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What Drives Refugees' Return After Conflict?*

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Abstract

Refugees' decisions to return after conflict carry significant political and economic implications for the origin and host countries. We examine how conflict resolution, security, economic conditions, and corruption influence return decisions. To estimate the causal effect of post-war conditions, we conducted a single-profile conjoint experiment among 2543 Ukrainian refugees across 30 European countries. Respondents were asked how likely they would be to return to Ukraine under different hypothetical scenarios. Results show that territorial integrity and security guarantees are critical, while economic prospects and combating corruption also play an important role. Refugees planning to return are more responsive to different post-war scenarios, and younger respondents are particularly influenced by income opportunities, job prospects, and potential EU accession. Our findings suggest that targeted political and economic reconstruction policies can substantially influence post-conflict return. In the most optimistic scenario, the expected return rate is 47%; in the most pessimistic scenario, only 3%.

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1 Introduction

Wars have lasting impacts on state capacity, political systems, and economic prosperity (Tilly, 2017; Glick and Taylor, 2010; Federle et al., 2024). A striking contemporary case is Ukraine, where the war has resulted in heavy destruction and severe disruptions to economic activity (Dietrich et al., 2025; ACLED, 2025; Centre for Economic Strategy, 2025) while simultaneously reinforcing national identity (Abramenko et al., 2024). Post-conflict reconstruction is a fundamental task that governments must confront to restore political stability and economic viability. Yet, the results of post-war reconstruction efforts have been mixed. In Western Europe and Japan, post–World War II reconstruction efforts successfully fostered long-term stability and prosperity (Eichengreen and Uzan, 1992). However, in other countries, such as Afghanistan, these efforts have failed (World Bank, 1998, 2011). The recent rise in organized violence, with more than 50 state-based armed conflicts recorded each year since 2015, highlights the need for deeper insight into effective post-war reconstruction strategies (Davies et al., 2023).

A vital component of post-conflict reconstruction is the return of those who fled the violence. Their reintegration helps restore the labor force and can facilitate knowledge transfer, trade, and cross-border investment between host and home countries (Parsons and Vézina, 2018; Mayda et al., 2022; Bahar et al., 2024). This is especially critical in the context of low birth rates, when future generations are unlikely to offset population losses from non-return (Vollset et al., 2020). The demographic trends in Ukraine provide a pressing case: between 1990 and 2021, its population decreased by 17%, reaching 41 million in 2021 (State Statistics Service of Ukraine, 2021). Following the 2022 Russian full-scale invasion, millions of Ukrainians sought refuge in other European countries, with a significant share being women accompanied by children. By 2025, more than 6.8 million Ukrainian refugees (17% of the 2021 population) remain abroad. Despite its importance, little is known about the conditions under which refugees return after the conflict has ended. Camarena and Hägerdal (2020) presents a notable exception: they document that the absence of economic opportunities after civil conflict may limit sustainable return among Christians in Lebanon.

In this paper, we examine the causal drivers behind Ukrainian refugees' post-conflict return intentions. We do this through a single-profile conjoint experiment conducted during the summer of 2024. This approach is more intuitive than the traditional paired conjoint design, as real return decisions are based on a single, realized post-war scenario. By presenting return scenarios with randomized attributes, we assess the relative importance of various post-war conditions on the perceived probability of return after conflict has ended

(Hainmueller et al., 2014; Leeper et al., 2020). This method enables us to isolate the effects of specific post-war conditions, such as security guarantees and territorial integrity, on refugees' willingness to return. Although this method collects return intentions in future scenarios, several previous papers have established that migration intentions are a good predictor of actual migration (Tjaden et al., 2019; van Dalen and Henkens, 2013). In the case of Ukrainian refugees, recent evidence by Adema et al. (2024) shows that return intentions are highly predictive of actual return.

Our results show that territorial integrity is the most important factor influencing the return decisions of Ukrainian refugees. Refugees have an expected return probability that is 10.8 percentage points higher if Ukraine regains all occupied territories than if Russia keeps all or most of them. The second most important factor is NATO membership, which would increase the expected probability of return by 7.1 percentage points compared to a scenario without security guarantees. Although economic and governance factors are less critical than territorial integrity and security, they still play a significant role. Reducing corruption would increase the subjective probability of return by 3.2 percentage points, which is comparable to the effect of a 20% increase in income and to expecting Ukraine to join the European Union (EU). Overall, we estimate that almost half of Ukrainian refugees would return to Ukraine in the most optimistic scenario that includes territorial integrity, NATO membership, and favorable economic and institutional development. In contrast, under the most pessimistic scenario, which involves territorial losses, no security guarantees, and weak economic and institutional development, only 3% of refugees are expected to return.

While extensive research has focused on the causes of forced displacement and the integration of refugees into host societies (Dustmann et al., 2017; Hainmueller et al., 2017; Harder et al., 2018), much less attention has been given to the factors driving refugees' decisions to return home. Most of the existing research on refugee return has focused on return during conflict, a period in which only a small share of refugees typically return due to safety concerns (Zakirova and Buzurukov, 2021; Beaman et al., 2022). UNHCR estimates that just about 1.2% of all refugees return annually (UNHCR, 2019). Research on Syrian refugees suggests that, although only a small share returned altogether, refugees' decisions to return are primarily driven by the safety situation en route and at home and are only weakly affected by conditions in the host country (Al Husein and Wagner, 2023; Alrababah et al., 2023; Beaman et al., 2022; Ghosn et al., 2021). Since return during conflict is usually rare, post-conflict return plays a larger role in determining overall return rates. However, return rates following the end of conflict vary significantly across cases (Constant et al., 2021).

Tuathail and Dahlman (2004) analyze the example of Bosnian refugees in Europe and show that half of the Bosnian refugees have returned 10 years after the war ended. Despite its importance, post-conflict return remains understudied. A second gap in the literature is due to the fact that the causal drivers of post-conflict return are difficult to observe directly, as only realized outcomes are observed. While analyses of past conflicts (Arias et al., 2014; Camarena and Hägerdal, 2020; Schwartz, 2019) provide valuable insights, they fall short of evaluating the causal impact of different post-war factors—such as the conditions of conflict resolution, the role of external support, and economic and institutional recovery—on return migration. All of these can shape expectations about future security and living standards. Third, despite the far-reaching implications of conflict resolution, little is known about how peace agreements or security guarantees from other nations can shape return migration. Our research addresses these three gaps in the literature by examining the causal impact of different post-war factors on return migration.

In Section 2, we begin by discussing relevant factors that can shape the post-war return of Ukrainian refugees, factors that inform the design of our experiment. Section 3 provides a general overview of the Ukrainian war and associated forced migration. In Section 4 we then outline the two samples of Ukrainian refugees we surveyed. Section 5 describes the experimental framework that guided our analysis, and details the design of our conjoint experiment. After presenting our empirical results in Sections 6, 7, and 8 we conclude in Section 9 by reflecting on the lessons we can learn from the Ukrainian case and how they might apply to understanding refugee return in other post-conflict settings.

2 Factors potentially driving post-conflict refugee return

The literature on post-war refugee return migration has emphasized the role of individual-level factors. Age and gender consistently emerge as key predictors: older individuals and men are generally more likely to return (Beaman et al., 2022; Harild et al., 2015). Family composition also plays a significant role, as refugees with family members remaining in their country of origin are more inclined to return, while those with strong social networks abroad tend to stay. Legal status also matters—those with temporary protection are more likely to consider returning than those with permanent asylum or citizenship (Harild et al., 2015).[1]

[1]Beyond the literature on return of refugees, the literature on non-refugee return migration has produced three key insights. First, return migration is often planned, with many migrants intending to return after achieving specific goals, not necessarily due to failed integration (Dustmann, 2003). Second, return decisions are significantly influenced by economic conditions both in the host and origin countries, such as wage differentials, employment opportunities, and exchange rates (Borjas and Bratsberg, 1996; Yang, 2006). Third,

Beyond personal characteristics, the decision to return is influenced by conditions in the home country. These include security, governance, and the broader context of post-conflict recovery, all of which shape perceptions of safety and prospects for reintegration (Black and Koser, 1999). We group these home-country factors into three main categories: (1) the conditions of conflict cessation, (2) the level of international support, and (3) the degree of economic and institutional development. The following section reviews the relevant literature on each of these dimensions and explores their implications for refugee return. We analyze the effects of personal characteristics in our heterogeneity analyses.

2.1 Conditions of conflict cessation

How interstate conflicts conclude can vary considerably, bearing significant implications for the sustainability of peace and the resolution of underlying disputes. UCDP's Conflict Termination Dataset contains information about the ending of interstate conflicts (Kreutz, 2010).[2] Between 1946 and 2019, conflict episodes between states ended on average one year after their onset (standard deviation: 2 years). Among these, 20% concluded with a peace agreement, 22% with a ceasefire, 30% ended in a victory for one of the parties without a formal agreement, and 28% faded out as fighting subsided without resolution. Importantly, 11% of all conflicts represent recurring episodes between the same actors, highlighting that conflict termination does not always imply lasting peace. Territorial concessions as a result of conflict are also common. The territorial change dataset of the Correlates of War project recorded 47 territorial changes as a result of conflict between 1946 and 2008 (Tir et al., 1998).

The manner and timing of how and when conflicts end are crucial for shaping expectations about renewed violence and perceptions of long-term safety. Durable peace agreements significantly increase the likelihood of voluntary return (Black and Koser, 1999; Stein and Cuny, 1994). Territorial losses, instead, may discourage return, particularly for those originating from the lost territory, but potentially also for others whose home regions are now near the new border. Furthermore, prolonged displacement tends to deepen refugees' economic and social integration into the host country, thereby reducing the likelihood of return (Brell et al., 2020; Hannafi and Marouani, 2023; Prömel, 2023).

migrants with stronger ties to their home country, such as family, property, or cultural attachment, are more likely to return (Constant and Massey, 2002).

[2]Armed conflict is defined by UCDP as at least 25 battle-related deaths in a calendar year.

2.2 International support and cooperation

External support in the form of financial assistance, military aid, or deployment of foreign troops has become an increasingly important element of armed conflicts since the 1970s (Meier et al., 2023). Ukraine is a prime example of this trend. Western allies have pledged hundreds of billions in support to Ukraine (Trebesch et al., 2023). As refugees' return to their countries after the end of conflict is limited by the threat of violence resurfacing (Muggah, 2005) and poor economic conditions (Camarena and Hägerdal, 2020), military and financial assistance by other countries can play an important role in facilitating refugee return. In addition to increasing Ukraine's chances on the battlefield, military assistance can significantly affect perceptions of safety after the fighting has ended by making renewed aggression more costly to Russia. NATO accession and security guarantees for Ukraine from certain member states have been discussed, but no decisions have been reached (The Associated Press, 2025).

International support may not only take the form of military alliances and direct support, but also through regional integration into the European Union. EU membership could strengthen Ukraine's security. This would occur partly through informal security assurances arising from deeper integration, which would increase other member states' stake in Ukraine's stability and long-term prosperity. Ukraine was granted EU candidate status on 23 June 2022 and formally opened accession negotiations on 25 June 2024 (Reuters, 2024). However, EU accession negotiations typically span several years, meaning that candidate status is unlikely to lead to swift membership. Nonetheless, given the perceived military advantages, both NATO and EU accession enjoy broad public support in Ukraine (Ukrinform, 2025).

2.3 Economic and institutional development

The economic consequences of war are long-lasting and reach beyond directly affected areas through production network shocks (Federle et al., 2024; Couttenier et al., 2024). Due to these costs, post-war countries are often in a dire situation and are less desirable places to reside than before the war. However, economies can experience strong growth in the post-war period (Eichengreen and Ritschl, 2009).

One of the main challenges facing Ukraine, beyond Russian aggression, is deeply entrenched and systemic corruption (Transparency International, 2021). Corruption is also consistently mentioned by Ukrainians as one of the most important challenges that Ukraine is facing (The Kyiv Independent, 2024). Good, non-corrupt institutions that eliminate the

threat of ex-post expropriation are crucial for investment incentives and, ultimately, economic prosperity (Acemoglu et al., 2001, 2002).

Economic conditions in the origin country strongly shape return decisions of non-refugee migrants (Yang, 2006; Amanzadeh et al., 2024). Once safety returned, economic conditions in the home country become important to refugees' return decisions (Alrababah et al., 2023). However, if economic opportunities are limited, refugees may choose to only visit temporarily instead of resettling permanently (Camarena and Hägerdal, 2020). In the case of Ukraine, this option may be particularly appealing given the ease of traveling from Ukraine to refugee-hosting European countries.

Access to employment, housing, and education significantly influences return decisions (Valenta and Strabac, 2013; Black, 2001). The restoration of public services and the perceived legitimacy of government institutions are also crucial; refugees are less likely to return if state institutions are non-functional (Cordero, 2019). Successful reintegration often hinges on whether the state can enforce property rights and deliver services.

In addition, the prospect of EU accession is likely to spur economic development and institutional reform in Ukraine by granting firms and citizens access to the EU's vast single market, providing financial assistance through common agricultural and regional policies, and supporting institutional strengthening.

3 The war in Ukraine

The war in Ukraine began in 2014 with Russia's annexation of Crimea and its support for separatist militias in the Donbas, sparking a prolonged proxy conflict. These events marked a major escalation in Russian-Ukrainian tensions, leading to thousands of deaths and the displacement of over a million people (Menon and Rumer, 2015). The situation intensified dramatically on 24 February 2022, when Russia launched a full-scale invasion of Ukraine. This triggered the largest refugee crisis in Europe since World War II.

Since the invasion, more than 6 million Ukrainian refugees have sought protection in other European countries (excluding Belarus and Russia), with Germany and Poland being the main host countries (UNHCR, 2025). Ukrainian refugees are eligible for temporary protection in the EU, Norway, Switzerland, and the UK, granting them residence and work rights. A large share of Ukrainian refugees are women with children (Brücker et al., 2023), in part due to Ukraine's ban on men aged 18–60[3] from leaving the country, with limited

[3] 23-60 starting August 2025 (Reuters, 2025)

exceptions. The economic effect of the outflow of Ukrainian refugees is even bigger than their population share suggests, as Ukrainian refugees are younger and more educated than the Ukrainian population in general (Kohlenberger et al., 2023).

Destination choices and return intentions of Ukrainian refugees have been the focus of multiple recent studies. Before the war, around 26% of Ukrainians expressed a desire to move abroad, indicating substantial migration potential. Most refugees initially preferred to migrate to Germany, Poland, or Italy (Elinder et al., 2023). Adema et al. (2025) conclude that job opportunities are a much stronger driver of Ukrainian refugees' destination choice than social assistance. Compared to other refugee groups in Europe, Ukrainian refugees showed unusually strong return intentions early in the conflict (van Tubergen et al., 2024). However, return intentions have considerably weakened over time, and 2.5 years into the war, only about 10% of those who had fled Ukraine had returned (Adema et al., 2024).

Several previous studies have examined the broader consequences of the conflict in Ukraine, as well as Ukrainians' opinions on potential concessions that could end the war. The 2014 and 2022 Russian invasions significantly strengthened Ukrainian national identity (Kulyk, 2024) and contributed to a shift away from the Russian language (Abramenko et al., 2024).[4] Economic ties with Russia also weakened, especially in regions with fewer ethnic Russians, where trade with Russia dropped more sharply after 2014 (Korovkin and Makarin, 2023). Methodologically most related to our survey, (Dill et al., 2024) implemented a conjoint experiment in Ukraine in summer 2022, examining support for different war strategies that Ukraine could pursue. In their conjoint experiment, expected military and civilian casualties associated with alternative strategies varied between 6,000 and 24,000 within three months, the risk of Russian nuclear attack varied between 0 and 10%, and the expected war outcomes ranged from a withdrawal of Russian troops to a Russian-installed government. They found that Ukrainians were not willing to give up their sovereignty or territory to avoid an additional 18,000 civilian or military casualties or a 5 or 10% risk of a Russian nuclear strike. Strong willingness to defend one's independence and territory reflects the rise of a more cohesive and assertive national identity (Bachleitner, 2025).

Ukraine and its allies have started to plan for reconstruction already in the first months of the war (The Associated Press, 2022). As Ukraine's reconstruction planning progresses, it encompasses a broad set of challenges, including broad economic reform, urban redevel-

[4]Although the conflict re-emerged in 2014, Russian aggression toward Ukrainians—including repression and famine—dates back to the USSR and resulted in numerous casualties (Markevich et al., 2024). Rozenas et al. (2017) and Zhukov and Talibova (2018) have examined the long-term political consequences, finding lower voter turnout and reduced support for pro-Russian parties in affected areas.

opment, industrial policy, EU membership negotiations and subsequent integration into the EU, anti-corruption efforts, and a significant internally displaced population, in addition to refugees abroad (Becker et al., 2025).

4 Data

We rely on data from two complementary panel surveys conducted among Ukrainian refugees. The first survey, covering Ukrainian refugees in 30 European countries, provides broad geographic coverage. The second survey offers a representative sample of Ukrainian refugees within the most popular host country, Germany. Demographic characteristics of the respondents from Survey I and Survey II and their respective target populations are presented in Table A.1.

4.1 Survey I: online survey across Europe

This survey, conducted in collaboration with Verian, involves an ongoing online panel targeting Ukrainian refugees aged 18 and above. Recruitment for the first wave occurred through Facebook ads between June 14, 2022 and December 22, 2022. Respondents were rewarded with a 3 Euro voucher for each of the follow-up waves, including the wave that included the survey experiment. The conjoint experiment was implemented in the eighth wave (June 21, 2024 – July 14, 2024), yielding responses from 1016 participants.

Recruitment through Facebook allowed us to reach Ukrainian refugees in the early stages of the war, regardless of whether they were officially registered in their host country, but at the cost that the resulting panel is not fully representative of the Ukrainian refugee population. Specifically, men and young respondents (especially in the age group 18-24) as well as respondents aged 65 or more are to some extent underrepresented compared with register data (see Table A.1). Importantly, in Figure A.3 for Survey I and Figure A.4 for Survey II, we show that our results remain qualitatively similar if using population weights constructed based on the joint distribution of age, gender, and destination country in the population of Ukrainian refugees as of July 2024.

4.2 Survey II: online survey in Germany

Using administrative data from the Central Register of Foreigners (AZR) provided by the Research Data Center of the Federal Office for Migration and Refugees (Federal Office for

Migration and Refugees (BAMF), 2025; BAMF-Forschungsdatenzentrum, 2021), we invited a random sample of 30,000 Ukrainian refugees residing in Germany to participate in the baseline survey in December 2023. Participants from this initial survey and an additional random sample of 15,000 postal invitations were invited to take part in the survey wave that contained the conjoint experiment between July and October 2024. Respondents were rewarded with a 5 Euro voucher for participation in this survey wave. In total, 1,527 respondents (691 from the 2023 recruitment wave and 836 from the refreshment sample) took part in the Survey II. The age and gender distribution of responses matches that of the target population reasonably well, although older respondents are somewhat less likely to respond to the survey (see Table A.1).

4.3 Descriptives

In both surveys, we ask refugees about demographic information, the last region of residence in Ukraine, educational background, and employment situation. In addition, we asked about their current return plans on a 4-point scale (Return soon, Return when safe, Do not know, and Settle outside Ukraine) in both surveys, as well as their non-experimental subjective probability of return in the following five years in Survey II. The former probes their current intention to return, which predominantly measures individuals' aspirations. The latter, instead, probes the subjective probability of return on a quasi-continuous scale, which also captures people's beliefs about how feasible return is. Table A.2 presents descriptive statistics for all variables used in the main text of this paper, and Table A.3 details the wording of the corresponding questions.

