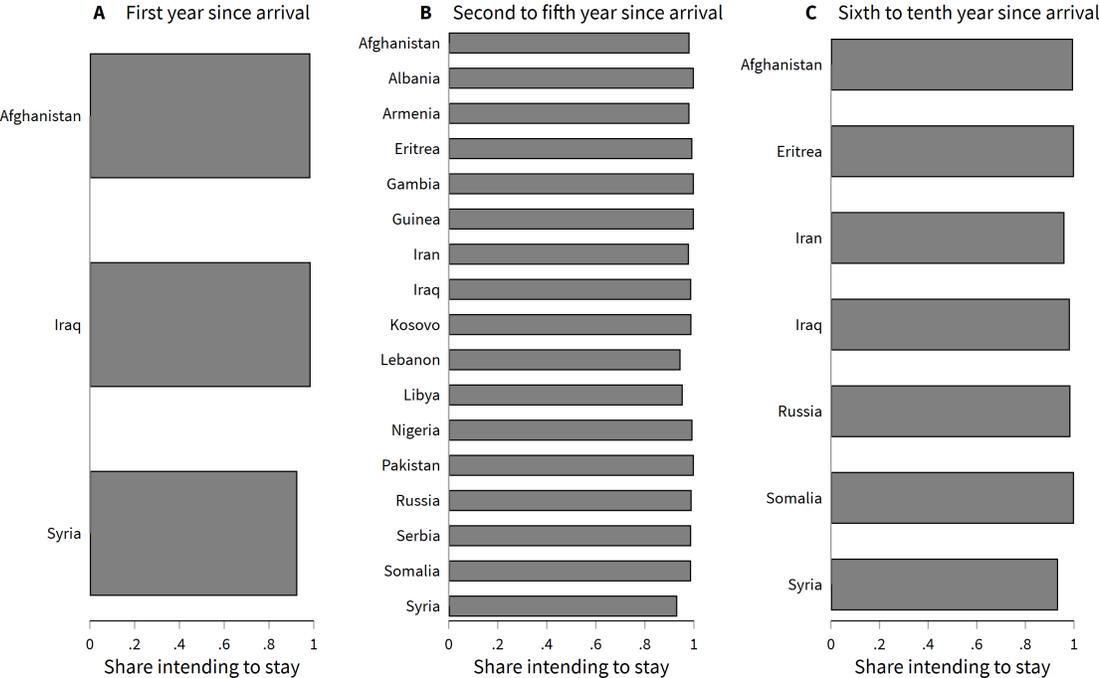
Notes: This Figure shows the share of respondents answering positively to the question: "Do you plan to stay in Germany?", by country and three spans of time since arrival, from the GSOEP 1984-2020. A) N = 1041; B) N = 15,835; C) N = 2,423. Only countries of birth with more than 50 respondents are shown.

Figure E2: Components of the first principal component of confidence in the government in Ukraine and across country groups between 2012 and 2023.
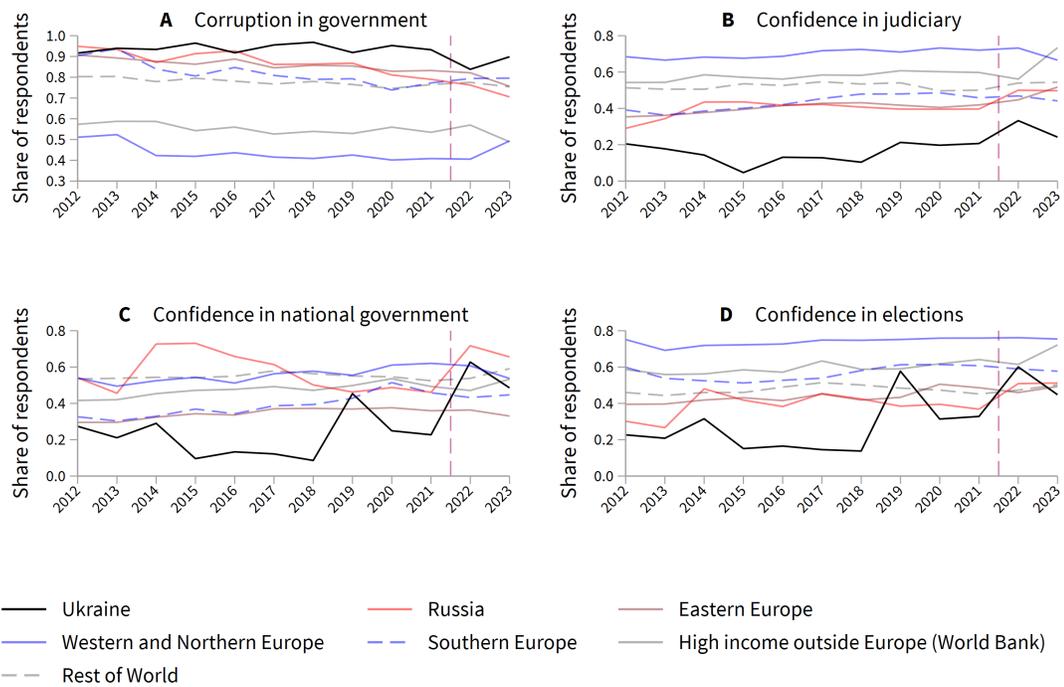
Notes: Changes in the four components of confidence in government. See notes to Figure 9 for construction of the sample.

