Push, Not Peace: Reconsidering the Drivers of Refugee Return

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Abstract

When do refugees return to their countries of origin? A core premise of the international refugee regime is that refugees should remain in asylum while conflict continues at home and repatriate once peace is restored. Drawing on a new global dataset covering 293 origin-asylum dyads from 1980 to 2023, I show that the opposite pattern prevails: most returns occur during ongoing conflict, while many refugees remain in asylum long after war has ended. I argue that return is driven less by peace in origin countries than by push factors in asylum countries, especially host-country conflict and forced return policies. By contrast, peace often fails to produce repatriation because the costs of uprooting established lives are high, expected quality of life in asylum often exceeds that in origin countries, and repression continues after war. I test this argument with panel models that exploit within-dyad variation, translate the estimates into predicted return rates at the dyad and global levels, and trace the mechanisms through a qualitative case study. I also document substantial inaccuracies in UN refugee data and introduce corrected annual measures of refugee stocks and returns, along with new indicators of forced return policies, camp settlement, and UN funding. The findings challenge a foundational premise of the refugee regime: although voluntary repatriation is its preferred durable solution, much return appears to be driven by coercion rather than peace.

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1 Introduction

One in every two hundred people globally is a refugee displaced from their country of origin (UNHCR, 2025). Most live in protracted displacement in neighboring low- and middle-income countries (LMICs), without secure legal status or a path to permanent settlement (UNHCR, 2025). When do refugees return home after years in exile? The conventional answer is that refugees repatriate once peace is restored. This expectation reflects a core premise of the international refugee regime: refugees should receive asylum while conflict persists in their origin countries, then return once that conflict ends.[1] Existing studies largely support this account, finding that refugees' intentions to return depend primarily on origin-country security conditions (e.g., Alrababah et al., 2023; Ghosn et al., 2021; Beaman, Onder and Onder, 2022; Koser, 1997; Adema et al., 2025).

In this paper, I show that observed return patterns do not align with conventional expectations. To do so, I introduce the Global Refugee Return (GRR) dataset, which addresses major inconsistencies in existing global displacement statistics. GRR hand-codes qualitative archival records into annual measures of refugee stocks and returns for 293 origin–asylum dyads from 1980 to 2023, alongside novel measures of *de facto* refugee conditions and UNHCR financing. These global data show that, rather than returning after peace, most refugees return during ongoing conflict, while many remain in asylum long after conflict ends. Both patterns contradict the core assumptions of the refugee regime and security-based explanations within the literature.

I argue that these puzzling patterns reflect two overlooked features of refugees' lives. First, much return during conflict is not voluntary but driven by "push" factors in the asylum country, particularly forced return policies and host-country conflict. Using GRR, I show that three-quarters of all returns occur in years with either a forced return policy or conflict in the asylum country. Second, refugees often remain in asylum after conflict ends when the costs of return are high, and political and economic conditions in exile exceed those in the origin country. Among refugees whose origin-country conflict has ended, three-quarters live in asylum countries that are richer than their countries of origin, and four-fifths come from origin countries that remain authoritarian or repressive after war. These dynamics generate the observed aggregate pattern: return during conflict and persistence after peace.

The cases of South Sudan and Afghanistan illustrate the logic. By 2022, over 2.3 million South Sudanese—more than 20 percent of the population—were living as refugees. In 2023, a large wave of returns occurred not because of peace in South Sudan but because of the outbreak of civil war in Sudan. Nearly three-quarters of South Sudanese refugees in Sudan returned within two years, while those in Uganda, Ethiopia, and Kenya largely remained. A similar dynamic unfolded in Afghanistan during the 1990s: although conflict continued after the fall of the Soviet-backed regime in 1992, more than 4.5 million Afghans returned in the wake of coercive measures employed by Iran and Pakistan, including mass forced return, non-renewal of residence permits, school closures, and cuts to food aid.

I formalize the argument in a simple model of refugee return and test its implications using the GRR dataset. Using panel methods, I show that return is largely driven by forced return policies and asylum-country conflict rather than origin-country conditions, and is less likely when origin-country repression persists, economic conditions are poor, and repatriation funding is scarce. To explain aggregate patterns, I complement this with global descriptive statistics and counterfactual estimates, finding that removing asylum-country conflict or forced return would have reduced returns globally by 36.1 and 26.9 percent, respectively, while reducing origin-country conflict would have had almost

[1] The UN refugee agency (UNHCR) identifies voluntary repatriation as the preferred "durable solution," and one of its core mandates is to facilitate safe return (Barnett and Finnemore, 2004). The other two "durable solutions" are local integration and third-country resettlement. Local integration refers to incorporation into the economic, social, and legal institutions of the host country, while third-country resettlement transfers refugees to another state, typically under limited quotas. Repatriation has been the focus of UNHCR mostly since the mid-1980s; during the Cold War, it focused on resettlement and integration of refugees from communist countries (Loescher, 2001).

no effect, holding other factors constant. I complement the analysis with a case study of Ethiopian refugees to illustrate the underlying mechanisms.