Across both surveys, most respondents hold higher education degrees (66.9%) but seem to face significant labor market barriers abroad, as only 30.5% report being employed. Nearly 40% of respondents originate from regions that are occupied or on the frontline. The return plans of Ukrainians vary markedly between surveys across Europe and in Germany: while 43.3% of Survey I respondents plan to return, only 12.3% do so in Survey II, with the majority (57.2%) intending to stay abroad. The pattern of low return intentions among Ukrainian refugees in Germany is also found in other surveys (van Tubergen et al., 2024).

The average subjective probability of return within five years in Survey II is still 30.4%, which suggests the scope for return is higher than from the return plans question. Even among those planning to settle outside of Ukraine, the average expected return probability is still 15.0% (42.9% among those who do not know and 72.3% among those who plan to return).

5 Research design

To explore the determinants of return plans among Ukrainian refugees, we employ a single-profile conjoint experiment. This method simulates realistic decision-making by presenting respondents with hypothetical post-war scenarios, characterized by distinct attributes. The approach relies on independent randomization of attribute levels to estimate causal parameters that quantify the impact of attributes on the outcome of interest (Hainmueller et al., 2014; Leeper et al., 2020). We conduct a single-profile rather than a paired-profile conjoint design for two reasons. First, in a paired design, if a given attribute level is strongly preferred relative to the alternatives, it can produce large effect sizes, regardless of whether respondents actually have strong return intentions. As a result, paired designs can only capture relative preferences across scenarios, not absolute preferences, which are essential for predicting how many refugees would return under a realized scenario. Second, a single-profile design better reflects the nature of return migration decisions, where individuals face a single realized scenario rather than a choice between alternatives—as in the typical paired-conjoint setting (e.g., voters choosing between candidates as in Hainmueller et al. (2014) or migrants choosing between destination countries as in Adema et al. (2025)). Prior conjoint and vignette studies on return migration decisions have similarly adopted the single-profile approach (Alrababah et al., 2023; Beaman et al., 2022).

The usefulness of conjoint experiments has been demonstrated in various contexts: the results of conjoint experiments on sensitive topics such as support for immigrant naturalization or stereotypes about welfare recipients align with observed choices (Hainmueller et al., 2015; Myers et al., 2024) and strongly reduce social desirability bias by diverting attention away from sensitive attributes (Horiuchi et al., 2022).

5.1 Conjoint design

Each hypothetical post-war scenario is described by eight attributes related to the conditions of cessation of hostilities, international security arrangements, EU integration, and economic and institutional development in Ukraine. For each attribute, we selected several realistic levels while keeping the total number limited to maintain sufficient statistical power. The full list of attributes and their corresponding levels is presented in Table A.4. An example realization of our experimental task is shown in Supplementary Figure A.1. Each survey participant was subsequently presented with five independently drawn scenarios. To indicate the appeal of return, after each scenario respondents were asked to indicate on a scale from

0 to 100 their subjective probability of return.

The attributes related to the cessation of hostilities are the following: when the fighting ends, the formality of resolution, and territorial control after the fighting ends. We varied the end of the war between 2024, 2025, 2026, and 2027 or later. The attributes for conflict resolution capture whether a peace or armistice agreement has been signed between Ukraine and Russia, or whether there is no such agreement. The territorial integrity attribute reflects whether Ukraine has restored the borders of 1991, liberated most but not all currently occupied territories, or if Russia has kept most or all occupied territories.[5]

The attribute related to international security arrangements revolves around NATO membership or security guarantees. We vary whether Ukraine receives no security guarantees, security guarantees from some but not all NATO countries, or whether Ukraine joins NATO. In addition, we study the effects of EU membership by varying whether Ukraine's EU accession talks are on hold, Ukraine is expected to join within 5 years, or in more than 5 years.

The attributes related to economic and institutional conditions involve labor markets and corruption. We include two attributes related to labor markets: job opportunities as well as changes in the general income level. We vary whether it is easy or hard to find a job according to qualifications and vary changes in incomes relative to before the war between -20% and +20% in increments of 10 percentage points. We focus on income levels relative to pre-war figures, which serve as a natural reference point given the war's disruption of labor markets. Moreover, refugees—having lived abroad—may be less informed about income changes in Ukraine during the war. Finally, we include changes in levels of corruption. We vary whether levels of corruption have decreased, stayed the same, or increased relative to the year before the experiment.

Attribute levels were randomized with equal probability, with the exception of conflict resolution attribute, where we draw "peace agreement" with a 50% probability and "armistice agreement' and "no agreement" with a 25% probability each. We placed a larger weight on "peace agreement" as it was the focus of international mediation efforts at the time of our experiment. To ensure that our results are not driven by the order in which we present attributes to respondents, we randomized the order on the individual level.

[5]The notion refers to internationally recognized borders of Ukraine at the time of its independence from the Soviet Union. 'Borders of 1991' include Crimea, Donetsk and Luhansk oblasts, and all other territories within Ukraine's administrative boundaries as established on August 24, 1991.

5.2 Estimation

Conjoint experiments are typically analyzed by estimating Average Marginal Component Effects (AMCEs), which capture the average causal change in the outcome that results from changing an attribute from its reference level to an alternative level, averaging over the distribution of all other attributes (Hainmueller et al., 2014). As we are particularly interested in the *level* of the outcome as well as subgroup heterogeneity, we instead report marginal means (MMs) (Leeper et al., 2020).[6] MMs reflect the average outcome for each attribute level, averaging over the distribution of all other attributes, with no need to choose a reference group. MMs can be estimated using a series of linear regressions. As our outcome is a rating-based measure of subjective return probability, which varies strongly across respondents, we include individual fixed effects to improve precision. We report 95% confidence intervals from a cluster bootstrap procedure at the respondent level to account for within-individual correlation of errors across rounds (see Appendix B.1 for the exact procedure). To test whether marginal means of two attribute levels are different, we calculate p-values on the difference between estimates across bootstrap samples by "inverting" confidence intervals (Hall, 2013).[7] We calculate p-values using the same procedure for differences in marginal mean differences across subgroups and across realizations of other attributes. Diagnostic tests, reported in Supplementary Appendix B.3, largely confirm the absence of carryover effects between rounds and row-order effects (Hainmueller et al., 2014).

6 Results

6.1 Territorial integrity and security guarantees are critical for return

Figure 1 presents marginal means of the subjective probability of return across all levels of the eight experimental attributes for the pooled sample. The subjective return probability is on average 27.0% across experimental profiles. This masks considerable heterogeneity across individuals: individual fixed effects alone explain 72.2% of the variation in return probabilities. Perhaps unsurprisingly, 34.1% of the individual-specific variation can be explained by the level of return plans. Age bins explain 5.7% and gender 1.8%. Surprisingly, whether

[6] Differences in MMs between the levels of an attribute are in expectation identical and numerically very close to AMCEs.

[7] This procedure finds the smallest significance level α for which the corresponding (1-α)% confidence interval no longer contains the null.

the respondent comes from home region which is occupied or on frontline explains 0.0% of the individual-specific variation, once return intentions, age bins, and gender are controlled for. Nonetheless, we analyze heterogeneity in responses in these dimensions. Even if there would be no (significant) level differences in return intentions, there could surely be slope-differences.

Territorial integrity is the strongest driver of return intentions. Restoration of the borders of 1991 has the most substantial positive effect on return intentions, increasing the subjective probability of return from 21.4% by 10.8 percentage points ($p < 0.001$) to 32.2% compared to the worst-case scenario of Russia keeping most or all of the occupied territories. Liberating most of the currently occupied territories would result in a 6.8 percentage points ($p < 0.001$) increase. This finding highlights that return intentions are strongly linked to a sense of national sovereignty.

Security guarantees and specifically NATO membership play a vital role in enhancing the perception of safety in post-war Ukraine. Joining NATO increases return probability by 7.1 percentage points ($p < 0.001$) relative to receiving no security guarantees from allies. Security guarantees from some but not all NATO countries would lead to a 3.1 percentage point ($p < 0.001$) increase in subjective return probability.

The prospect of the war extending beyond 2027 reduces the subjective probability of return compared to conflict resolution in 2024 by only 1.5 percentage points ($p < 0.001$) in the pooled sample. This indicates that Ukrainian refugees are resilient: their return intentions remain almost unaffected if it takes more than two years for the conflict to end.

Absence of formal conflict resolution lowers the subjective return probability by 1.9 percentage points ($p < 0.001$) relative to the peace agreement, and by just 0.8 percentage points ($p = 0.11$) relative to the armistice agreement. The small effect sizes suggest that respondents consider Russian promises — even those formalized in official agreements — cheap talk, and expect the international response to potential violations to be toothless, unless there are security guarantees.

6.2 Economic and institutional improvements increase the likelihood of return

The prospect of Ukraine's EU membership boosts the probability of return from 25.2% to 28.3% ($p < 0.001$) if accession is expected in more than five years, and to 28.1% ($p < 0.001$) if accession is expected within five years after the war has ended. These effects should be interpreted as additional effects of EU membership beyond the immediate impact of job

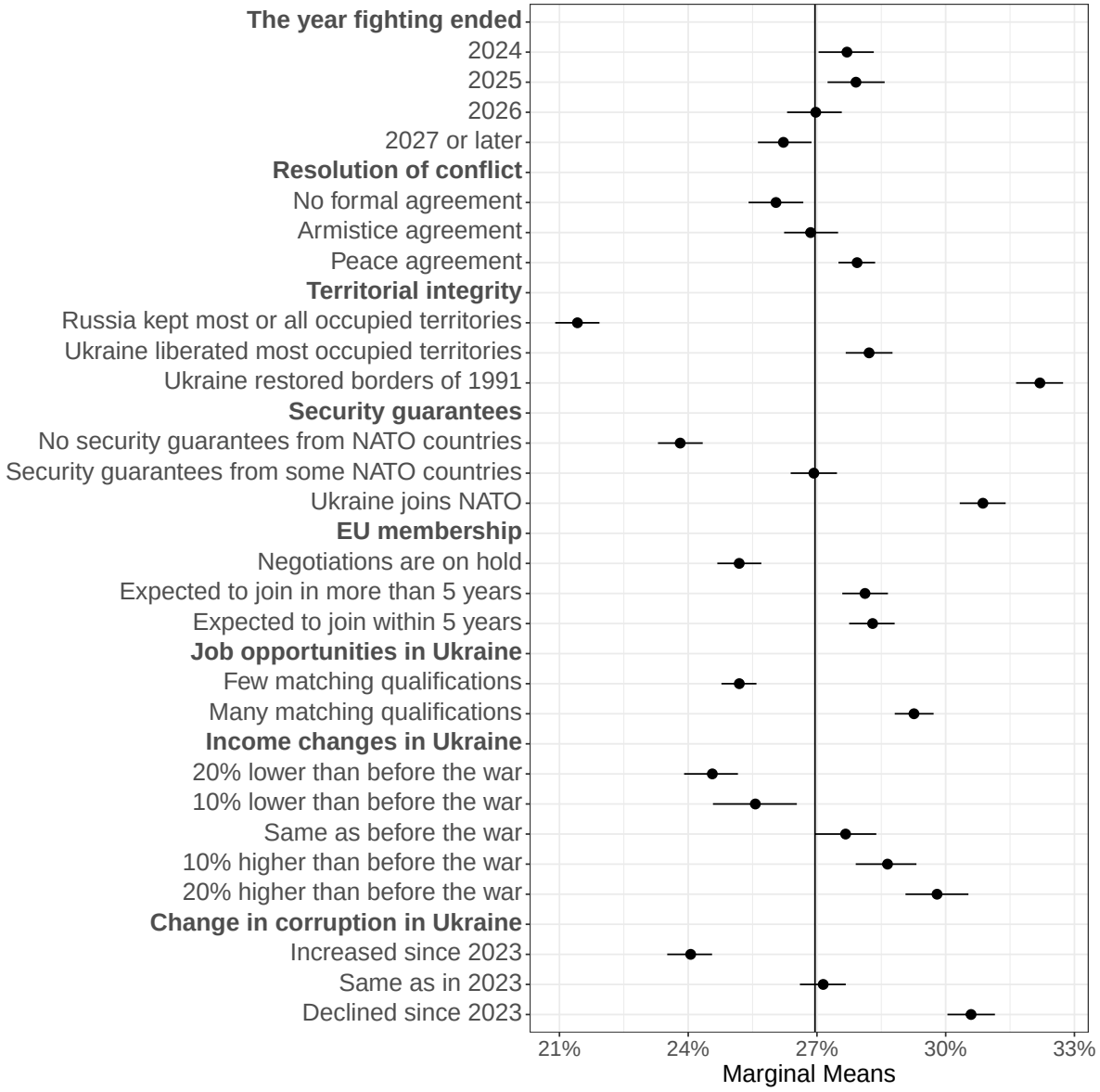

Figure 1 Expected return probabilities across post-war conditions

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. See 5.2 above and Section B.1 of the Appendix for details on the calculation of the marginal means. The vertical line represents the mean return probability across profiles. n = 12,586 profiles evaluated (n = 4997 in Survey I and n = 7589 in Survey II).

opportunities and wages, which are already captured in two other attributes. However, the positive effect of EU accession could capture future economic opportunities stemming from the free movement of goods, services, capital, and people, increased investor confidence, and structural funds. Beyond job opportunities and wages, EU membership is a commitment to institutional stability and democratic values, which many refugees may see as a necessary foundation for rebuilding their lives.

Improved job opportunities and higher incomes in Ukraine also increase the likelihood of return, providing further evidence for the importance of economic factors. The availability of many job opportunities matching individuals' qualifications raises the likelihood of return by 4.1 percentage points ($p < 0.001$) compared to few job opportunities. Income changes have asymmetric but monotonic effects: a 20% income loss reduces return probability by 3.1 percentage points ($p < 0.001$; relative to no change), while a 20% gain increases it by 2.1 percentage points ($p < 0.001$). This asymmetry of losses having a stronger impact is in line with both diminishing marginal utility of consumption and loss aversion. Overall, although economic factors are not as important as security guarantees and territorial integrity, they still have a significant effect on the return intentions of refugees. Thus, revitalization of the Ukrainian economy is an important additional factor in encouraging refugees' return.

Reducing corruption increases the subjective probability of return by 3.2 percentage points ($p < 0.001$) compared to it staying the same, which is comparable to the effect of an additional 20% in income and expecting to join the EU. This indicates that, beyond security and economic factors, the quality of governance and institutions in the country of origin is also crucial for refugees' return. If corruption is perceived to decrease, refugees may feel more confident in the long-term opportunities for themselves and their children.

We show estimated marginal means separately for the two samples in Appendix Figure A.2. Comparing the results of two surveys reveals some interesting heterogeneity. The average return probability is 14.4 percentage points lower in Survey II compared to Survey I, reflecting the difference in return intentions between respondents in the two surveys. The mean across scenarios in Survey II (21.6%) is lower than the non-experimental subjective return probability in five years (30.4%). This suggests that respondents in Survey II have more optimistic expectations about the state of Ukraine in the next five years than the average of our experimental conditions.

Overall, the factors driving return decisions from both surveys point in the same direction and are similar in size, indicating consistency of preferences despite differences in host countries and sample collection. Respondents of Survey I (across EU countries) show a stronger

emphasis on territorial integrity and security guarantees, while respondents of Survey II (in Germany) place a higher weight on formal resolution of the conflict. Since the results are largely similar, we pool the two samples in subsequent analyses.

Our results remain similar if we use population weights to render our results more representative of the population of Ukrainian refugees across the EU (Survey I) and in Germany (Survey II) (see Supplementary Figures A.3 and A.4).

6.3 Post-war conditions matter most for those planning to return

Figure 2 presents heterogeneity by the current return plans of refugees, as inquired before the conjoint experiment in both surveys. One of the key takeaways is that Ukrainians who are planning to stay abroad are less responsive to different post-war scenarios, with their return plans depending especially on territorial integrity and corruption. The standard deviations in the experimentally elicited return probabilities for those who plan to return, do not know, and plan to stay abroad are 34.1%, 27.7%, and 20.3%, correspondingly. These indicate meaningful variation within each group, suggesting that return intentions remain sensitive to future developments regardless of the non-experimentally stated return plans.

For those planning to return, territorial integrity is of primary importance: restoring borders of 1991 would shift average return probability by 16.4 percentage points ($p < 0.001$) compared with the situation in which Russia keeps all or most occupied territories (from 41.5 to 57.9 percent), while liberating most territories would raise it to 53.5 percent. Among Ukrainians who are uncertain about whether to return, the full liberation of Ukrainian territory would lead to a 15.2 percentage point ($p < 0.001$) increase in return probability, whereas for those who plan to stay abroad, the increase would be only 5.5 percentage points ($p < 0.001$) compared to the outcome in which Russia keeps most or all occupied territories. This indicates that return intentions of both 'Plan to return' and 'Do not know' subgroups are largely contingent on the victory of Ukraine, while the plans of those who plan to stay abroad would be significantly less affected by the territorial outcome.

The effect of NATO membership or security guarantees from some NATO countries is the highest among those currently planning to return. At the same time, the absence of these guarantees will also affect their subjective probability of returning the most. Additionally, the absence of formal conflict resolution may have a negative effect on return intentions of those in the 'Do not know' subgroup, reducing their intentions by 4.1 percentage points ($p < 0.001$) compared to peace agreement. Thus, a lack of formal conflict resolution may introduce additional hesitancy for those who are already uncertain about return, which is not

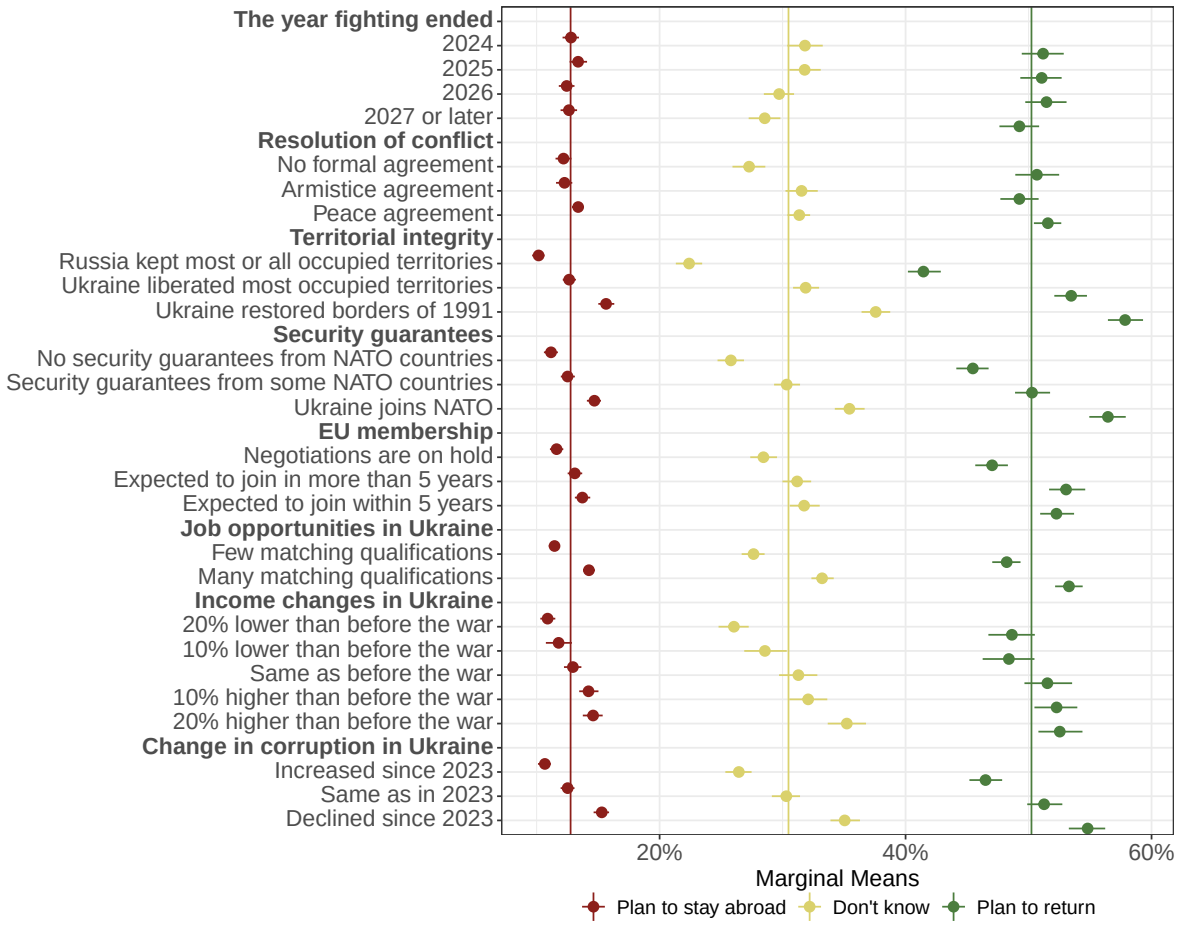

Figure 2 Heterogeneity by current return plans.