Figure E3: Year-on-year changes in the desire to emigrate, optimism, and confidence in the government and military
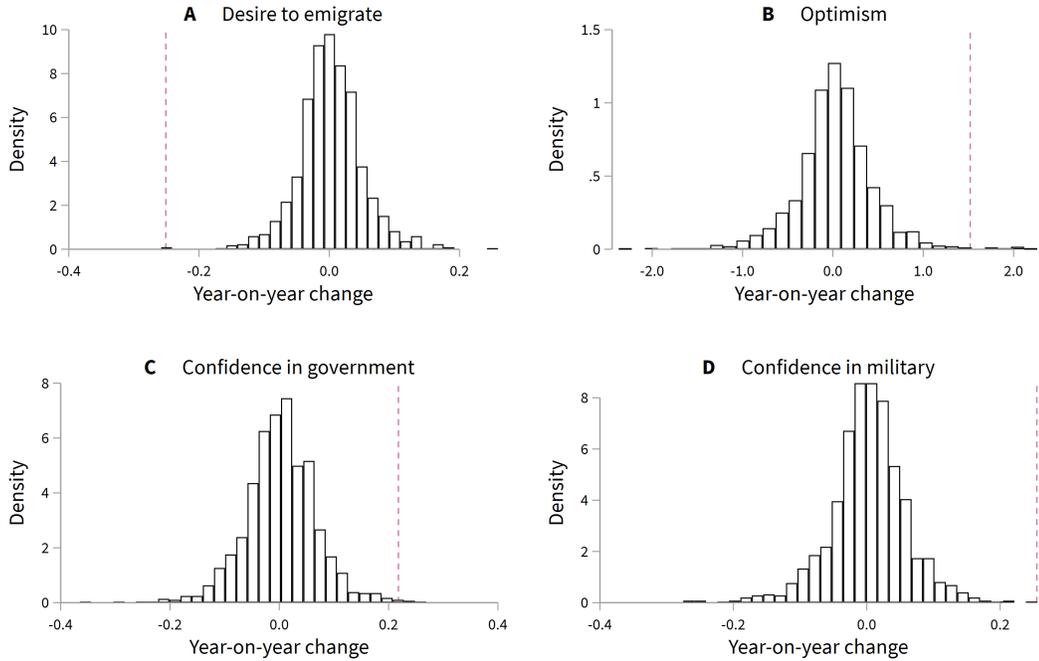
Figure E4: Desire to emigrate, optimism, confidence in government and military in Ukraine and country groups, controlling for demographic factors
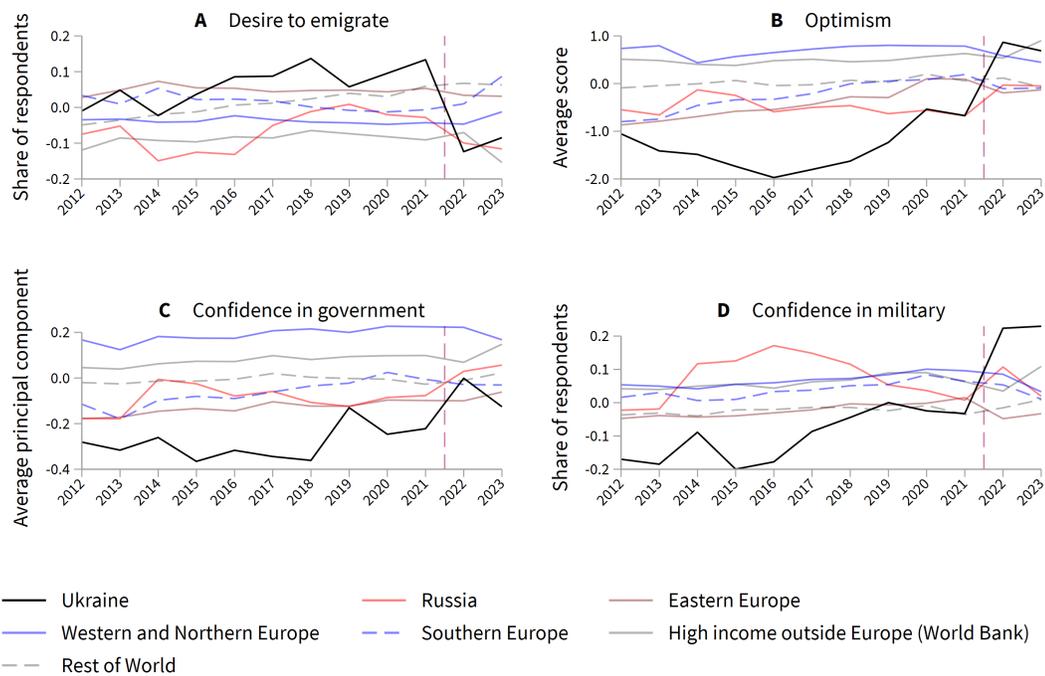
Notes: Desire to emigrate, optimism, confidence in government and military in Ukraine, Russia and five country groups, controlling for demographic factors. See notes to Figure 9 for information about the underlying sample and questions. Here, we show the residuals of each of the four outcomes after controlling for demographic factors. We obtain the residuals of the respective variables after regressing each of them on (1) age, age squared, dummies for secondary and tertiary educational attainment and (2) a binary indicator for being female, and all interactions of (1) with (2).