This research makes three contributions. First, despite the centrality of return to the international refugee regime, it has been remarkably understudied at the macro level. This is the first study to examine global patterns using improved data, and it challenges both the regime's foundational principles and prevailing security-based accounts. I show that most historical returns were not voluntary decisions but responses to coercive pressures. Existing research has missed this pattern for two reasons: it has focused largely on Syrian return and on settings in which refugees have a meaningful choice to remain, and it has examined return intentions more often than realized return (e.g., Ghosn et al., 2021; Alrababa'h et al., 2021; Adema et al., 2025). Second, the article makes a significant data contribution: it identifies inaccuracies in UNHCR's global stock and return data, and provides corrected annual measures of refugee stocks and returns, multiple new measures of *de facto* refugee conditions, and new data on UNHCR financing.

Third, the findings contribute to broader debates within political science. The study provides evidence on the limits of international law, organizations, and norms in constraining state behavior (Simmons, 2009; Hafner-Burton and Tsutsui, 2005; Mearsheimer, 1994; Finnemore and Sikkink, 1998). Many host states have adopted forced return policies in direct contravention of *non-refoulement*—the core principle of the 1951 Refugee Convention—underscoring the limited capacity of UNHCR and the broader regime to prevent such practices. The findings also bear on the determinants of cross-border movement (Peters, 2017) and on the regional consequences of civil war for the domestic politics of neighboring states. Large population inflows can shift ethnic and political balances, generate competition over resources, and alter the availability of external aid, prompting shifts in host-state domestic policy (Gourevitch, 1978; Salehyan and Gleditsch, 2006; Adida, 2014).

The article proceeds as follows. I first document the empirical puzzle—return during conflict and stasis after peace—then develop the theoretical framework. I next introduce the GRR dataset, outline the empirical strategy, and present the panel results and predicted return rates. I then provide descriptive evidence on the prevalence of key factors, followed by a case study that traces the mechanisms. The article concludes with implications for durable solutions and directions for future research.