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. See 5.2 and Appendix B.1 for details on the calculation of the marginal means. The vertical lines represent the mean return probability across profiles for each of the three samples. n = 12,281 profiles evaluated (n = 5806 in 'Plan to stay abroad', n = 3402 in 'Do not know', and n = 3073 in 'Plan to return' subgroup).

the case for other refugee subgroups. Interestingly, undecided individuals care more about income levels, suggesting that their own economic prospects are more important to them.

6.4 Women are more responsive to conflict outcomes than men

Figure 3 presents effect heterogeneity by gender, revealing considerable differences. First, the average return probability is 8.0 percentage points higher for female participants, indicating higher return intentions under similar conditions. This is in contrast with previous literature that finds that men are more likely to return after conflict (Beaman et al., 2022; Harild et al., 2015). One explanation of this different result is that many women still have partners back in Ukraine, as Ukrainian men aged 18–60 are subject to a travel ban.

While both men and women share a common desire for territorial integrity, security, and economic stability, significant differences emerge in their priorities. Women are more sensitive to economic and institutional factors when evaluating return conditions. For instance, women respond more strongly to the restoration of full territorial integrity (+11.4 vs +9.5 percentage points ($p = 0.03$) compared to Russia keeping most or all occupied territories). This pattern is noteworthy given that men face a greater risk of being conscripted into military service upon return, which one might reasonably expect to make them more sensitive to issues of security and stability. Also, women respond more to increased income (+6.3 for women vs +3.4 percentage points for men ($p = 0.004$) for 20% increase in income relative to 20% decrease).

A potential concern is that these results are driven by stronger return intentions of women than men. In Figure A.5, we show effects separately for male and female respondents for each of the three levels of return intentions discussed above. The results indicate that the stronger response to income for women also holds up for men and women with the same level of return intentions. However, the gender gap for territorial integrity and security can be explained by difference in the level of return plans on the baseline level of return plans.

6.5 Economic prospects critical for younger refugees

Figure 4 presents the effect heterogeneity by respondent age. The average return probability differs significantly between age groups and is equal to 22.0% in '18-34', 26.4% in '35-54', and 41.2% in '55+' age subgroup. This is in line with previous literature, which finds that older individuals are more likely to return after conflict (Beaman et al., 2022). Additionally, we find that young Ukrainians (aged 18 to 34) are particularly responsive to economic

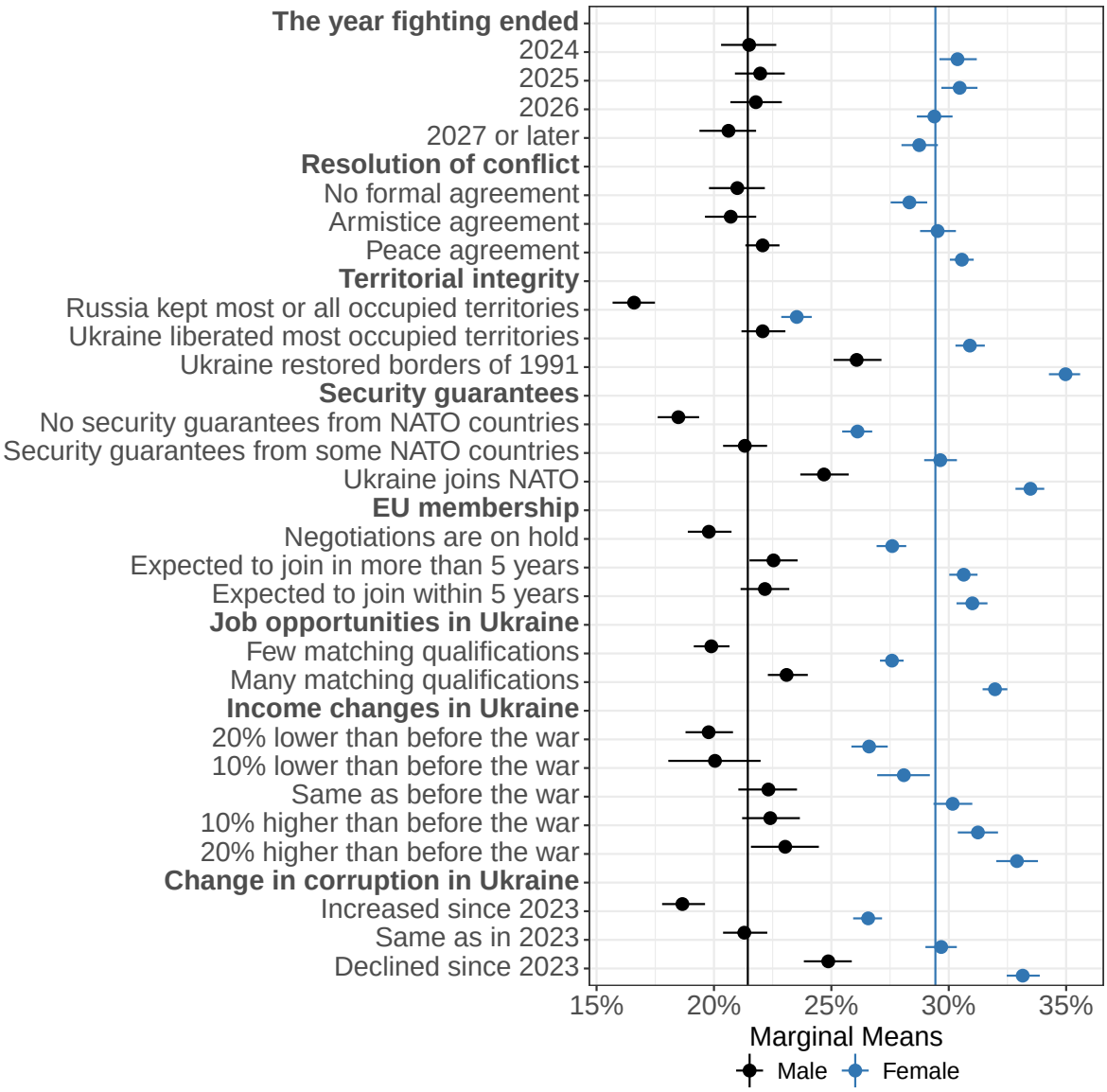

Figure 3 Heterogeneity by gender.

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. See 5.2 and Appendix B.1 for details on the calculation of the marginal means. The vertical lines represent the mean return probability across profiles for each of the two samples. n = 11,983 profiles evaluated (n = 8606 in 'Female', n = 3377 in 'Male' subgroup).

development in Ukraine. However, comparisons are complicated by the small size of the oldest age group, which makes the differences statistically insignificant. Compared to those aged 55 years or older, young Ukrainians demonstrate higher preference for job opportunities matching one's qualifications (+4.6 vs +2.5 percentage points ($p = 0.06$) for many compared to few). Younger individuals also tend to be more responsive to variation in income (+5.8 vs +3.2 percentage points ($p = 0.13$) for a 20% increase compared to 20% decrease) and put more weight on EU accession within 5 years (+3.5 vs +1.4 percentage points ($p = 0.11$) relative to EU negotiations being on hold). Overall, these findings show that the return of younger refugees is contingent on the economic and institutional development of Ukraine. Our findings suggest that the economic growth and EU accession are particularly relevant for attracting younger refugees, who are going to benefit from these more in the long term.

We consider additional heterogeneity with respect to individuals' characteristics and situation in Figures A.6-A.9. Those with children, those who arrived with a partner, those with higher education, and those residing in Western European countries have lower average expected return probabilities. The response to different post-war conditions does not vary strongly across these subgroups. A notable exception is that individuals with higher education are more responsive to earnings and corruption than those with lower education, possibly because they have greater earnings potential and their career opportunities are more strongly affected by corruption.

6.6 Territorial integrity is also important for those from non-occupied territories

As territorial integrity has a strong impact on return intentions, it raises the question whether this result is driven by individuals originating from the occupied territories or nearby places. Figure 5 shows the effect heterogeneity by whether individuals are from regions that were occupied or on the frontline at the time of the experiment or not. Although the effect of the restoration of all territories (relative to Russia keeping most or all occupied territories) on return is larger for the directly affected group, it is still relevant for individuals from places that were never occupied (+12.3 among those from occupied areas vs +10.1 percentage points among others ($p = 0.006$)). The strong response among those from non-occupied regions of Ukraine could be driven by direct safety concerns due to the risk that Russia attacks again, concerns about national sovereignty, or even partial occupation undermining reconstruction efforts and future prosperity of Ukraine.

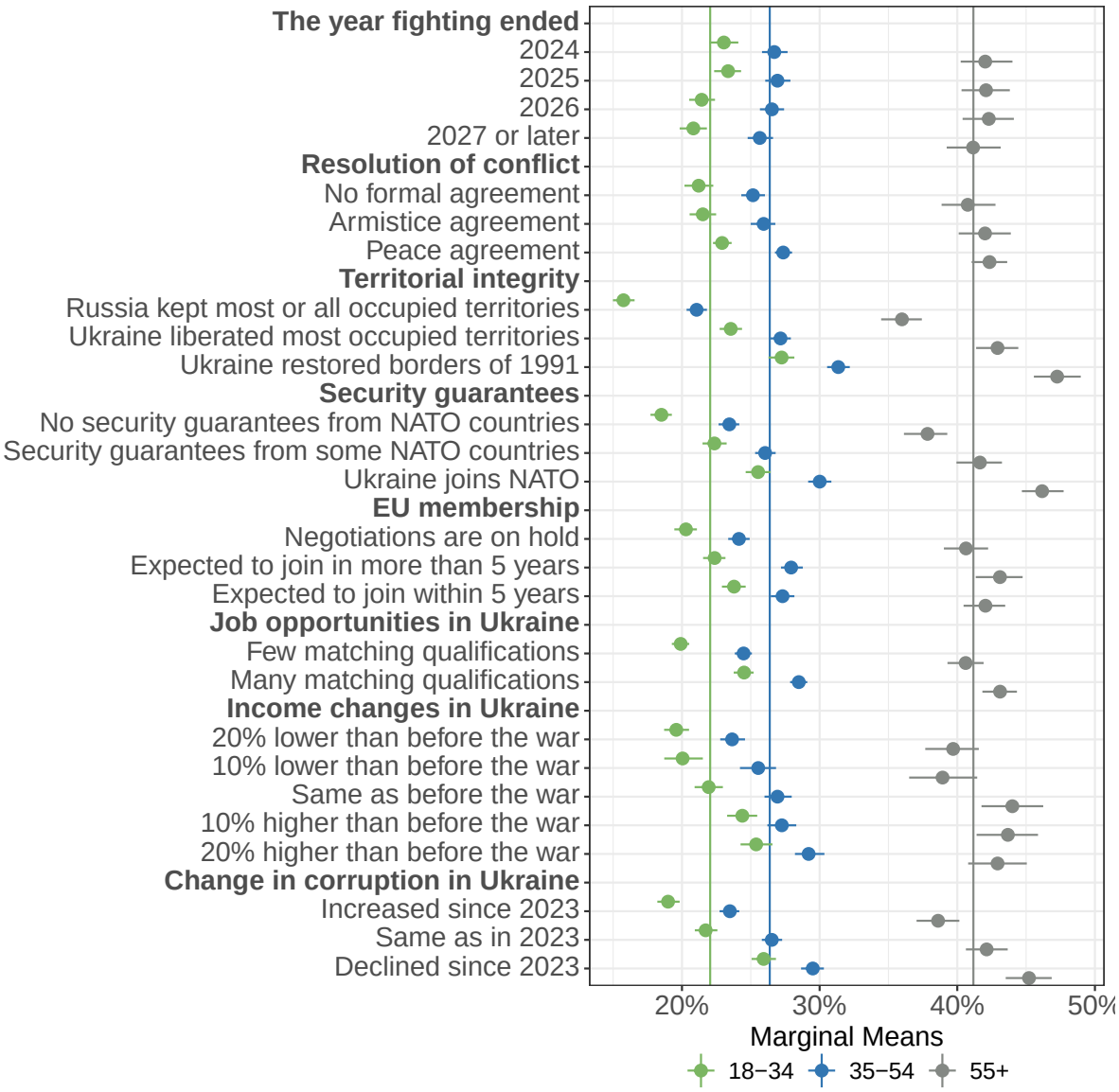

Figure 4 Heterogeneity by age groups.

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. See 5.2 and Appendix B.1 for details on the calculation of the marginal means. The vertical lines represent the mean return probability across profiles for each of the three samples. n = 12,233 profiles evaluated (n = 4514 in '18-34', n = 5968 in '35-54', and n = 1751 in '55+' subgroup).

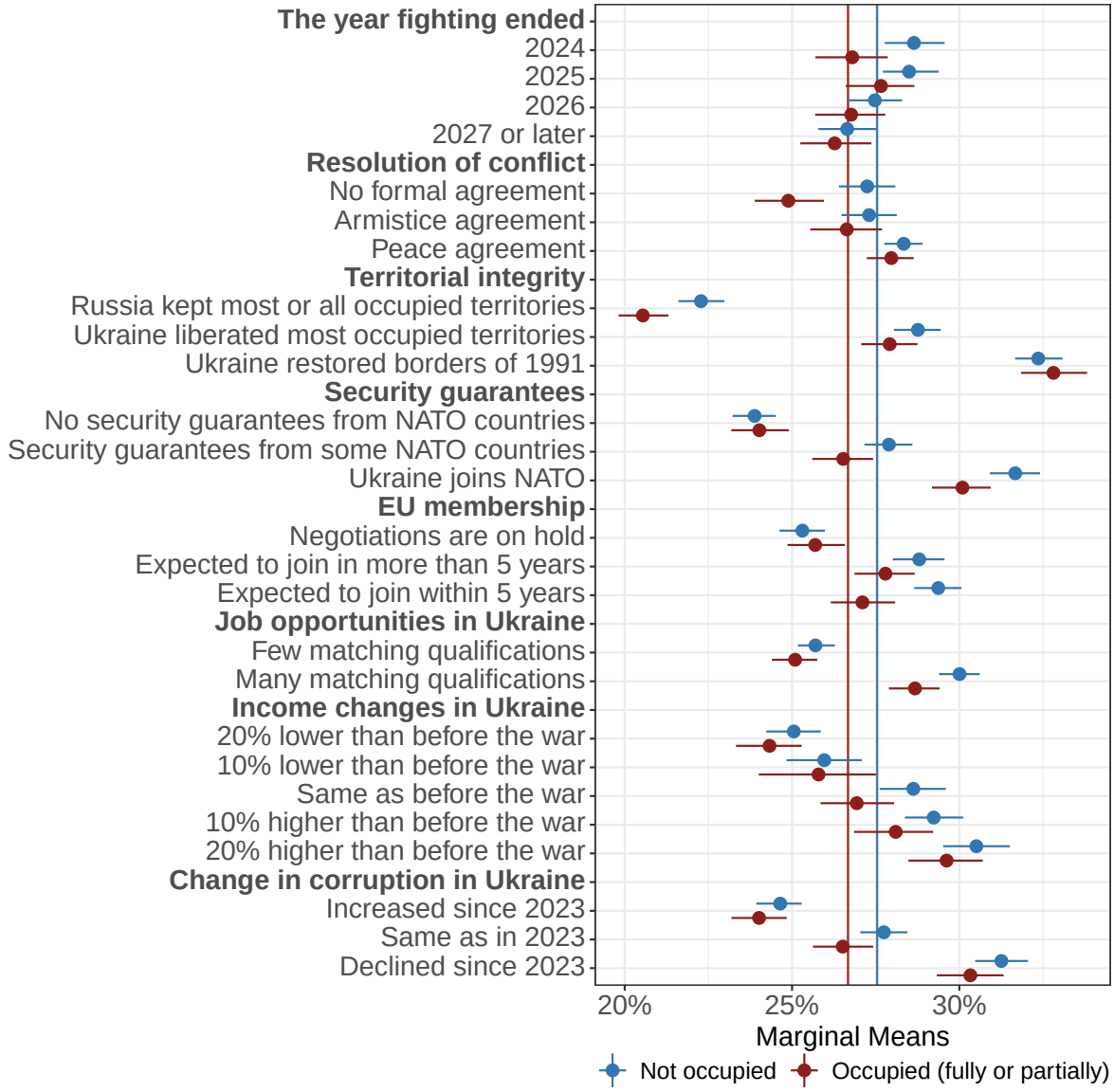

Figure 5 Heterogeneity by region of origin.

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. See 5.2 and Appendix B.1 for details on the calculation of the marginal means. The vertical lines represent the mean return probability across profiles for each of the two samples. We split the sample by whether the region of origin (Ukrainian: *Oblast*) of respondents or part of it is occupied by the Russian military in July 2024. n = 12,003 profiles evaluated (n = 4750 in 'Occupied (fully or partially)' and n = 7253 in 'Not occupied' subgroup).

7 Economic factors matter most under stable and secure conditions

The effect of various post-conflict conditions on the assessed return probability likely depends on the realization of other post-conflict conditions. In this section, we examine how territorial integrity—the most important factor affecting return to Ukraine—moderates the impact of other considerations.

Figure 6 presents marginal means for the levels of four other dimensions, disaggregated by scenarios in which Russia retains most or all occupied territories, Ukraine liberates most territories, and Ukraine fully restores its 1991 borders. The difference in the expected return probability in the case of a peace agreement (compared to no formal agreement) does not depend on territorial control. Security guarantees also play an equally large role across all territorial scenarios. Notably, the average return probability (24.7%) when Ukraine joins NATO—despite Russia retaining most territory—is comparable to the rate observed when Ukraine liberates most territory without receiving NATO security guarantees (24.7%). This indicates that territorial control alone neither offsets nor amplifies the effects of formal conflict resolution and security guarantees on return intentions.