Figure E5: Desire of Ukrainians to live outside Ukraine under four scenarios.
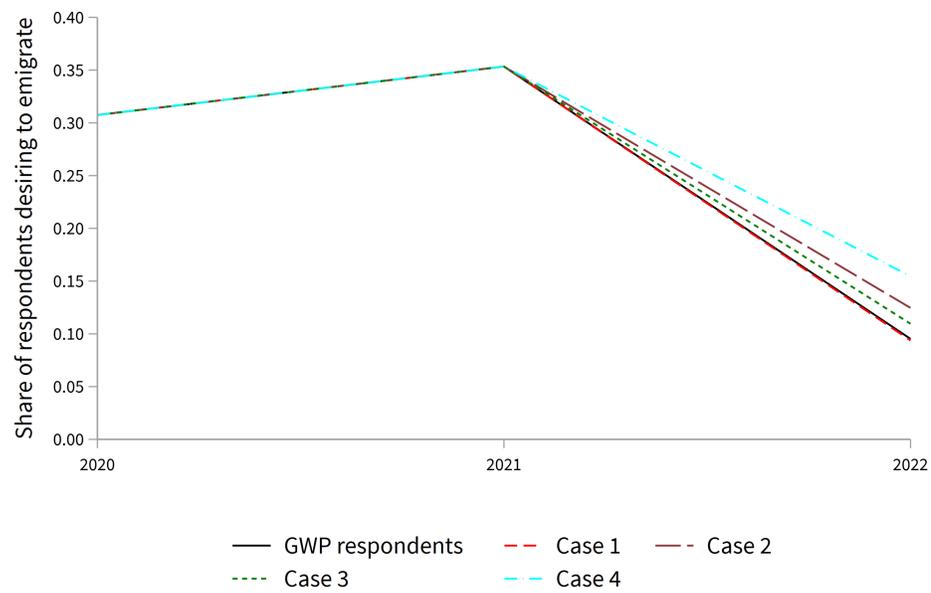
Notes: This figure shows how Ukrainians' desire to emigrate would have changed from 2021 to 2022 under four different scenarios about refugees' desire to live in Ukraine, discussed in Section A.3. We take the values for desire to emigrate for Ukrainians in Ukraine from GWP and use results from the full baseline Verian sample to evaluate the counterfactual desire to emigrate of Ukrainian refugees in case they would still be in Ukraine. The number of Ukrainians in Ukraine, in European countries covered by Verian and in Russia and Belarus are based on data from Eurostat from 31 August 2022. See text in Section A.3 for a detailed discussion of the four cases. N = 1,024 (2020), N = 974 (2021), N = 991 (2022).