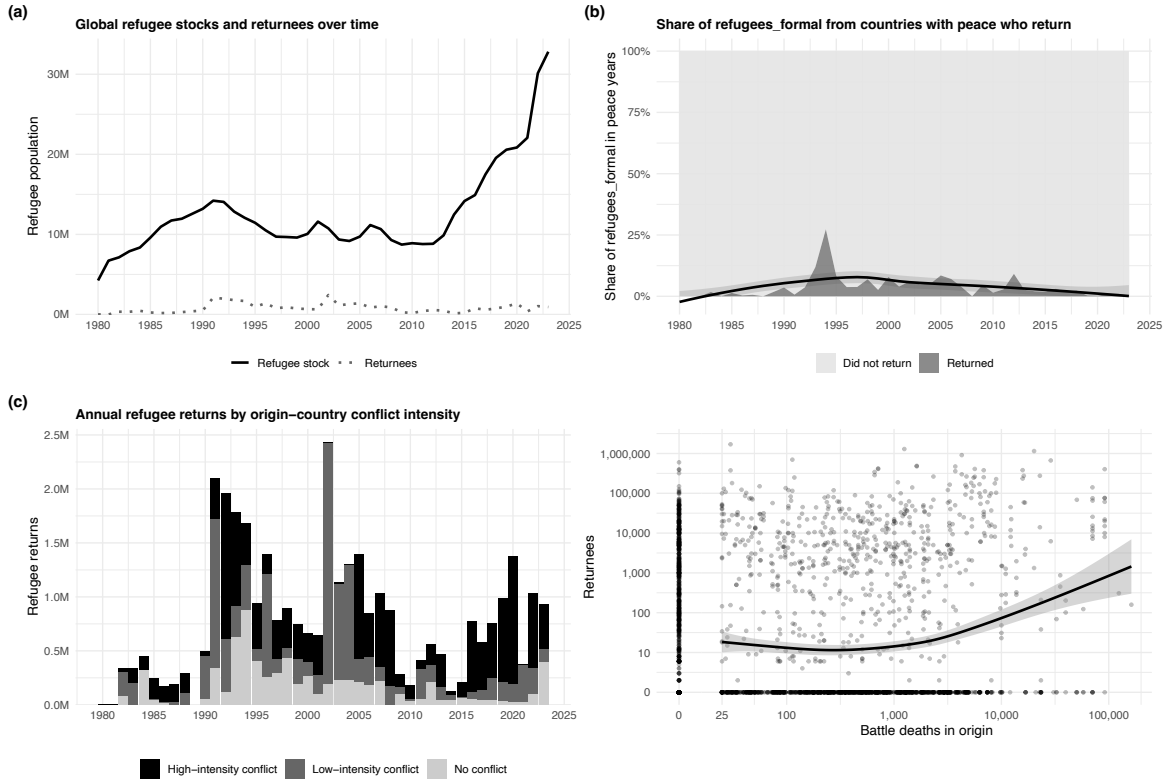
2 Puzzling Patterns of Refugee Return

Prevailing theories of refugee return center on security conditions in the country of origin. This view follows from the core logic of the refugee regime: refugees flee war, are protected in asylum under the principle of *non-refoulement*, and return when there is peace. On this account, repatriation depends primarily on whether conflict has ended at home.

Micro-level studies of return intentions support this view, consistently finding that safety at home dominates economic considerations in explaining who plans to return (Alrababah et al., 2023; Ghosn et al., 2021; Al Husein and Wagner, 2023; Adema et al., 2025; Beaman, Onder and Onder, 2022). For example, the "threshold model" developed by Alrababah et al. (2023) argues that refugees consider return only once a minimum level of safety in the origin country has been achieved. Below this threshold, deteriorating conditions in asylum should not induce return; only after peace is restored do refugees weigh quality-of-life considerations across origin and asylum. This framework yields two clear empirical implications. First, return should increase when there is peace in the origin country. Second, return should be rare during active conflict.

Drawing on the Global Refugee Returns (GRR) dataset, a new dataset described in Section 4.1, Figure 1 shows that observed patterns are inconsistent with both implications. Panel (a) plots global refugee

Figure 1: Return during conflict and non-return during peace



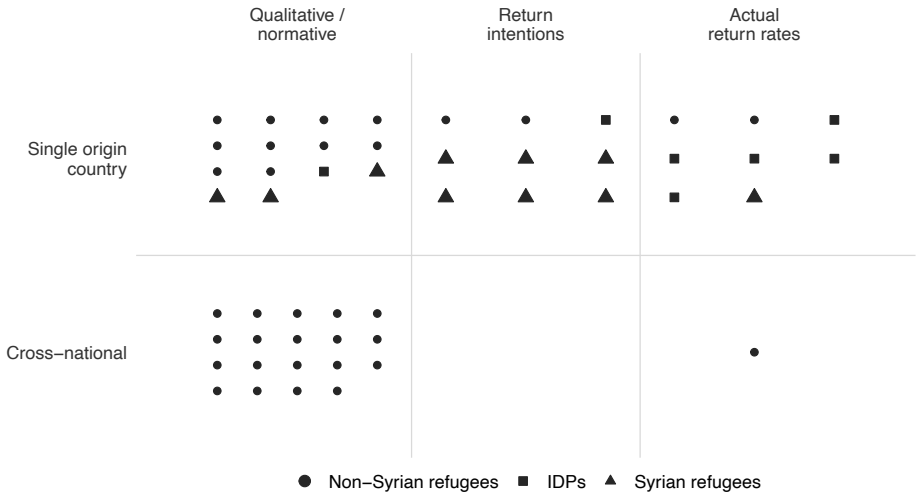
Note: Panel (a) plots the global refugee stock (solid line) and total recorded returns (dotted line) for each year from the Global Refugee Return dataset. Panel (b) subsets the sample to refugees who originally fled war rather than non-conflict forms of persecution and restricts the sample to dyad-years in which the country of origin (COO) is at peace, showing the share of refugees who returned versus did not return in each year; the black line is a LOESS smoother of the return share. Panel (c) decomposes total annual returns by the conflict status of the COO, distinguishing no conflict, low-intensity conflict ($\geq$ 25 battle deaths), and high-intensity conflict ($\geq$ 1,000 battle deaths) using UCDP thresholds. Panel (d) plots the relationship between conflict severity in the COO and refugee return by showing dyad-year observations of log battle deaths in the origin country and log returnees; the black line is a LOESS smoother. The year 1989 is omitted across all panels due to missing return data. *Source*: Refugee data from the Global Refugee Return dataset; conflict data from the UCDP/PRIO Armed Conflict Dataset.