The third and fourth panels reveal that Ukrainian refugees place significantly greater value on economic prosperity when Ukraine restores its 1991 borders. The difference in return intentions between the worst-case (20% income drop) and best-case (20% income increase) scenarios is just 2.6 percentage points when Russia retains all occupied territories, but rises to 8.1 percentage points when Ukraine fully regains its territory ($p < 0.001$). Similarly, EU membership within five years has a minimal effect under continued Russian control (+0.9 points), but has a substantial impact (+5.6 points) if Ukraine restores all territory ($p < 0.001$). Those results are in line with those of Alrababah et al. (2023), who find that Syrian refugees only become more responsive to economic opportunities once their hometowns or all of Syria is safe and military conscription has ended.

Appendix Figure A.10 displays marginal means for the levels of four other dimensions, separately for scenarios in which Ukraine joins NATO, receives security guarantees from some NATO countries, or obtains no guarantees at all. Peace agreements are valued slightly more in the absence of security guarantees ($p = 0.12$), suggesting that peace agreements and security guarantees may function as imperfect substitutes in providing assurances of future safety.

We also tested whether Ukrainian refugees are more willing to tolerate a longer war if

territories are recovered, and whether the effects of economic and institutional conditions are stronger in the presence of a peace agreement. Figures A.11 and A.12 present the results. The modest effect of a later war end does not vary systematically with territorial outcomes. Similarly, the effects of job opportunities and changes in corruption are not influenced by the presence of a peace agreement. However, the impact of large income gains is somewhat greater when a peace agreement is in place. This finding suggests that economic improvements are valued more once a basic level of safety is ensured, consistent with earlier results regarding the importance of security guarantees.

8 Expected return rates span 3% to 47% across scenarios

An important question for the future of Ukraine is how many refugees will return once the fighting has ended. As our experiment has studied the role of several relevant factors, it can inform how many people would return in a given scenario. We define three pre-registered scenarios, which relate to specific realizations of the eight attributes: good, intermediate, and bad. To estimate return probabilities in each of these scenarios we proceed in two steps. First, we estimate the intercept and AMCEs from a regression of the return probabilities on the attributes on the full sample. Second, for each of the scenarios, we predict the return probability based on these estimates and the attribute values in the given scenario. We repeat this procedure for the full sample as well as for subsamples with different return intentions, to allow for heterogeneous preferences. We choose the following attribute values for each scenario:

- **Good:** The war ends in 2024 or 2025 (with equal weight), Ukraine and Russia signed a peace agreement, Ukraine liberated all occupied territories and restored borders of 1991, Ukraine joins NATO, Ukraine is expected to join the EU within 5 years, there are many job opportunities that correspond to one's qualifications, all incomes are 20% higher than before the war started, and Ukraine has made significant advances in reducing corruption relative to the year 2023.

- **Intermediate:** The war ends in 2026, Ukraine and Russia signed an armistice agreement, Ukraine liberated most occupied territories, Ukraine obtained security guarantees from some but not all NATO countries, Ukraine is expected to join the EU in more than 5 years, there are many (50%) or few (50%) job opportunities that correspond to one's qualifications, all incomes are the same as before the war started, the level of corruption is similar to the one in the year 2023.

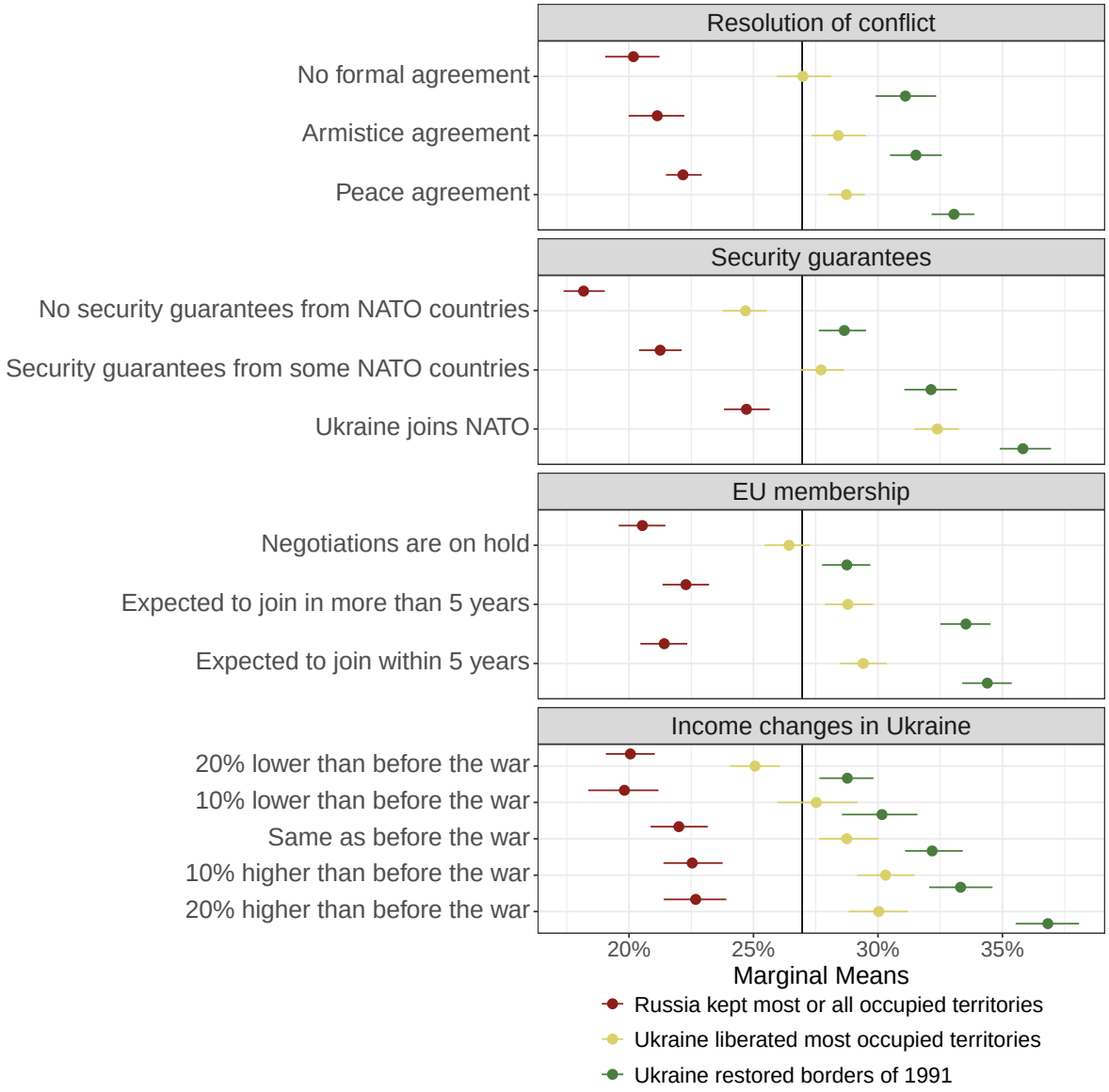

Figure 6 Internal interactions between territorial integrity and selected attributes

Notes. Dots with horizontal whiskers indicate the subgroup marginal mean with cluster bootstrapped 95% confidence intervals. See 5.2 and Appendix B.1 for details on the construction of the marginal means. The vertical lines represent the mean return probability across all profiles. n = 12,586 profiles evaluated (n = 4294 in 'Russia kept most or all occupied territories', n = 4167 in 'Ukraine liberated most occupied territories', n = 4125 in 'Ukraine restored borders of 1991').

- **Bad:** The war ends in 2027 or later, the fighting stopped with no peace or armistice agreement, Russia kept most or all occupied territories, Ukraine did not get security guarantees from any NATO country, negotiations on Ukraine's EU membership are on hold, there are few job opportunities that correspond to one's qualifications, all incomes are 20% lower than before the war started, and the level of corruption is worse than in the year 2023.

In order to calculate an average that is more representative of the Ukrainian refugee population across the EU, we weight observations with demographic weights as in Figures A.3 and A.4. As we match the Ukrainian refugee population across Europe through reweighting, we interpret the predicted probabilities as the best estimate of the share of Ukrainian refugees that would return under given scenarios. In addition to these scenarios, we report unconditional subjective return probabilities from Survey II, which enables comparing the conditional predicted return probabilities by scenario with individuals' unconditional expectations.

Figure 7 presents the predicted probabilities of return across the three scenarios, for the full sample and by the levels of current return plans. The probability of returning in the bad scenario is very small (2.7%). However, in the good scenario, the probability of returning is 46.5%, suggesting that the post-war conditions jointly can matter a lot. The weighted unconditional probability (32.3%) is very close to the intermediate scenario (30.0%). For context, UNHCR data indicate that among refugees from conflicts ending between 1989 and 2008, the average return rate ten years after the conflict was 31 percent, with a median of 21% (Constant et al., 2021).

Individuals with stronger return intentions tend to give responses that closely match the predicted probabilities for more favorable post-war scenarios. Among those who plan to return, we observe a positive probability (17.0%) to return even in the bad scenario. Moreover, the unconditional probability (72.8%) is very close to the best scenario (78.0%), which may suggest that this group is overly optimistic about the conditions with which the war ends. This implies that the stated preference for return may be highly contingent on subjective war outcome expectations, and in a bad or intermediate scenario, considerably fewer people would return than descriptive survey estimates would suggest.

Figure A.13 and A.14 present the results for the two surveys separately. While respondents in Survey II show a lower return probability compared to those in Survey I, the differences in the average return probability for individuals with the same level of unconditional return plans are small across the two surveys.

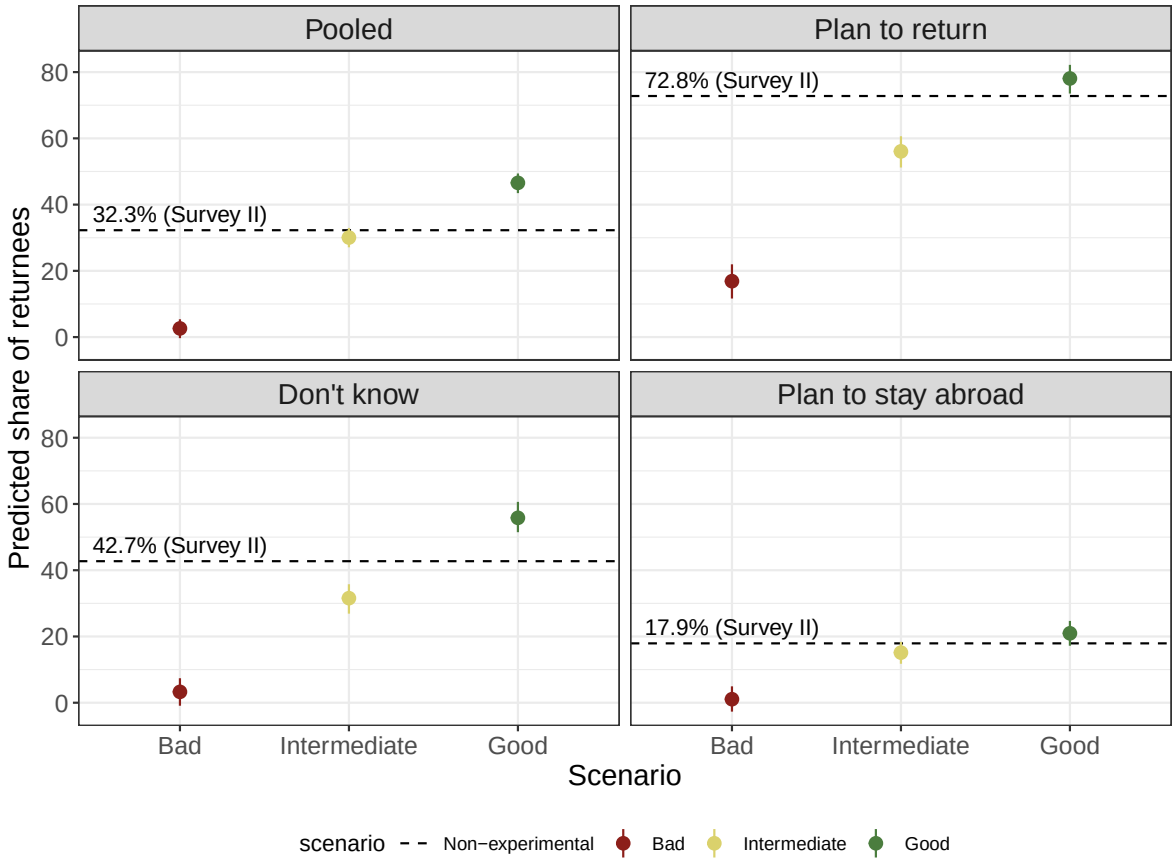

Figure 7 Predicted share of returnees in three scenarios.

Notes. The predicted share of refugees is obtained through a prediction of a regression of the probability of return on attribute levels for different realized scenarios for each of the attributes. For a discussion of the pre-registered scenarios, see the main text. For a discussion on the procedure, see Appendix B.2. The unconditional probability (dashed horizontal line) has only been elicited in Survey II. n = 11,530 profiles evaluated (n = 5316 in 'Plan to stay abroad', n = 3154 in 'Do not know', and n = 2815 in 'Plan to return' subgroup).

9 Conclusion

This paper advances our understanding of refugee return by identifying how post-war conditions—especially territorial integrity, security guarantees, economic prospects, and institutional quality—shape return intentions. Using conjoint experiments among Ukrainian refugees in 30 European countries, we show that return decisions are highly responsive to hypothetical post-war scenarios. Among all factors tested, territorial integrity exerts the strongest effect, which is in line with earlier observational studies (Zakirova and Buzurukov, 2021). This finding is also consistent with a conjoint experiment by Dill et al. (2024), who show that Ukrainians within Ukraine reject territorial concessions at any cost. Security guarantees, improved economic opportunities, and anti-corruption reforms also significantly increase the likelihood of return. We also find that economic and institutional improvements have the greatest impact on return intentions when territorial sovereignty is restored, consistent with prior findings that economic opportunities become relevant to return only once safety is assured (Alrababah et al., 2023). The year the fighting ends and the form of conflict resolution appear to matter little, suggesting that Ukrainians are resilient and distrust agreements with Russia. Our scenario analysis shows that in the most favorable scenario, nearly half of the refugees expect to return (46.5%), while very few would do so in the worst-case scenario (2.7%). Overall, return decisions appear to hinge heavily on expectations about the war's outcome.

Our findings reveal significant differences in return intentions across groups, including by current return plans, gender, and age. These differences extend not only to baseline return probabilities but also to the degree of responsiveness to specific post-war conditions. This emphasizes the importance of post-war policies that address the particular concerns of these groups. For instance, among those who are undecided about returning, women and younger respondents are more sensitive to economic conditions. Of particular concern are the lower return intentions observed among younger individuals, a demographic group that is crucial for Ukraine's long-term reconstruction, especially given the country's low fertility rates. The average subjective return probability is 30.4% across all respondents, but declines to 26.3% among those aged 18 to 34. This group is particularly responsive to higher wages, job opportunities, and EU accession. Attracting younger individuals back to Ukraine will therefore require targeted, growth-oriented policies that provide clear economic and professional opportunities for this group, alongside a credible prospect of integration into the EU.

These findings carry important policy implications for governments and international

organizations involved in post-conflict reconstruction and refugee reintegration. First, they underscore the need for credible security arrangements and territorial integrity as prerequisites for large-scale voluntary return. Second, economic policies that prioritize job creation, wage growth, and institutional reform—particularly anti-corruption efforts—are likely to be especially effective in encouraging return, particularly among younger refugees. These investments in economic development and anti-corruption reforms can yield a double benefit: improving post-war living conditions in Ukraine while also encouraging refugee return. Third, signaling a realistic and credible path toward European Union accession may serve as a powerful incentive for return, especially for those who view integration into the EU as a marker of long-term stability and opportunity.

While based on the Ukrainian case, our findings have more general implications. Our results are consistent with qualitative evidence from returnees in Bosnia and Herzegovina, Kosovo, and the Iraqi Kurdistan Region, where security concerns were paramount, but economic conditions also played a crucial role in shaping return decisions (Constant et al., 2021). This suggests that our findings may hold in other post-conflict contexts. Our results also align with broader migration research. Previous research on migrants more generally has found that economic factors significantly influence return decisions (Dustmann, 2003; Yang, 2006). Future work should explore how the relative importance of different return determinants varies across refugee populations and in the context of civil wars.

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Appendix

A Data availability statement

All analyses in the main text were pre-specified in a pre-analysis plan submitted to the AEA RCT Registry under number AEARCTR-0013914 before the start of the survey experiments. A copy of the pre-analysis plan can be accessed here: https://drive.google.com/file/d/1ktFCnjtqLQuIbTjnpf2JzZdqmu-Prbky/view?usp=sharing. All pre-registered analyses are reported in either the main text or the Supplementary Appendix. We deviate from the pre-registration in one way: we report Marginal Means rather than AMCEs to communicate both effect sizes as well as level differences between subsamples in a comprehensive manner.

Research documentation, data, and code used to generate the results will be provided upon conditional acceptance. All analyses were performed using R version 4.3.3. Custom functions used can be found within the replication package. All user-written packages were obtained from CRAN on 2025-04-09, using the *groundhog* package for version control.

B Estimation of marginal means

B.1 Appendix on the MM bootstrap procedure

To absorb individual-level heterogeneity in our rating-based outcome, we need to account for individual fixed effects in the outcome (Hainmueller and Hopkins, 2015; Hartmann et al., 2024; Bansak and Jenke, 2025). The marginal means procedure of Leeper et al. (2020) regresses for every attribute the outcome on indicators for the attribute levels, without intercept and controls for the other attributes. This procedure does not naturally allow for inclusion of individual fixed effects as those absorb the *level* of the outcome. To nevertheless obtain estimates for the marginal means, we have to add back the mean level of individual fixed effects. To obtain valid confidence intervals, one needs to account for the uncertainty in the estimated individual fixed effects mean. Hence, we perform the following clustered bootstrap procedure using the R package *boot*:

1. We perform B =999 cluster bootstrap replications on the respondent level. Every bootstrap round is indexed by b.

    - For every attribute, we obtain MMs in the following way:

- We regress the outcome on dummies for the attribute level and individual fixed effects. We save the estimates for every attribute level (except for the reference category).
- We initialize the estimate for the reference category with 0.
- We calculate the average individual fixed effect from the regression.
- We add the average individual fixed effect to the coefficients

- We save the MM estimates $\hat{\beta}^b$.

2. Based on the vector of $\hat{\beta}$'s we estimate the 2.5th and 97.5th percentile.

B.2 Appendix on the scenario bootstrap procedure

We calculate the predicted share of returnees in a given scenario based on estimated AMCEs as this allows us to estimate the effects of all attribute levels in a single model and predict the return probability under specific scenarios. Following Hainmueller et al. (2014), we estimate AMCEs using a linear regression of our outcome on individual fixed effects and indicators for the attribute levels, choosing the first level in Table A.4 as the reference category for every attribute. For each of the scenarios we predict the subjective return probability based on the AMCEs and the attribute values for the corresponding scenario.[8] As the individual fixed effects nest the intercept, we need to add back the average fixed effects to make calculate the predicted share of returnees under a given scenario. To perform inference on these predicted share, we perform a bootstrap procedure to obtain valid confidence intervals for each of the scenarios. Our procedure is analogous to that described in section B.1, replacing the marginal mean estimation with the estimation of the AMCE-based prediction for each of the scenarios.

B.3 Appendix on Diagnostics

We perform two diagnostic tests that are relevant for single-profile conjoint experiments to ensure robustness of our results.