Figure E6: National pride has increased over time and skyrocketed in 2022
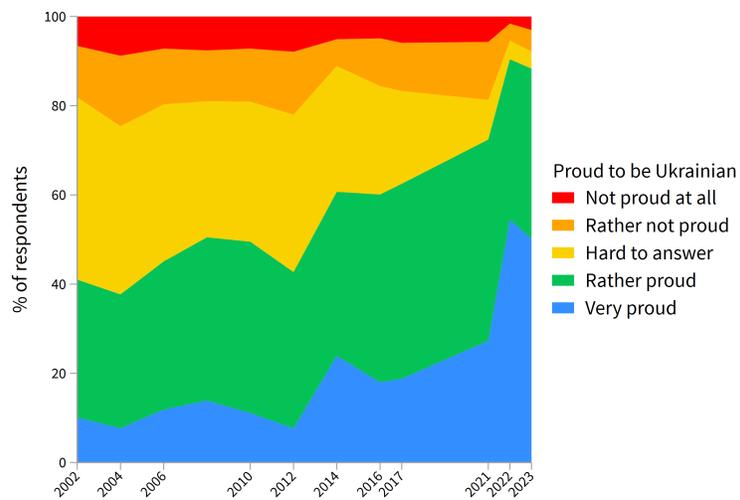
Figure E7: Most Ukrainian in Ukraine plan to build a future in Ukraine
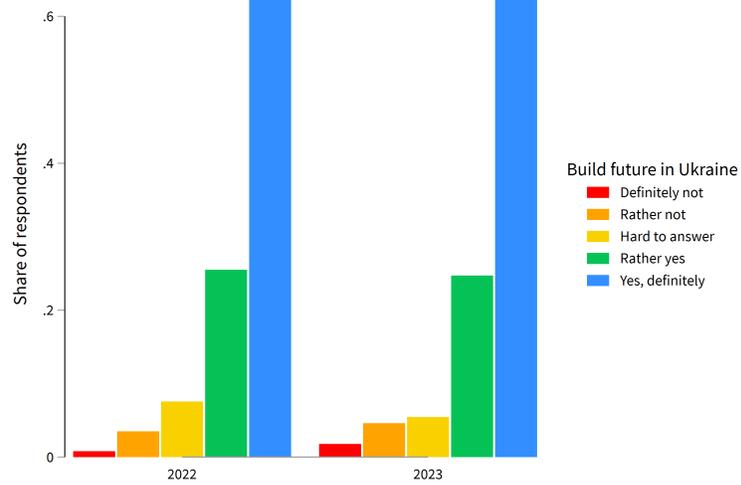
Notes: Distribution of plans to build a future in Ukraine. See the text and notes to Figure E6 about the survey, of which this figure only uses the 2022 and 2023 data on plans to build a future. N = 2,024 (2022) and N = 2,002 (2023).

Figure E8: Relation between national pride and plans to build a future in Ukraine
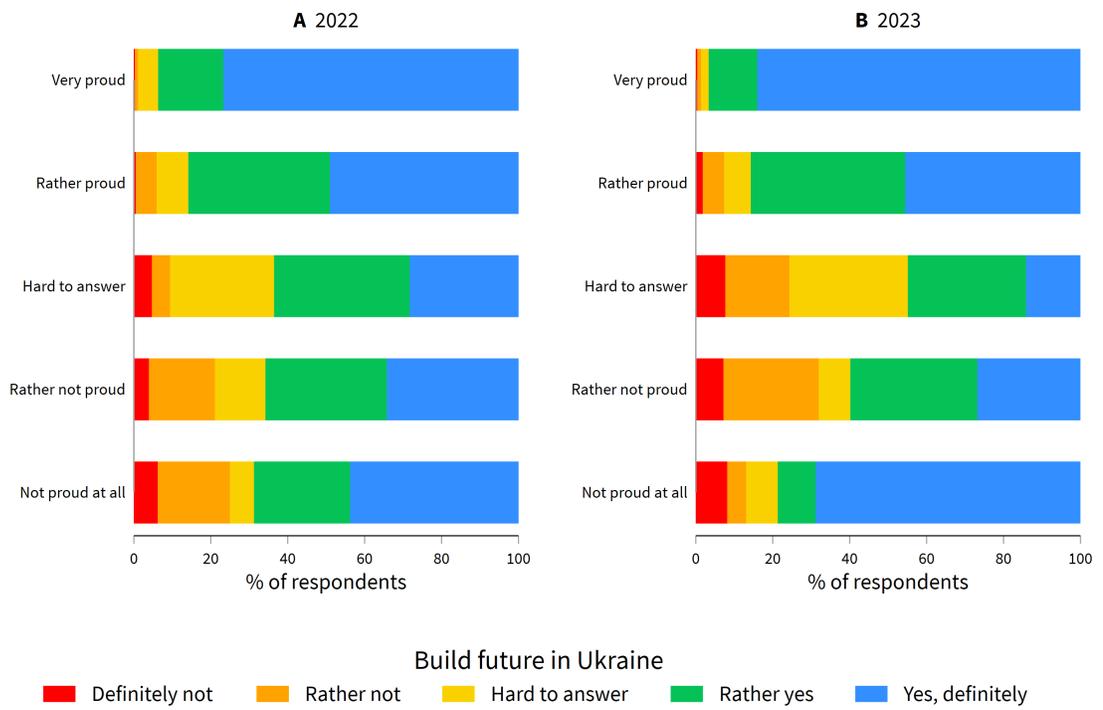
Notes: Plans to build a future in Ukraine in 2022 over levels of national pride. See notes to Figure E6 about the survey, of which this figure only uses the 2022 and 2023 data. N = 2,024 (2022) and N = 2,002 (2023).