stocks and return flows since 1980, illustrating that return is rare relative to the size of displaced populations. GRR shows that, across dyad-years with more than 1,000 refugees, the median return rate is zero and the mean is 5.31 percent; in 89 percent of dyad-years, fewer than 5 percent of refugees return. One interpretation is that low return reflects the persistence of conflict, but this explanation is incomplete: almost as many of the world's refugees originate from countries now at peace as those in high-intensity conflict (30.1 percent versus 38.8 percent), and Panel (b) reflects that, even when there is no conflict in the origin country, the average return rate is only 3.42 percent.[2] Extending the window to the first three post-conflict years yields a cumulative return share of just 6.8 percent. In general, peace alone does not produce large-scale repatriation.

On the contrary, Panel (c) shows that most returns occur during war, not after it. Decomposing annual returns by origin-country conflict status shows that most return occurs during conflict. Between 1980 and 2023, more than three-quarters of all recorded returns took place while conflict was ongoing. Roughly two-fifths occurred during high-intensity conflict, over a third during low-intensity conflict, and only one-fifth during peace. Panel (d) reinforces this pattern at the dyad-year level. Plotting

[2]Restricted to origin-year dyads where refugees generally fled war rather than broader non-conflict persecution.

Figure 2: Geographic and methodological concentration in the refugee return literature



Note: Each point represents a study identified through a systematic journal search (2006–2026) of: (1) 12 leading political science journals (APSR, AJPS, JOP, CPS, BJPS, WP, IO, ISQ, JPR, JCR, PSRM, PNAS); (2) 5 leading migration and refugee studies journals (Journal of Refugee Studies, IMR, JEMS, International Migration, Comparative Migration Studies); (3) 2 leading development economics journals (World Development, Journal of Development Economics); and (4) the leading area studies journal for each of four principal refugee-producing regions (African Affairs, IJMES, Journal of Asian Studies, Latin American Research Review). Supplemented with citation tracing from key articles and books, and recent working papers on contemporary cases. Triangles denote studies of Syrian refugees; squares denote studies of IDPs; circles denote other populations. List of studies detailed in Appendix Table 15.

conflict severity against returnees reveals a positive relationship: higher battle deaths are associated with more, not fewer, returns.

These patterns are difficult to reconcile with security-based theories. If improved safety at home were the dominant driver, we would observe concentrated return after conflict termination and minimal return during war. Instead, most returns occur during conflict, and most post-conflict settings do not produce large-scale repatriation. This yields two central puzzles: why do refugees return during conflict, and why do they not return when conflict ends?

Existing studies have missed these patterns because the literature is dominated by micro-level, single-country analyses of return intentions, particularly of Syrian refugees, rather than cross-national studies of realized return (Figure 2).[3] This focus has produced three limitations. First, it emphasizes within-group variation—what distinguishes individuals who intend to return from those who do not—while most variation in return occurs at the group level. Return episodes are concentrated and episodic, with the top 5 percent of dyad-years accounting for 93.7 percent of all returns (GRR). Second, because existing research has focused on specific cases, it overlooks common factors among host countries in unexamined contexts. Third, it analyzes intentions rather than realized behavior; when return is observed, it often diverges from these expectations.[4]

3 Theory

Why do refugees return during ongoing conflict, yet often remain in asylum even after peace? I argue that both patterns reflect the same underlying mechanism: refugees often prefer to remain in asylum

[3]The exception is Zakirova and Buzurukov (2021). See Appendix Table 15 for a full list of studies.

[4]For example, in the case studied by Alrababah et al. (2023) (Syrian return from Lebanon in 2020), GRR shows that roughly 21,000 Syrians returned despite ongoing conflict, driven in large part by coercive policies and facilitated repatriation. This contradicts the threshold model's prediction that refugees return only when conditions are safe.

in both war and peacetime, and large-scale return most often occurs not because conditions at home improve, but because conditions in the asylum country deteriorate. The ideal case is one in which war and persecution ends, refugees wish to return, and they have the resources to do so. In practice, however, this scenario represents a minority of cases.