First, we empirically test the absence of carryover effects (Hainmueller et al., 2014). It implies that the profiles, which the respondent has already seen in one task, will not have an effect on their choice in the subsequent ones. We check for this by estimating effect sizes separately for each consecutive task. As for a single task there is only a single observation per

[8] For a discussion of these scenarios, see Section 8 of the main text.

individual, we estimate AMCEs without individual fixed effects. The estimates are presented in Supplementary Figure A.15. Although the effects vary across the five rounds, differences are small, which suggests that respondents did not answer systematically differently in earlier compared to later rounds.

Second, we test for attribute order effects. In a conjoint experiment, the order in which attributes appear within a profile should not systematically influence respondents' choices. In both surveys all five tasks were presented for each respondent in the same order to prevent confusion, but Survey I and II relied on slightly different randomization procedures. In Survey I, attributes were presented to respondents in a fully random order. In Survey II, we used a structured rotation: eight distinct attribute orders were generated by circularly shifting the sequence of attributes, so that each attribute appeared first in exactly one order, with the remaining attributes following in the same relative sequence. To test the assumption that there are no attribute order effects, we estimate row-specific AMCEs for each attribute. The estimates are presented in Supplementary Figures A.16 and A.17. We only observe weak attribute order effects.

In addition, we examine a mistake in the randomization in Survey II. Respondents choosing Russian as the language of interview (51.6% of the sample – 42.9% answered in Ukrainian, 5.5% in English) accidentally saw a value of -20% when they were randomized to be shown -10%. This implies that the marginal mean estimate of -20% has a larger weight on Russian speakers and that the estimate of -10% has larger weight on the Ukrainian-speaking subsample. To study how this could have affected our results, we show heterogeneity for respondents answering using Russian and Ukrainian in Survey II in Appendix Figure A.18. Although we find that the mean return intention is stronger for Ukrainian speakers, this has limited consequences for the results. As we estimate the MMs with individual fixed effect models, we absorb level differences between Russian-speaking and other respondents.[9] In addition, the difference in MMs between income drops and increases of 20% are comparable in both subsamples, suggesting that a 10% decrease among Russian speakers would have similar relative effects as for non-Russian speakers.

[9] As we show a worse option than intended in about 10% of cases, this does have an effect on the average marginal mean, but as the difference between -10% and -20% for non-Russian speakers is small, this has a negligible effect.

Table A.1 Demographic composition of the two Surveys and their target population

Variable	Survey I	Target (Europe)	Survey II	Target (Germany)
Gender				
Female	84.7%	74.8%	62.5%	67.9%
Male	14.7%	25.2%	37.0%	31.9%
Prefer not to answer/Other	0.6%	0%	0.5%	0.2%
Age group				
18-24	3.5%		23.2%	13.6%
25-34	21.4%	37.0%	21.3%	19.0%
35-44	30.1%		29.6%	27.5%
45-54	22.8%	54.0%	16.4%	17.2%
55-64	15.6%		5.7%	11.5%
65+	6.6%	9.1%	3.9%	11.2%

Target distribution of Survey I and II from Eurostat (December 2022) and BAMF (August 2022), respectively.

Table A.2 Descriptive statistics of key variables in the two Surveys

Variable	Overall	Survey I	Survey II
Gender			
Female	71.5%	84.7%	62.5%
Male	27.9%	14.7%	37.0%
Prefer not to answer/Other	0.5%	0.6%	0.5%
Age group			
18-34	36.8%	24.9%	44.4%
35-54	48.7%	52.9%	46.0%
55+	14.5%	22.2%	9.6%
Return plans			
Plan to stay abroad	45.9%	28.7%	57.2%
Don't know	27.1%	26.4%	27.5%
Plan to return	24.7%	43.3%	12.3%
Prefer not to answer	2.4%	1.6%	2.9%
Occupation status of home region			
Not occupied	60.4%	63.7%	58.1%
Occupied or frontline	39.6%	36.3%	41.9%
Education			
No higher education	32.5%	26.5%	36.6%
Have higher education	66.9%	73.5%	62.4%
Prefer not to answer	0.6%	0.0%	1.0%
Employment			
Not employed	69.5%	63.2%	73.5%
Employed	30.5%	36.8%	26.5%
Non-experimental return probability	30.4%	NA%	30.4%

Table A.3 Question wording in Survey I and Survey II

Variable	**Survey I wording**	**Survey II wording**
Gender	What is your gender? 1) Female 2) Male 3) I identify in another way 4) Prefer not to answer	What is your gender? 1) Female 2) Male 3) I identify in another way 4) Prefer not to answer
Residence country	In which country are you currently located? 1) Dropdown of European countries 2) Other European country 3) Other non-European country 4) Prefer not to answer	Where do you live currently? 1) In the same city/town/village I used to when completing the first survey 2) In the same German state but in another city/town/village 3) In Germany but in another state 4) In Germany 5) In Ukraine 6) In another country (please, specify)
Age	What is your age? 1) Enter your age: (numerical input) 2) Prefer not to answer	What is your age? 1) Enter your age: (numerical input) 2) Prefer not to answer

Variable	**Survey I wording**	**Survey II wording**
Return plans	What are your plans regarding returning back to Ukraine? 1) I intend to go back very soon 2) I intend to go back later when I feel it's safe to return 3) I do not intend to go back and plan to settle outside Ukraine 4) I don't know yet 5) Prefer not to answer	What are your current plans regarding returning back to Ukraine? 1) I intend to go back very soon 2) I intend to go back later when I feel it's safe to return 3) I do not intend to go back and plan to settle outside Ukraine 4) I don't know yet 5) Prefer not to answer
Subjective return probability plans	-	What are your plans regarding returning back to Ukraine? How likely do you think that in the next 5 years you will return to Ukraine and stay there? (slider from 0 to 100)
Region of origin	In which region of Ukraine did you reside in before leaving the country? 1) List of Ukrainian regions 2) Prefer not to answer	Where did you live in Ukraine? 1) Dropdown of Ukrainian regions 2) Prefer not to answer

Variable	**Survey I wording**	**Survey II wording**
Education	What is your current level of education? 1) Primary education 2) Basic secondary education/Incomplete secondary education 3) Complete secondary education 4) Vocational education/College 5) Incomplete higher education 6) Bachelor's 7) Master's 8) PhD/Academic degree 9) Prefer not to answer	What is your current level of education? 1) Primary education 2) Basic secondary education/Incomplete secondary education 3) Complete secondary education 4) Vocational education/College 5) Incomplete higher education 6) Bachelor's 7) Master's 8) Specialist degree 9) PhD/Academic degree 10) Prefer not to answer
Employment	Have you ever worked in [current residence country]? 1) I'm currently working 2) I have worked in the past, but I no longer work 3) No, neither 4) Prefer not to answer	What is your current employment situation? (select all that apply) 1) Full-time 2) Part-time 3) Mini-job 4) Self-employed 5) Internship 6) Unemployed, looking for a job 7) Unemployed, not looking for a job 8) Student 9) Retired 10) Prefer not to answer

Variable	**Survey I wording**	**Survey II wording**
Marital status	What is your relationship status? 1) Single 2) Married 3) In a relationship 4) Separated/Divorced 5) Widowed 6) Prefer not to answer	What is your relationship status? 1) Single 2) Married 3) In a relationship 4) Separated/Divorced 5) Widowed 6) Prefer not to answer
Partner location (if married or in a relationship)	Who, if anyone, did you leave Ukraine with? 1) With my partner/spouse 2) Prefer not to answer	Please indicate where the following groups of people are currently mainly living. (multiple answers) 1) Partner/spouse a) With you b) In your city but not with you c) In Germany but not in your city d) In Ukraine e) In another country f) Prefer not to answer

Variable	**Survey I wording**	**Survey II wording**
Children	How many children do you have? Integer 0-10	*Original*: Do you have own children living with you? Number of children [1-5] Prefer not to answer *Refreshment*: Do you have children? 1) Yes 2) No 3) Prefer not to answer If Yes: Number of children [1-5] Prefer not to answer
Children's location	Please indicate your children's age and whether they live with you. Age [numerical] Gender [M/F] Living with you [checkbox]	*Original*: Please list all your children by age and gender and indicate where they live. (Please start with the youngest child. If you have more than 5 children, only list the youngest ones) Age [numerical] Gender [M/F] *Refreshment*: Please list all your children by age and gender and indicate where they live (up to 5). Age [numerical] Gender [M/F] Where [With me, In Germany but not with me, In Ukraine, In another country]

Table A.4 Attributes and possible attribute values

Attribute	Description	Levels
The year fighting ended	When did the fighting end in the hypothetical scenario	2024 2025 2026 2027 or later
Resolution of conflict	Whether Ukraine and Russia signed a peace or armistice agreement	The fighting stopped with no peace or armistice agreement Ukraine and Russia signed an armistice agreement Ukraine and Russia signed a peace agreement
Territorial integrity	Whether Ukraine restored its territorial integrity	Russia kept most or all occupied territories Ukraine liberated most occupied territories Ukraine liberated all occupied territories and restored borders of 1991
Security guarantees	Whether Ukraine received NATO membership or security guarantees	No security guarantees from any of the NATO countries Security guarantees from some but not all NATO countries Ukraine joins NATO
EU membership	Whether Ukraine is expected to join the EU	Negotiations on Ukraine's EU membership are on hold Ukraine is expected to join the EU in more than 5 years Ukraine is expected to join the EU within 5 years
Income change compared to pre-war level	Changes in all income levels in Ukraine compared to pre-war levels (percentage change)	All incomes are 20% lower than before the war All incomes are 10% lower than before the war All incomes are the same as before the war All incomes are 10% higher than before the war All incomes are 20% higher than before the war
Job opportunities	Availability of jobs matching qualifications	There are few job opportunities that correspond to your qualifications There are many job opportunities that correspond to your qualifications
Change in corruption since 2023	Changes in corruption levels	The situation with corruption is worse than in 2023 The situation with corruption is similar to the one in 2023 Ukraine has made significant advances in reducing corruption relative to 2023

The values of all attributes except for "Resolution of conflict" were drawn with equal probability. The values of "Resolution of conflict" were drawn with 50% probability for a peace agreement, 25% for armistice, and 25% for no agreement.

Figure A.1 An example realization of the conjoint task

Notes. The first column lists relevant country attributes. The second column presents attribute levels for a given scenario. Below the attribute table respondents are asked to choose on a scale from 0 to 100 how likely are they to return to Ukraine in the given scenario. Prior to the conjoint tasks the following introductory text was shown to respondents: "We are interested in the conditions under which you would consider returning to Ukraine. We are going to give you 5 scenarios that describe hypothetical situations in Ukraine after the fighting has ended. Please, indicate under each, how likely are you to return in this case."

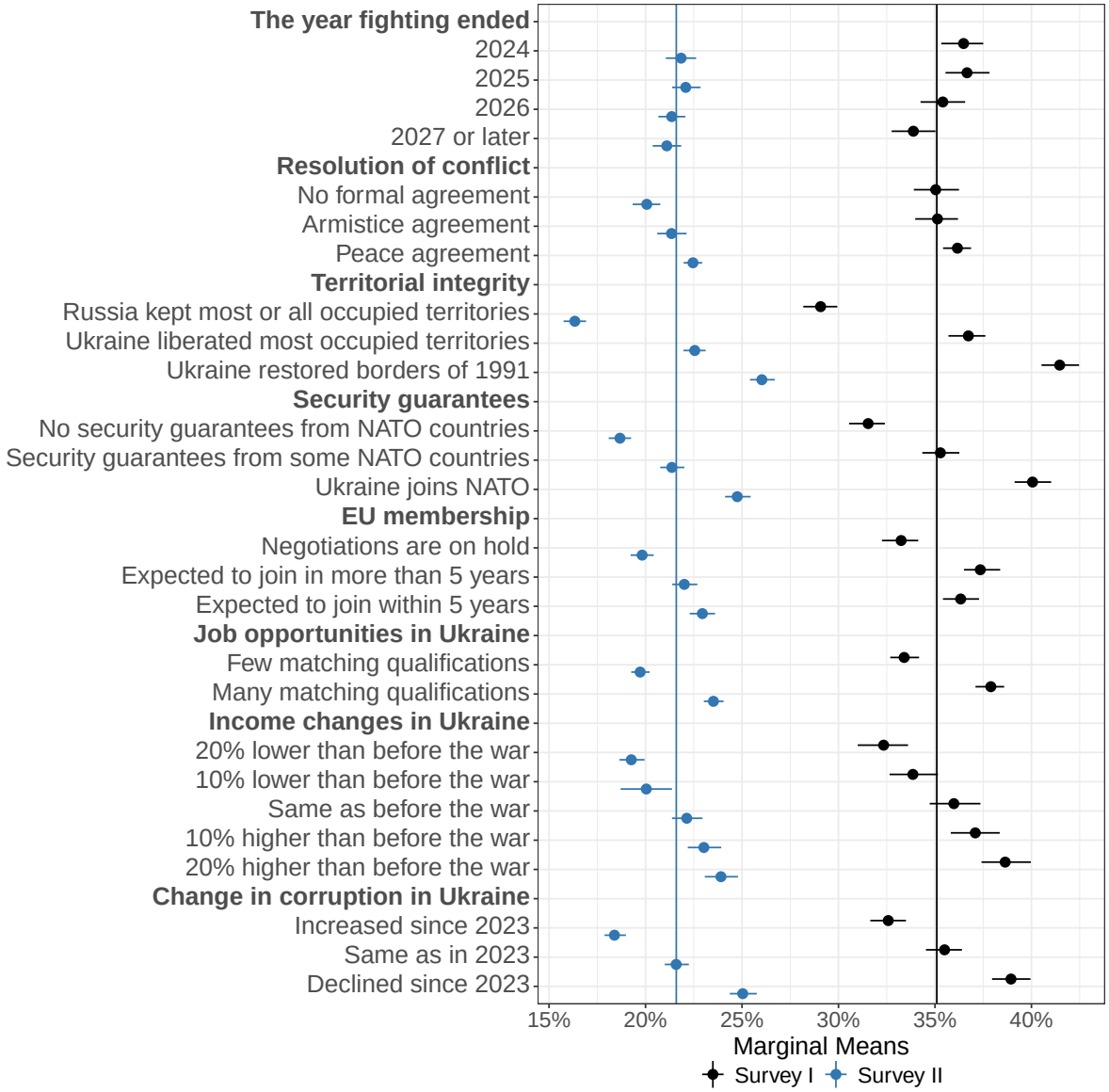

Figure A.2 Heterogeneity by sample

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. See 5.2 above and Section B.1 of the Appendix for details on the calculation of the marginal means. The vertical lines represent the mean return probability across profiles for both samples. n = 12,586 profiles evaluated (n = 4997 in Survey I and n = 7589 in Survey II).

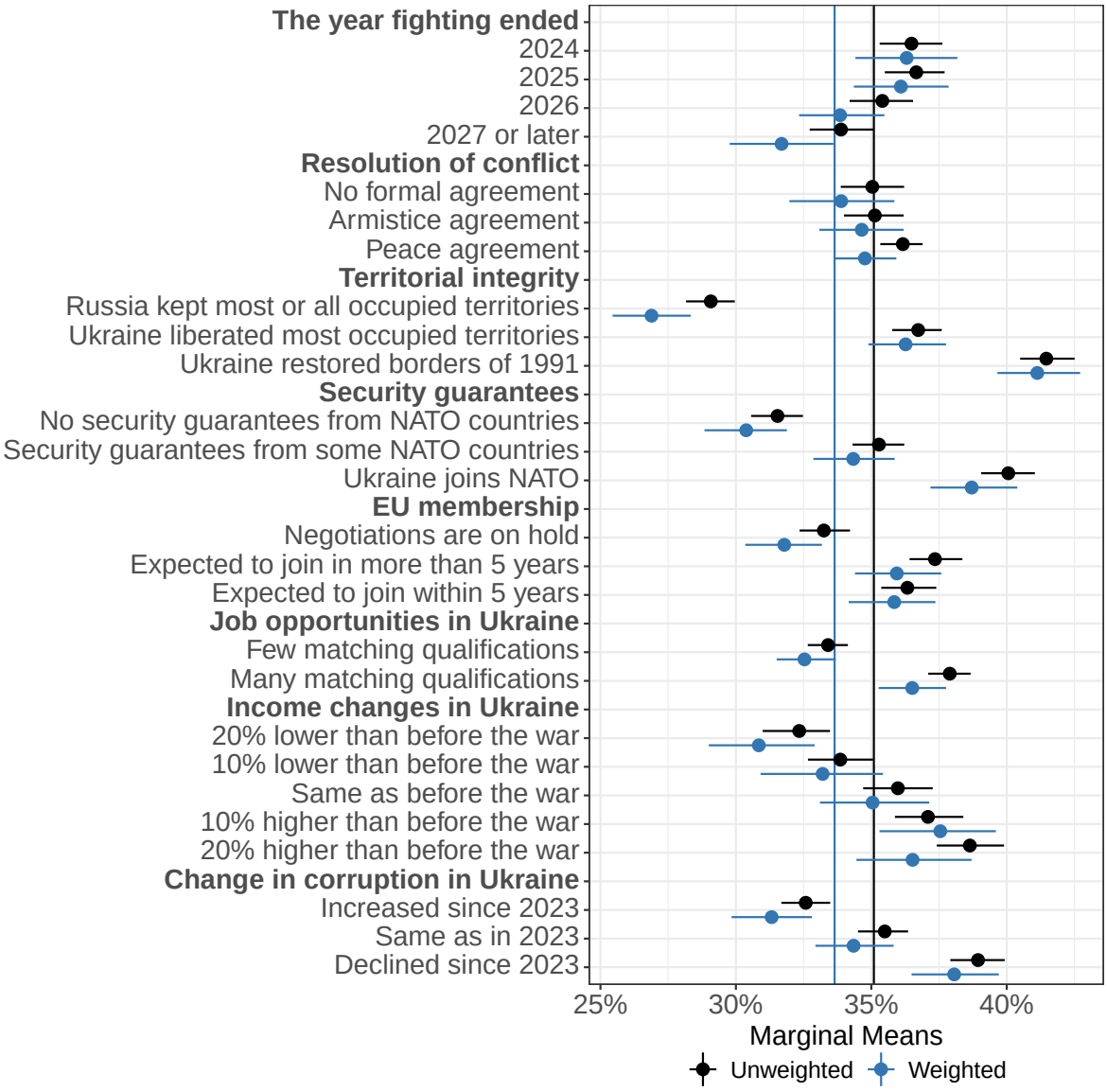

Figure A.3 Unweighted and population weighted marginal means for Survey I

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. Section 5.2 and Appendix B.1 explain the calculation of the marginal means. The vertical lines represent the mean return probability across profiles for the weighted and unweighted marginal means. The weights are based on the joint distribution of Ukrainian refugees in Europe across age-gender-destination country cells as of July 2024 (Eurostat, 2025). Number of observations in weighted regressions is reduced due to missing values. N = 4,479.