3.1 When Refugees Return

A key assumption of security-based accounts is that once refugees reach asylum, they remain protected until conflict ends in their country of origin. In practice, this assumption often fails. Most refugees (67 percent) reside in neighboring countries, which means they remain in conflict-prone regions even after fleeing immediate violence (UNHCR, 2025). States bordering conflict zones face elevated risks of war, both because neighboring countries become involved in fighting and because structural risk factors for conflict cluster geographically (Fearon and Laitin, 2003; Collier and Hoeffler, 2004; Gleditsch, 2007). Refugees thus face a substantial risk that conflict will emerge in their country of asylum (Lischer, 2005).[5] Living close to the border and absent resources for onward migration, many refugees return to their country. Take, for example, the Democratic Republic of the Congo in 1996–1997:

> "In October, an outbreak of civil war in Zaire, which engulfed Rwandan refugee camps there, produced what UNHCR described as the 'largest and swiftest' repatriation in memory. About a half-million Rwandan refugees returned home during a four-day period in mid-November. Most returnees repatriated on foot, jamming the main Rwandan highway from the border. The sea of humanity stretched nearly 100 miles during the height of the return." *(WRS, Zaire, 1997)*

Even absent conflict, asylum-country governments may force refugees to leave before peace has been achieved at home. Despite the prohibition on forced return under the 1951 Refugee Convention, many states circumvent or ignore *non-refoulement* (Schwartz, 2025). Governments that have not ratified the Convention face no formal legal constraint, while signatories often rely on indirect coercion, including withdrawal of residence permits, closure of schools and markets, and termination of food aid, to induce ostensibly "voluntary" repatriation. This echoes scholarship documenting how repatriation is often coerced (Chimni, 2004; Harrell-Bond, 1989; Long, 2013; Stein and Cuny, 1994). Such coerced return is often facilitated by UNHCR, whose reliance on donor funding and asylum-state cooperation creates incentives to accommodate state preferences at the expense of the voluntariness standard it formally upholds (Barnett, 2001*a*,*b*; Barnett and Finnemore, 2004; Whitaker, 2003). Because most refugees are hosted in regions neighboring their origin country, onward flight would require reaching distant borders and is typically blocked by cost or asylum-state security forces (Whitaker, 2003).

Iran's treatment of Afghan refugees during the 1990s illustrates this pattern. Despite ongoing conflict in Afghanistan, Iranian authorities pursued a series of measures designed to induce return without formally violating *non-refoulement*. Afghans who had arrived in 1992 were reclassified as "illegal immigrants," new registrations were curtailed, and refugee status was replaced with six-month temporary permits. Work-permit renewals were refused, worksite raids were conducted, and those without valid papers were deported. In March 1995, Iran announced that all refugees would be required to leave by March 1997. A 1999 law mandated the deportation of foreign workers without authorization, a category that encompassed the vast majority of Afghans in the country. Though framed as voluntary, these measures made continued residence in Iran untenable for many refugees and generated substantial return flows during periods when conditions in Afghanistan remained unsafe.

At the same time, the end of conflict does not automatically generate return. Most refugees spend at least a decade in asylum.[6] Over time, they build new lives: they find work, start businesses, learn

[5] In line with this, Shaver et al. (2024) find that 45.40% of asylum country-year observations between 2000-2021 have both inflows and outflows of refugees.

[6] The mean conflict duration among protracted situations in the data is 13.3 years, and Devictor and Do (2016) show that refugees in protracted situations live in asylum for an average of 21 years.

the local language, raise children who have never been "home," and develop social and economic networks in their host communities. In this sense, they become long-term migrants, and, as with migrants more broadly, the longer they remain abroad, the less likely they are to return (Borjas and Bratsberg, 1996; Van Hook and Zhang, 2011). This is especially the case when refugees are integrated in urban areas rather than camps; 60.8 percent of dyad-years in the sample. Asylum countries are also typically wealthier than origin countries: most refugees are hosted in the safer and more prosperous countries within LMIC regions. Return may also be less likely when the origin country is associated with trauma, including the death of family members, the destruction of homes and property, or other experiences of wartime violence.

In addition, war does not mean the end of repression and broader conditions that would make refugees' living conditions poor upon return. Civil wars often end in authoritarianism rather than democracy, and the human rights environment of a post-conflict state led by pro-government militias can be worse than the pre-conflict baseline (Karreth, Sullivan and Dezfuli, 2020; Carey and González, 2021). Refugees are often automatically granted refugee status on the basis of widespread conflict, known as *prima facie* recognition, and may not have qualified on the basis of fleeing an authoritarian regime alone (Hathaway and Foster, 2014). The grounds for their original status can thus dissolve with the end of war even as the repressive conditions that would deter return persist. Refugee scholars have made a parallel point, arguing that durable return requires more than the cessation of fighting, but also safe political and economic conditions for the refugee group (Bradley, 2013; Long, 2013). Despite this conceptual distinction, return-determinants studies operationalize security almost entirely through conflict events.[7]