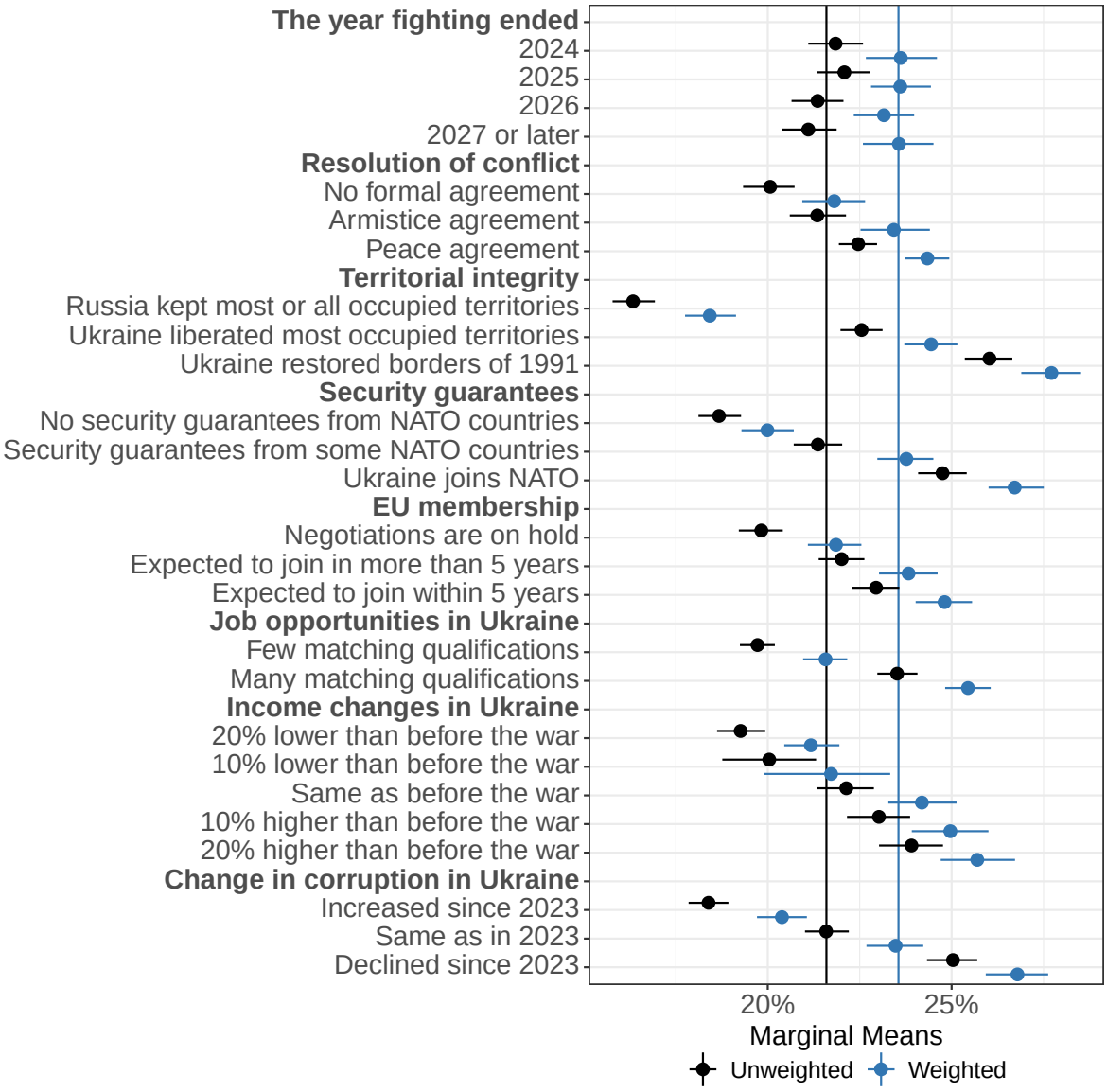

Figure A.4 Unweighted and population weighted marginal means for Survey II

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. Section 5.2 and Appendix B.1 explain the calculation of the marginal means. The vertical lines represent the mean return probability across profiles for the weighted and unweighted marginal means. The weights are based on the joint distribution of Ukrainian refugees in Europe across age-gender-destination country cells as of July 2024 (Eurostat, 2025).Number of observations in weighted regressions is reduced due to missing values. N = 7,051.

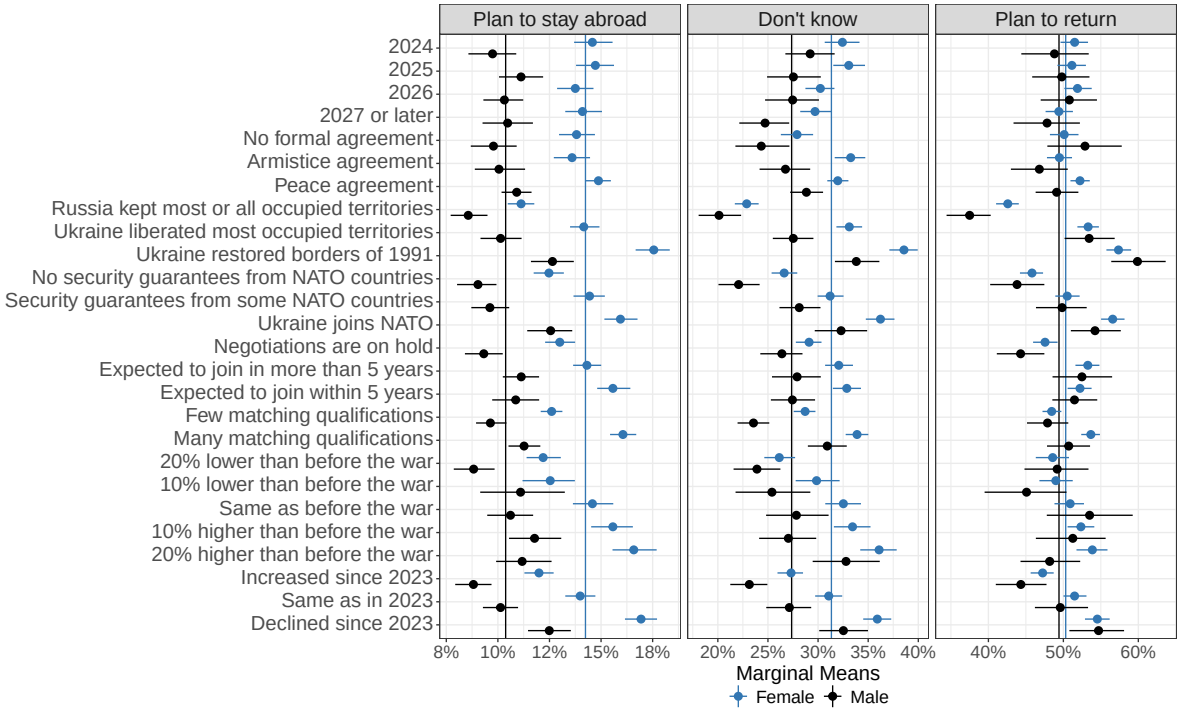

Figure A.5 Heterogeneity by return intention and gender

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. See 5.2 and Appendix B.1 for details on the calculation of the marginal means. The vertical lines represent the mean return probability across profiles for each of the six subsamples. n = 11,708 profiles evaluated (n = 3552 in 'Plan to stay abroad' and 'Female', n = 1899 in 'Plan to stay abroad' and 'Male', n = 2489 in 'Do not know' and 'Female', n = 798 in 'Do not know' and 'Male', n = 2400 in 'Plans to return' and 'Female', n = 570 in 'Plans to return' and 'Male').

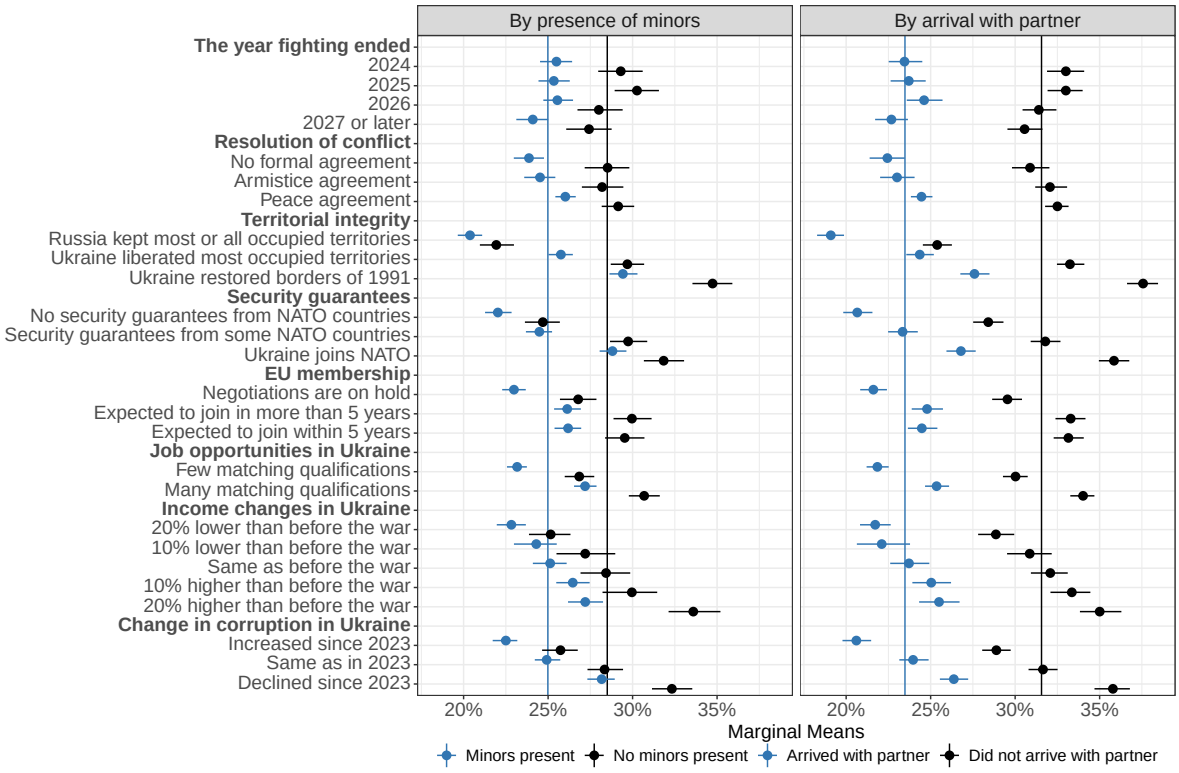

Figure A.6 Heterogeneity by presence of minors and partner

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. Section 5.2 and Appendix B.1 explain the calculation of the marginal means. The vertical lines represent the mean return probability across profiles for each of the four samples. Only responses of participants aged from 18 to 60 were analyzed. n = 8,803 profiles evaluated in the left facet; n = 9734 profiles evaluated in the right facet (n = 5594 in "Minors present" subgroup, n = 3209 in "No minors present" subgroup, n = 4469 in "Arrived with partner" subgroup, n = 5265 in "Did not arrive with partner" subgroup).

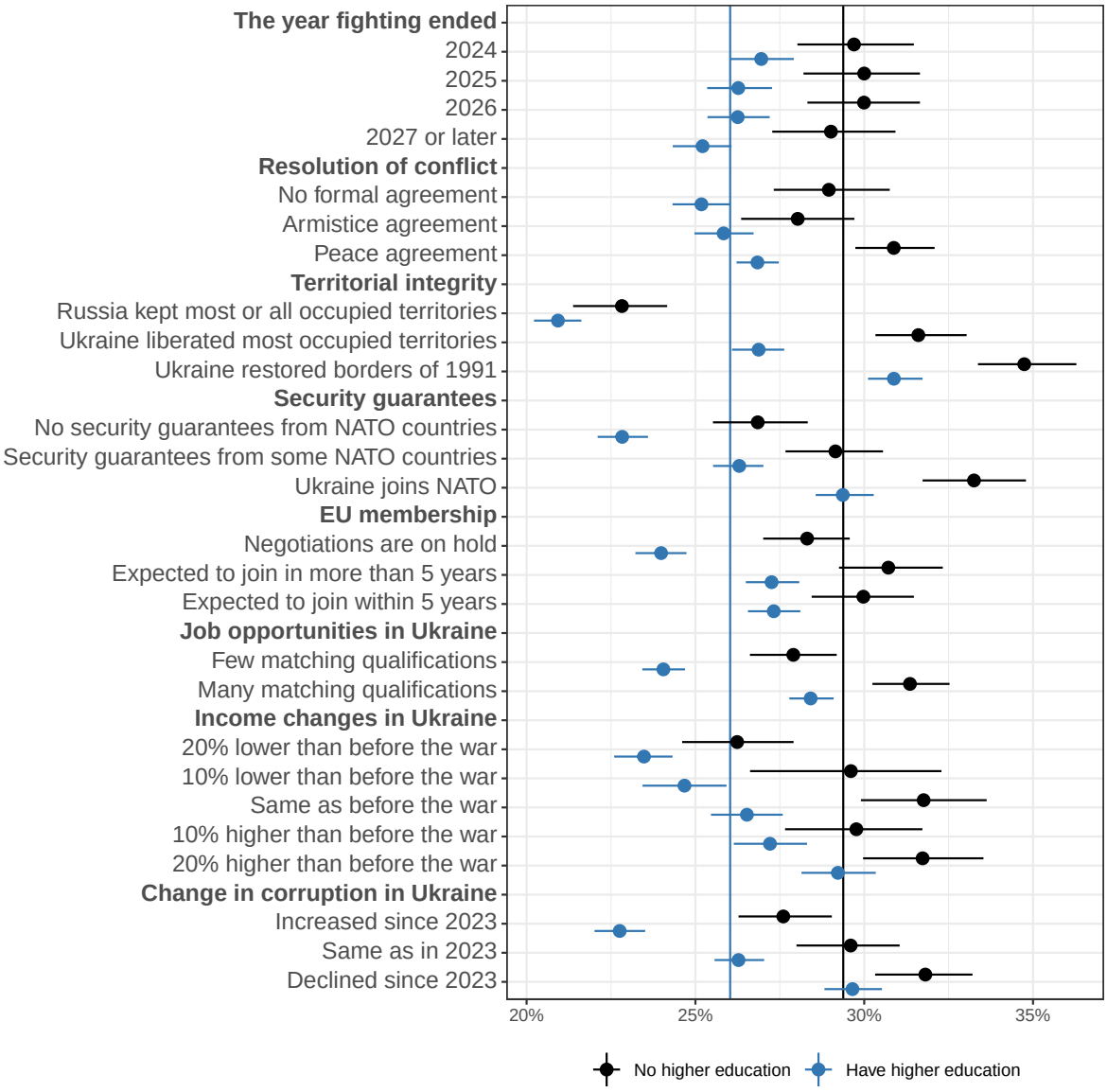

Figure A.7 Heterogeneity by education

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. Section 5.2 and Appendix B.1 explain the calculation of the marginal means. The vertical lines represent the mean return probability across profiles for each of the two samples. Only responses of participants aged from 30 to 59 were analyzed. n = 7607 profiles evaluated (n = 5667 in "Have higher education" subgroup, n = 1940 in "No higher education" subgroup).

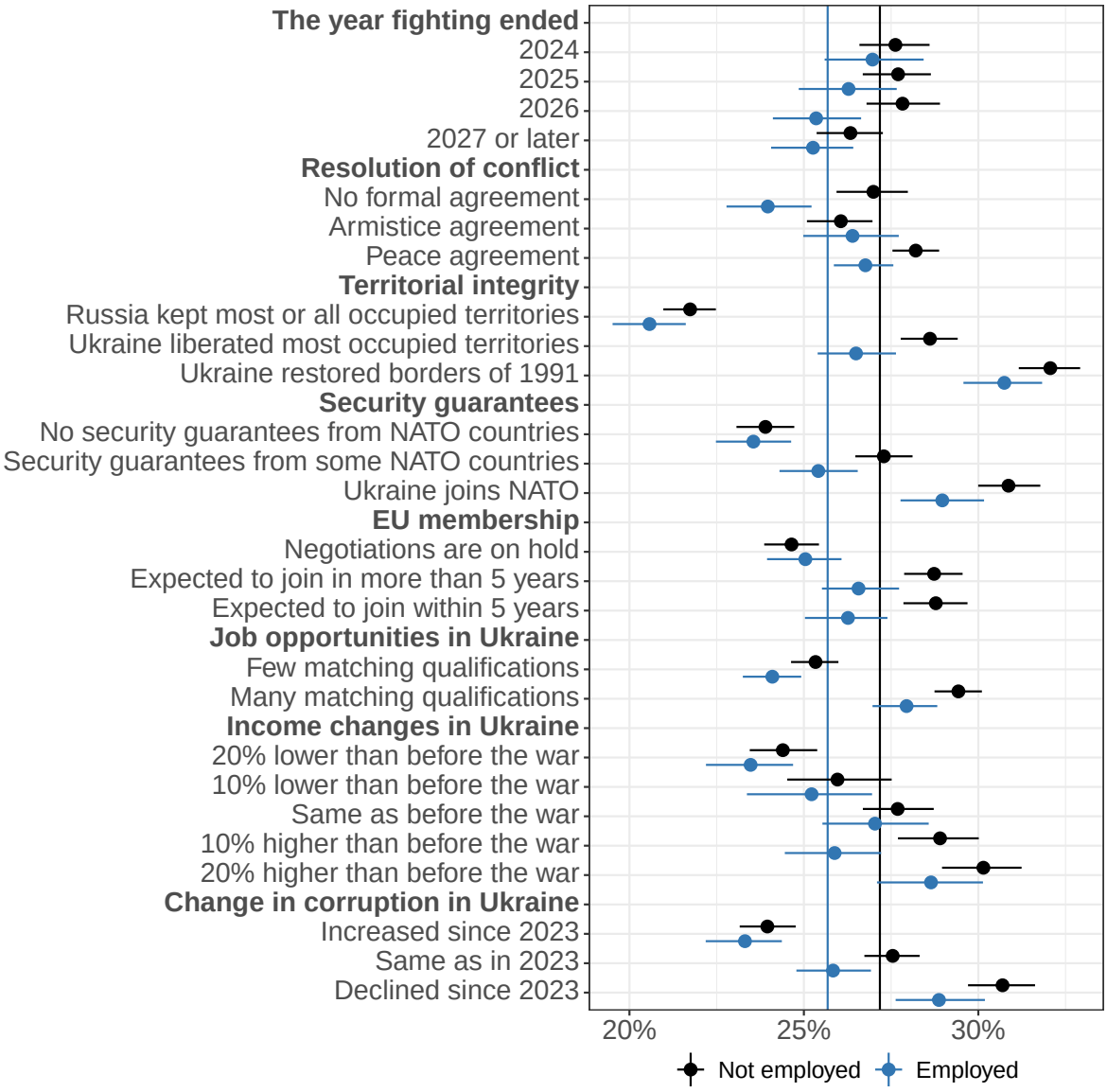

Figure A.8 Heterogeneity by employment status

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. Section 5.2 and Appendix B.1 explain the calculation of the marginal means. The vertical lines represent the mean return probability across profiles for each of the two samples. Only responses of participants aged from 30 to 59 were analyzed. n = 7869 profiles evaluated (n = 5188 in "Employed" subgroup, n = 2681 in "Not employed" subgroup).