Even when refugees would prefer to return, they may lack the means to do so. Relocating, rebuilding housing, and re-establishing livelihoods in a post-conflict economy carries substantial costs, which refugees who have spent years in asylum may lack the resources to cover. International assistance can offset these costs: UNHCR sometimes provides cash grants, transport, and reintegration packages to returnees. The repatriation of Sierra Leonean refugees from Guinea in the early 2000s illustrates the scale of support involved:

> "About half of the returning refugees received assistance from UNHCR and other agencies in the form of transportation, cooked meals, and medical care during the journey home... Returnees received blankets, cooking utensils, shelter materials, and a two-month food supply. UNHCR appealed for a nine-fold increase in its budget, to $18 million, to support reintegration programs including schools, health clinics, and livelihood programs." *(Guinea & Sierra Leone, WRS, 2002–2004)*

When war ends, return requires uprooting established lives and moving back to a country with a damaged post-conflict economy and potential ongoing repression and future insecurity. Peace removes the immediate security barrier, but it does not eliminate the economic, social, and psychological costs of relocation. In the absence of strong push factors from the asylum country, refugees may choose to stay. Taken together, these dynamics suggest that refugee return should be modeled not as an automatic response to peace at home, but as a choice shaped by relative security and economic conditions in origin and asylum, coercive pressure from the host country, and the costs of relocation.

3.2 Formalization

I formalize the argument using a simple utility framework in which refugees choose between remaining in the asylum country (a) or returning to their country of origin (o). Expected welfare in each location depends on quality of life, which itself is a function of security, economic conditions, and political repression, and on any coercive push factors imposed by the host country. Return additionally requires

[7] For exceptions, see Zakirova and Buzurukov (2021) and Beber, Roessler and Scacco (2021).

the refugee to pay a one-time transition cost.

Expected welfare from remaining in asylum is:

$$W_a = v_a(s_a, e_a) - \phi(p_a)$$

where s_a indexes security conditions in the asylum country, e_a indexes economic conditions, and v_a is strictly increasing in both, capturing baseline quality of life in asylum. The term $\phi(p_a) \geq 0$ represents the additional welfare loss imposed by coercive host-country policies p aimed at inducing return, and is increasing and unbounded above, such that sufficiently coercive measures can outweigh any finite quality-of-life advantage to remaining in asylum. I treat ϕ as conceptually distinct from v_a because these policies are deliberate state actions, rather than general conditions in the host country.

Expected welfare from returning to the origin country is:

$$W_o = v_o(s_o, e_o, \rho_o) - \tau$$

where s_o indexes security conditions in the origin country, e_o indexes economic conditions, and ρ_o indexes political repression, including restrictions on civil liberties and political persecution directed at the refugee's group. v_o is strictly increasing in s_o and e_o and strictly decreasing in ρ_o, and $\tau \geq 0$ is the one-time transition cost of returning, which may be sufficiently to prevent return even when origin-country welfare exceeds that of asylum.

A refugee returns if and only if two conditions hold. First, return is welfare-improving:

$$W_o > W_a \iff v_o(s_o, e_o, \rho_o) - v_a(s_a, e_a) + \phi(p_a) > \tau.$$

Second, the refugee can afford the transition cost:

$$r \geq \tau.$$

Refugees for whom the first holds but not the second are stranded: they would prefer to return but cannot afford to do so.

This formulation differs from the security-based accounts, such as the Alrababah et al. (2023) threshold model, in three ways. First, I allow quality of life to depend on security conditions in both contexts and remove the assumption that refugees consider return only once origin-country insecurity falls below a safety threshold. This allows return to occur during ongoing origin-country conflict if remaining in asylum becomes sufficiently worse. Second, I separate origin-country political repression from conflict, since post-war regimes can remain highly repressive and prevent return even after violence subsides. Third, I introduce a transition cost and a feasibility constraint, such that parity in welfare across countries does not automatically produce large-scale repatriation.

3.3 Hypotheses

The model yields four predictions. The first follows from $\phi(p_a)$ and the dependence of v_a on s_a. Both coercive host-country policies and armed conflict in the asylum country reduce W_a, narrowing the gap that justifies remaining.

> *H1 (Host-Country Push).* The probability of return increases when the host country imposes coercive return policies or experiences armed conflict.

The second follows from v_a. Higher security and economic conditions in asylum raise the welfare cost of leaving.

Table 1: Expected Patterns of Refugee Return

		Host-country push	
		Yes ($p > 0$ or s_a low)	*No ($p = 0$ and s_a high)*
Conflict ends	*Yes (s_o high)*	Return most likely (push + peace)	$v_a > v_o - \tau$ or $r < \tau \Rightarrow$ Stay $v_a < v_o - \tau$ and $r \geq \tau \Rightarrow$ Return
	No (s_o low)	Return likely (push only)	Stay

H2 (Asylum Quality of Life). The probability of return decreases as quality of life in asylum rises relative to the origin country.

The third follows from v_o. Improvements in origin-country conditions, whether through declining violence, reduced state repression, or economic opportunity, raise the welfare value of return.

H3 (Origin-Country Conditions). The probability of return increases as origin-country security and quality of life improves.

The fourth follows from τ and the feasibility constraint $r \geq \tau$. Long displacement and urban integration raise transition costs, while repatriation assistance relaxes the feasibility constraint by transferring resources to refugees.

H4 (Transition Costs). The probability of return decreases with transition costs and increases with repatriation assistance.

Table 1 summarizes the expected patterns across combinations of host-country push and origin-country conflict. Return is most likely when push factors coincide with peace at home and remains likely when push factors are present during ongoing conflict. Absent push factors, refugees return only if origin-country conditions become substantially better than those in asylum, net of transition costs.

The model also generates a prediction about aggregate patterns. Because push factors are widespread, $v_a > v_o$ typically holds, and transition costs are generally high, most global return should occur during ongoing conflict rather than after its termination. I provide descriptive evidence for these conditions in Section 5.5.

4 Data and Empirical Strategy

4.1 The Global Refugee Return (GRR) Dataset

To test the theory, I introduce the Global Refugee Return (GRR) dataset, which covers all protracted refugee situations at the origin–asylum dyad–year level from 1980 to 2023. The dataset includes origin countries with at least 25,000 refugees in exile in any year, consistent with UNHCR's definition of a protracted refugee situation. For each origin country, I include all asylum countries accounting for at least 75 percent of the total refugee population.[8] The resulting sample comprises 293 dyads across 87 origin and 93 asylum countries.

GRR makes two contributions. First, it corrects systematic measurement error in UNHCR data on

[8]The 75 percent threshold is calculated using UNHCR data, supplemented with Palestinian refugees under UNRWA and Mozambican refugees in South Africa, listed as "Unknown" in UNHCR data.

refugee stocks and returns. UNHCR records only voluntary repatriations, excluding forced returns,[9] and captures spontaneous returns incompletely, since refugees who return without UNHCR assistance may not be recorded. Stock figures often reflect "planning estimates" negotiated with host governments rather than actual counts, omit large unregistered populations, and are not revised retroactively when more accurate censuses become available. These problems are compounded by political incentives: host governments may overstate stocks to sustain aid flows, while origin governments may overstate returns to signal post-conflict stability. UNHCR, which depends on the cooperation of these governments, may adopt government figures rather than risk losing access.

Rather than relying on official statistics, GRR reconstructs stocks and returns using qualitative assessments from experts in each context. The primary source is the *World Refugee Survey* (WRS), published annually from 1980 to 2008, which reports on stocks, forced and spontaneous returns, and unregistered populations, as well as providing a qualitative assessment of the reliability of official data. The WRS draws on consultations with governments, international organizations, and field-based sources, and is widely regarded as an authoritative account of refugee conditions (USCRI, 2008). Since reports are organized by host country rather than by return event, they capture smaller return movements as well as large or highly salient episodes. For 2009–2023, I draw on the U.S. Department of State's *Country Reports on Human Rights Practices*. Because these reports less frequently include stock and return statistics, for these years I use UNHCR data as a baseline and supplement with information on unregistered populations and forced returns.

Second, GRR complements existing *de jure* datasets such as DWRAP by introducing two measures of refugees' *de facto* conditions in asylum: forced return practices and the share of each refugee population living in camps (Blair, Grossman and Weinstein, 2022).[10] Additionally, GRR includes new data on UNHCR financing, measuring both overall funding per refugee within each asylum country and funding per refugee allocated specifically to repatriation.

The dataset was constructed through detailed coding of archival reports. I hand-coded the 25 largest refugee-producing countries and their primary asylum destinations (83 dyads); smaller cases were coded by trained research assistants using a standardized protocol and subsequently reviewed. I cross-validated major discrepancies between GRR and UNHCR figures and assessed internal consistency through desk research. Additional details, including dyad-level plots comparing GRR and UNHCR data, are provided in the Appendix.