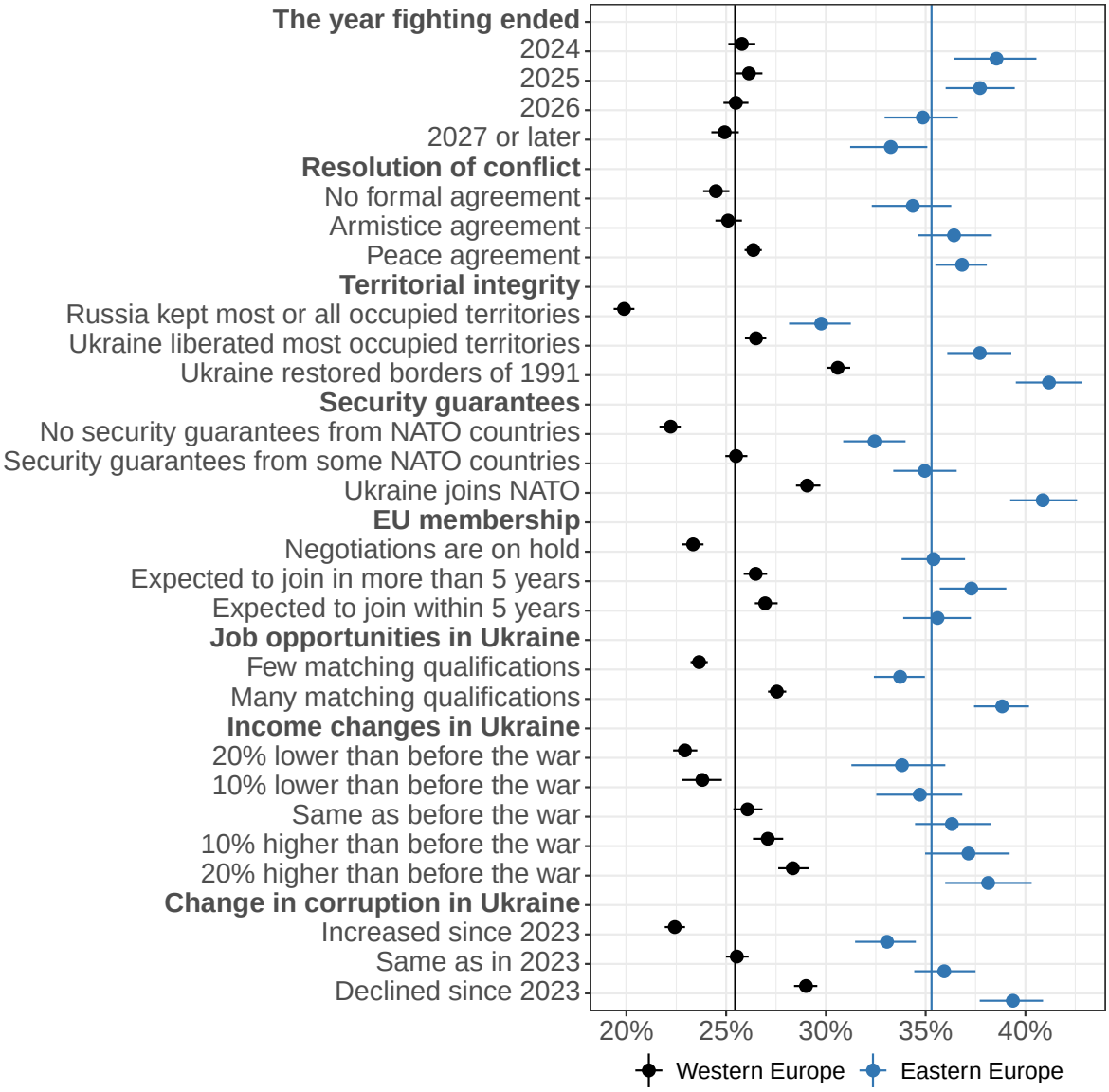

Figure A.9 Heterogeneity by residence country group

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. Section 5.2 and Appendix B.1 explain the calculation of the marginal means. The estimate with large confidence intervals for '20% lower than before the war' for the Russian speaking sample are driven by 8 individuals who changed the language from Russian to Ukrainian during the survey. The vertical lines represent the mean return probability across profiles for each of the two samples. n = 12,481 profiles evaluated (n = 10664 in 'Western Europe', n = 1817 in 'Eastern Europe').

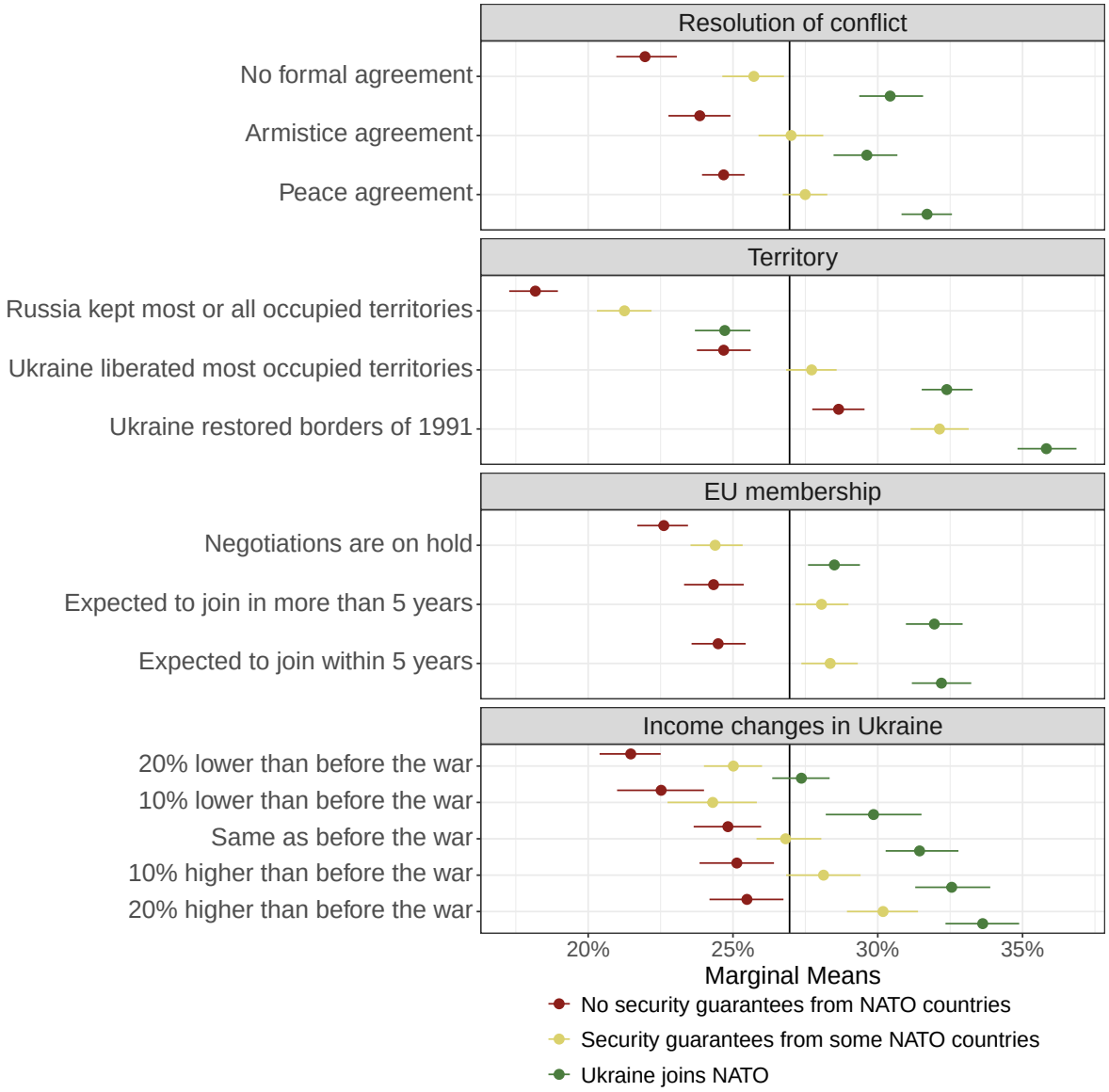

Figure A.10 Internal interactions between security guarantees and selected attributes

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. Section 5.2 and Appendix B.1 explain the calculation of the marginal means. n = 12,586 profiles evaluated (n = 4199 in 'No security guarantees', n = 4194 in 'Some security guarantees', n = 4193 in 'Ukraine joins NATO' subgroup).

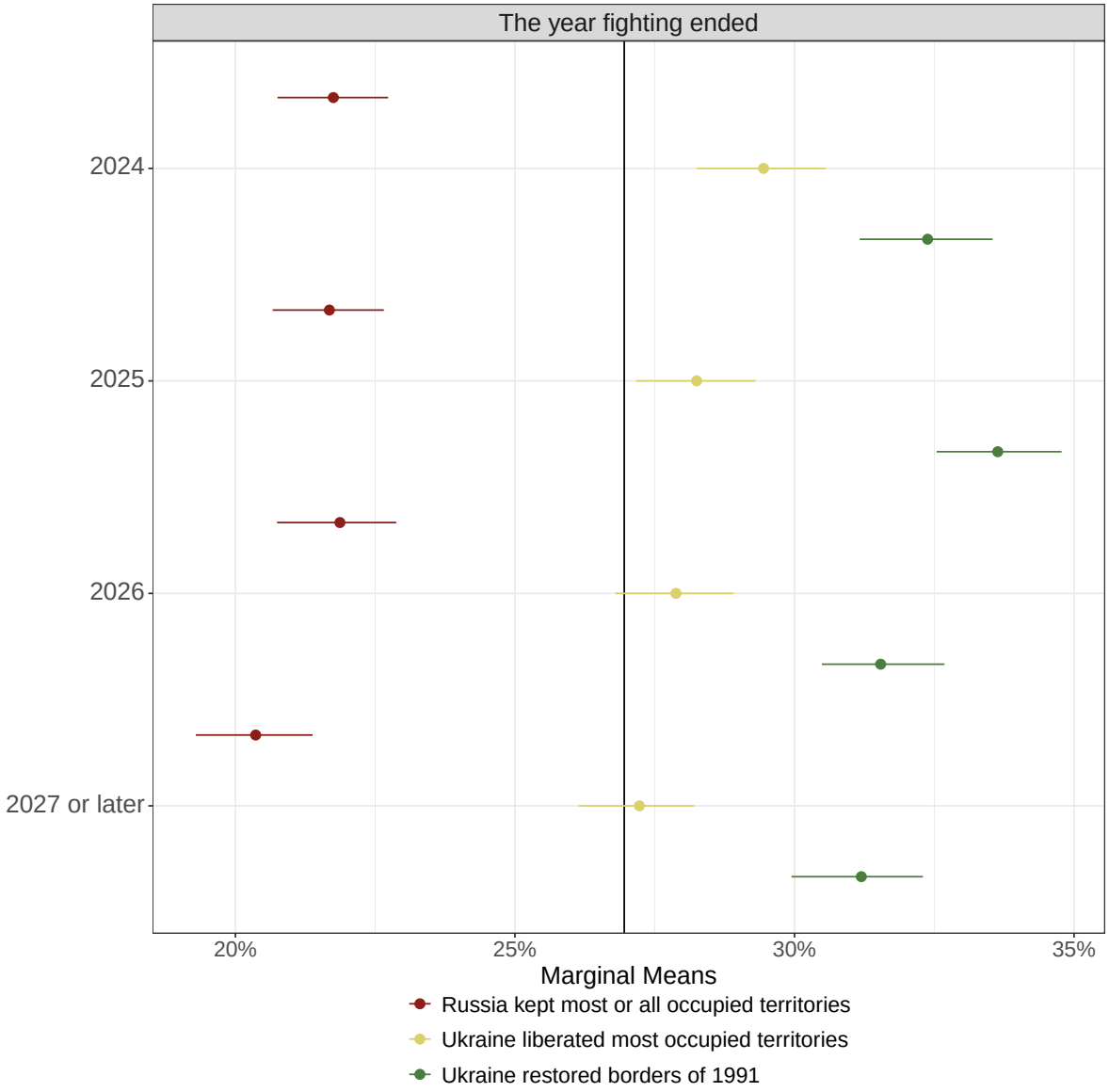

Figure A.11 Internal interactions between territorial integrity and when the war ends

Notes. Dots with horizontal whiskers indicate the subgroup marginal mean with cluster bootstrapped 95% confidence intervals. Section 5.2 and Appendix B.1 explain the construction of the marginal means. The vertical lines represent the mean return probability across all profiles. n = 12,586 profiles evaluated (n = 4294 in 'Russia kept most or all occupied territories', n = 4167 in 'Ukraine liberated most occupied territories', n = 4125 in 'Ukraine restored borders of 1991').

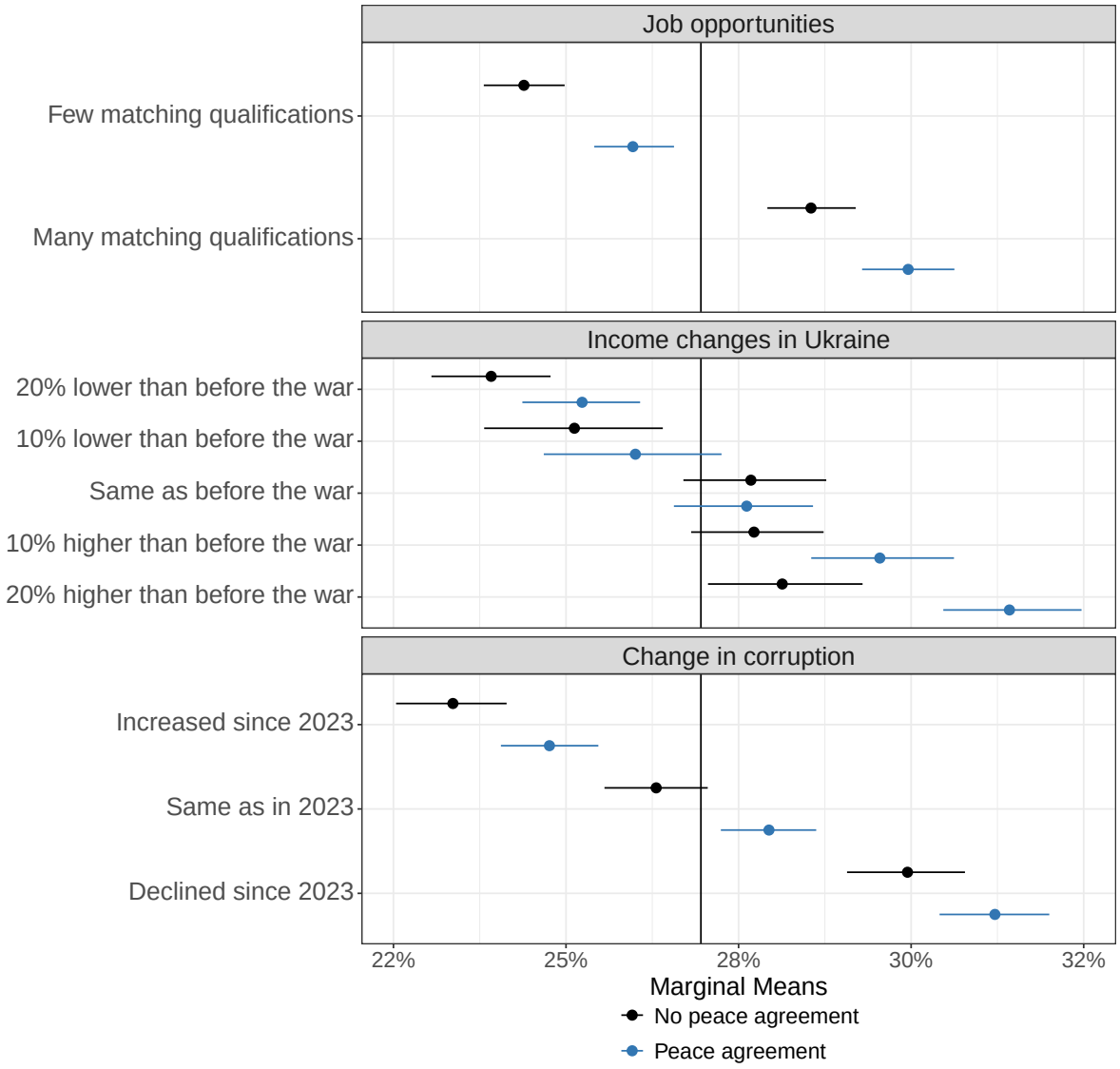

Figure A.12 Internal interactions between conflict resolution and economic and institutional factors
Notes. Dots with horizontal whiskers indicate the subgroup marginal mean with cluster bootstrapped 95% confidence intervals. Section 5.2 and Appendix B.1 explain the construction of the marginal means. The vertical lines represent the mean return probability across all profiles. n = 12,586 profiles evaluated (n = 6378 in 'Peace agreement', n = 6208 in 'No peace agreement').

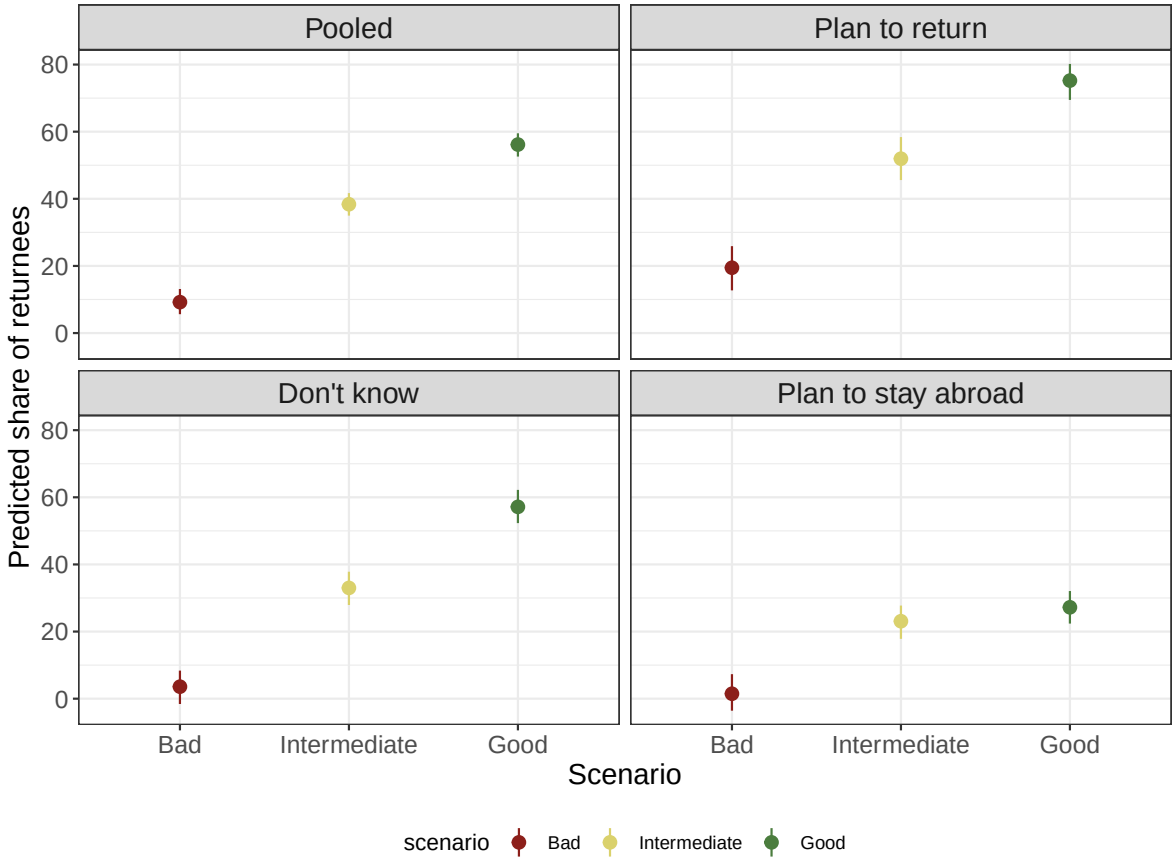

Figure A.13 Predicted share of returnees in Survey I in three scenarios

Notes. The predicted share of refugees is obtained through a prediction of a regression of the probability of return on attribute levels for different realized scenarios for each of the attributes. For a discussion of the pre-registered scenarios, see the main text. n = 4,479, profiles evaluated (n = 1280 in 'Plan to stay abroad', n = 1203 in 'Do not know', and n = 1936 in 'Plan to return' subgroup).

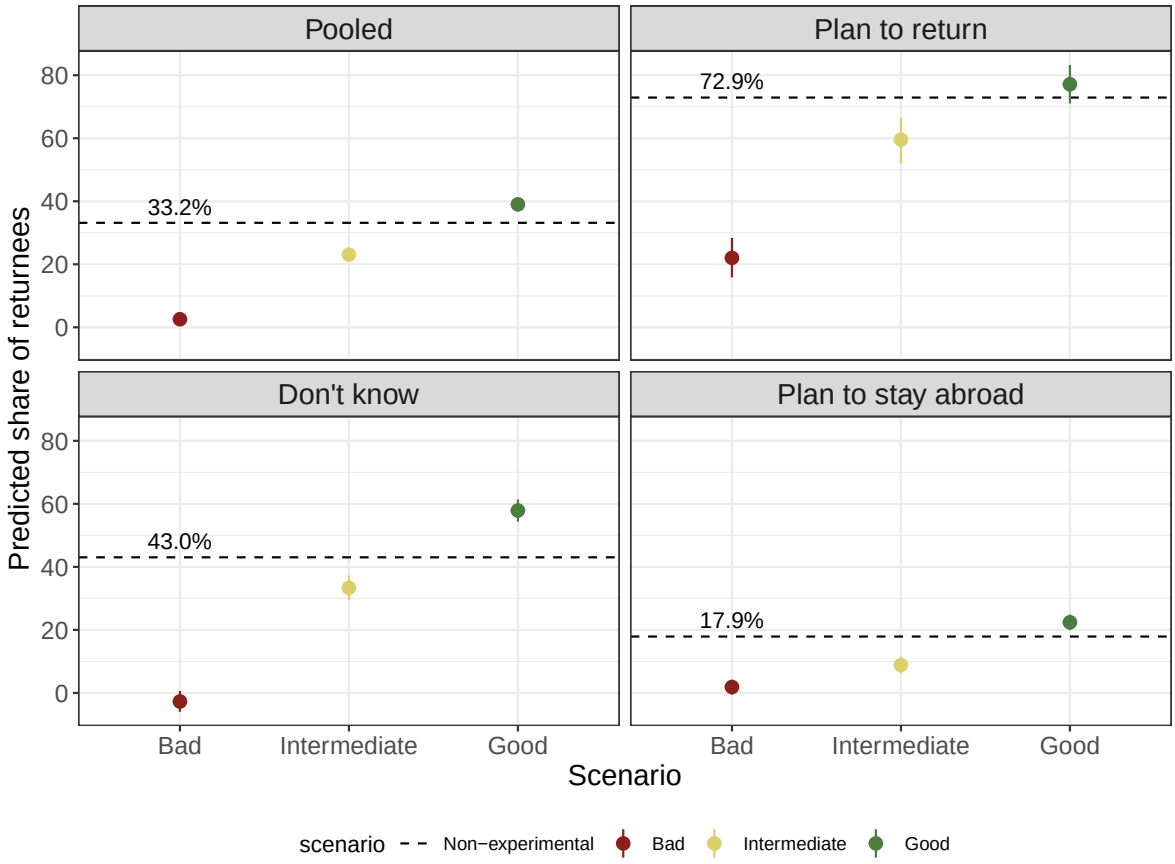

Figure A.14 Predicted share of returnees in Survey II in three scenarios

Notes. The predicted share of refugees is obtained through a prediction of a regression of the probability of return on attribute levels for different realized scenarios for each of the attributes. For a discussion of the pre-registered scenarios, see the main text. n = 7051 profiles evaluated (n = 4036 in 'Plan to stay abroad', n = 1951 in 'Do not know', and n = 879 in 'Plan to return' subgroup).

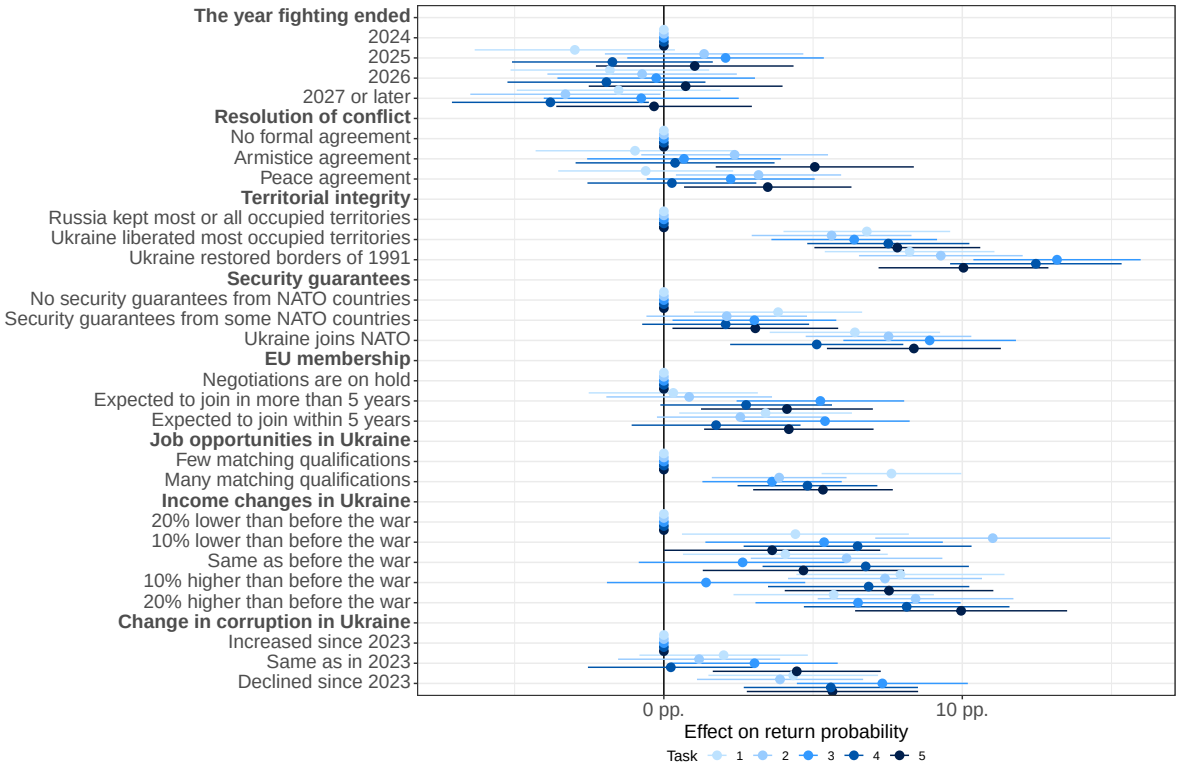

Figure A.15 Task order effects (Survey I and II)

Notes. Dots with horizontal lines indicate effect sizes with cluster-robust 95% confidence intervals from linear least-squares regression (AMCEs) without individual fixed effects. The dots on the zero line denote the reference categories. n = 12,586 (n = 2543 in Task 1, n = 2526 in Task 2, n = 2516 in Task 3, n = 2506 in Task 3, n = 2495 in Task 5)

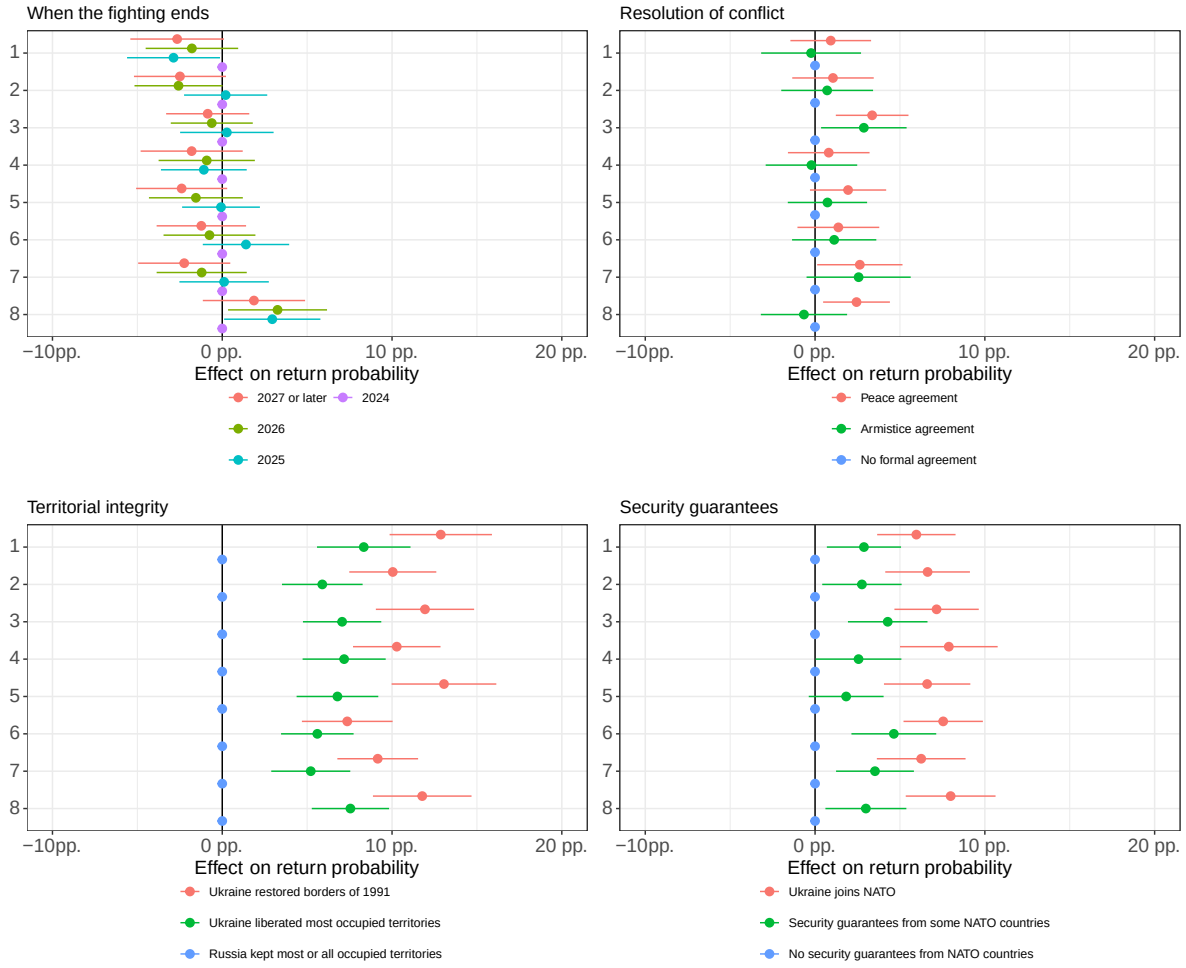

Figure A.16 Attribute order effects A (Survey I and II)

Notes. Dots with horizontal lines indicate effect sizes with cluster-robust 95% confidence intervals from linear least-squares regression (AMCEs). Every row (labeled 1 to 8) indicates the row order position in which the respective attribute was shown. The dots on the zero line denote the reference categories. Each facet is based on 12,586 profiles.

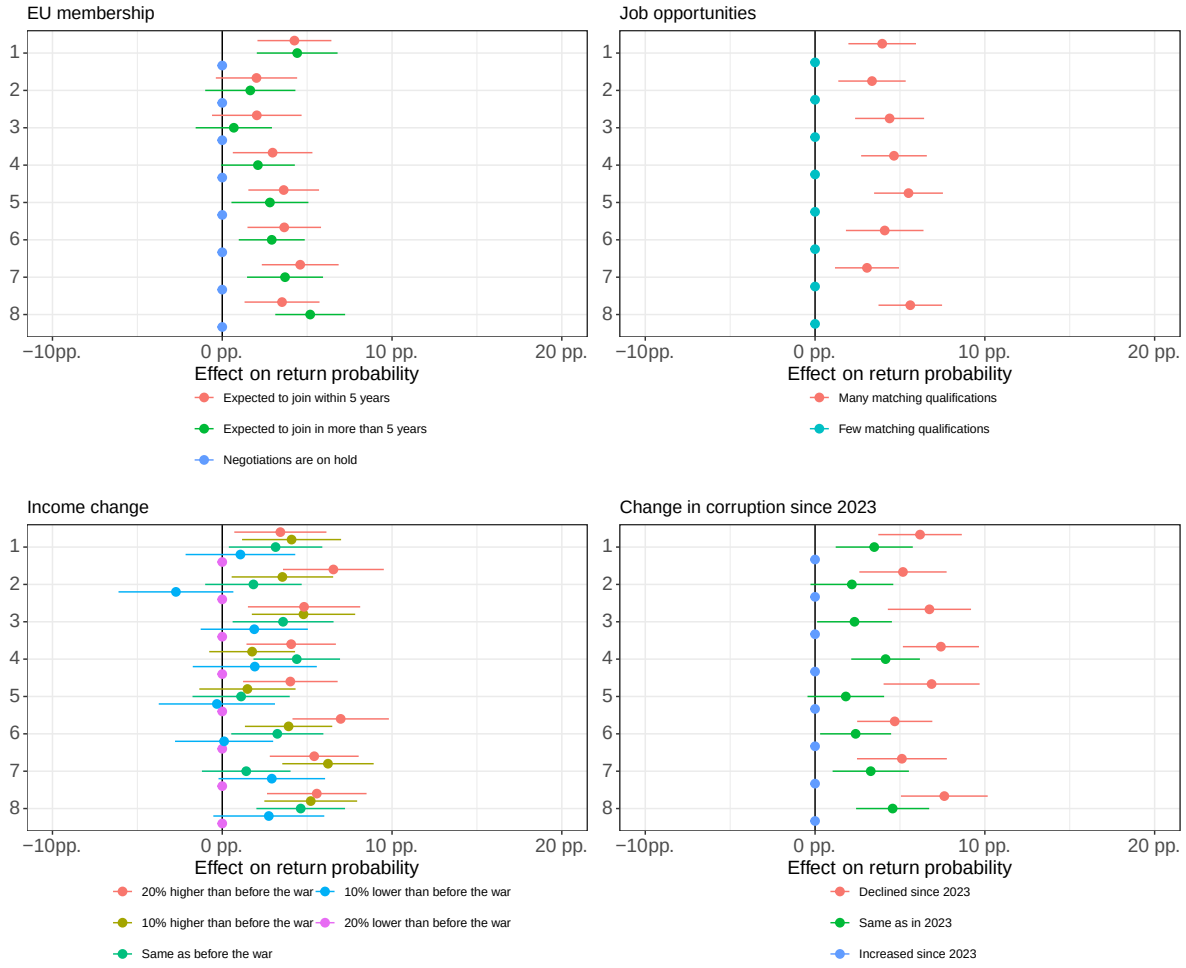

Figure A.17 Attribute order effects B (Survey I and II)

Notes. Dots with horizontal lines indicate effect sizes with cluster-robust 95% confidence intervals from linear least-squares regression (AMCEs). Every row (labeled 1 to 8) indicates the row order position in which the respective attribute was shown. The dots on the zero line denote the reference categories. Each facet is based on 12,586 profiles.

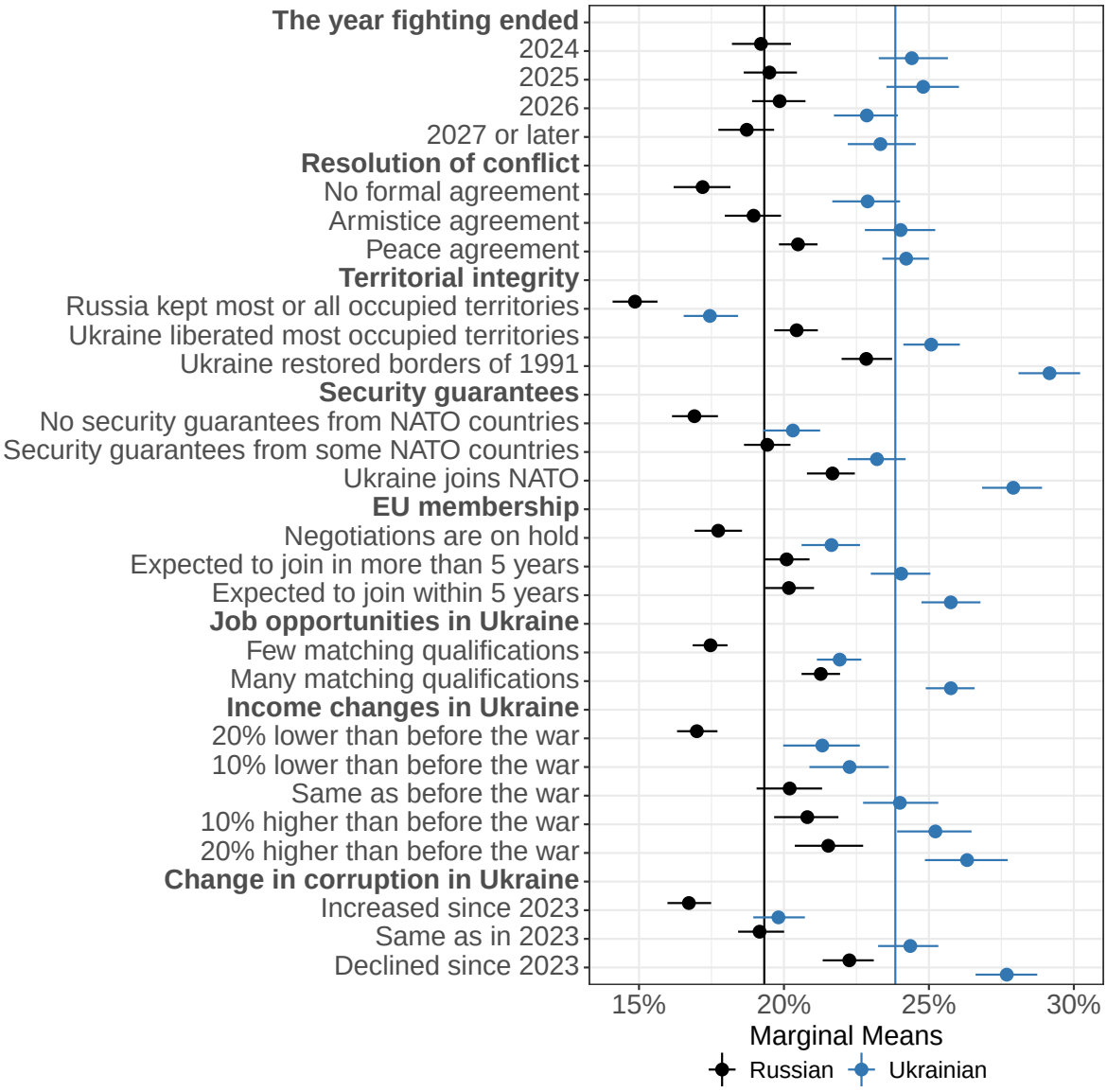

Figure A.18 Effects heterogeneity by language of survey in Survey II

Notes. Dots with horizontal whiskers indicate the marginal mean for each attribute level with cluster bootstrapped 95% confidence intervals on the respondent level. Section 5.2 and Appendix B.1 explain the calculation of the marginal means. The vertical lines represent the mean return probability across profiles for each of the two samples. We remove all 8 profiles where users switched between Russian and Ukrainian. n = 7165 profiles evaluated (n = 3910 in 'Russian', n = 3255 in 'Ukrainian').