The value of these corrections is illustrated by the example of Ethiopian and Eritrean refugees in the Horn of Africa. UNHCR data record 2 million Ethiopian refugees in Somalia in 1980, falling to 700,000 in 1981 and remaining around that figure until 1988; GRR records 700,000 throughout the early 1980s, declining to 350,000 by 1988. The WRS indicates that the decline in official statistics reflected "more accurate counting" rather than large-scale return (Somalia, 1982), and that the Somali government's later figure of 840,000 was "arbitrarily agreed upon by the government and UNHCR" and "always considered far too high" by others (WRS, Somalia, 1989). UNHCR data also miss the pushed return that followed: as the Somali civil war engulfed refugee-hosting areas in 1990–1991, large numbers of Ethiopian refugees fled back to Ethiopia, yet UNHCR records no repatriations because its personnel had been evacuated. The reverse problem appears in Sudan, where UNHCR data show a sharp drop in the Eritrean refugee stock after the fall of the Mengistu regime in 1991, but GRR records no comparable decline because large-scale repatriation was delayed by funding disputes; only "some 10,000 Eritreans returned by their own means" in the year of independence (WRS, Sudan,

[9] Note that such repatriations often include returns that are coerced in practice but classified as voluntary.

[10] Existing data on camp residence are insufficient for this purpose: UNHCR accommodation data tend to undercount camp populations, while Zhou and Shaver's (2021) refugee site data do not identify which refugee groups occupy each site or what share of each group lives in camps, limiting their use for studying variation across groups facing different conditions within the same country.

1992). This case is discussed in more detail in Section 7.

GRR has several limitations. Because the WRS reports only on countries hosting large refugee populations, the sample is biased toward major cases and excludes smaller dyads. This focus on major cases is defensible, as most refugee stocks and returns are concentrated in the settings where reporting is richest. Coverage in high-income asylum countries is also weaker, as WRS and USHR reports often discuss refugee treatment in aggregate rather than by origin group. Stock and return figures rely on expert assessments and may be imprecise, particularly where governments restrict access, though triangulation across multiple in-country sources likely improves on UNHCR statistics that can depend on operational presence. The forced return measure requires subjective coding of severity, but underlying quotations are provided to allow independent evaluation. The transition from WRS to U.S. State Department reports in 2009 may introduce measurement discontinuities, and both sources reflect a U.S. perspective. To reduce these concerns, I review every dyad in the dataset, investigate apparent inconsistencies through desk research, prioritize consistency within dyads given the two-way fixed-effects design, and conduct robustness checks using alternative samples. While GRR is not free from measurement error, it provides a more internally consistent account of refugee stocks and returns than existing alternatives.

4.2 Specification

To understand which factors predict return within dyads, I estimate Poisson pseudo-maximum likelihood (PPML) models with dyad and year fixed effects.[11] The unit of analysis is the directed dyad-year. The dependent variable is the count of refugees in dyad i (from origin o hosted in asylum a) who returned in year t. I include the log of the previous year's refugee stock so that estimated coefficients describe proportional changes in the return rate rather than in the absolute level of returns. I restrict the estimation sample to dyad-years with more than 1,000 refugees in the previous year, which reduces the risk of small-denominator observations producing unstable return rate estimates. Identification comes from within-dyad variation over time; dyad fixed effects absorb all time-invariant dyad characteristics and year fixed effects account for common temporal shocks. Standard errors are clustered at the dyad level.

The baseline specification takes the following form:

$$E[Y_{it} \mid \mathbf{X}_{it}] = \exp\big(\boldsymbol{\beta}'\mathbf{X}_{it} + \alpha_i + \gamma_t + \ln S_{it-1}\big) \tag{1}$$

where Y_{it} is the count of returnees from dyad i in year t; $\mathbf{X}_{it}$ is a vector of covariates; α_i and γ_t denote dyad and year fixed effects; and $\ln S_{it-1}$ is the log of the lagged refugee stock. Continuous covariates are standardized to facilitate comparison of effect sizes.

To interpret the substantive magnitude of the estimated effects, I compute predicted return rates under theoretically motivated scenarios using the main PPML model. For each scenario, I set the variables of interest to specified values while holding all other covariates at their observed levels, then average predicted return rates across all dyad-years in the estimation sample. I use these predictions in three ways: to examine the interaction between origin-country conflict and asylum-country push factors, to isolate the role of relative quality of life and transition costs in the absence of push factors, and to conduct a counterfactual simulation that quantifies each factor's contribution to the aggregate returns observed in the data.

[11] The PPML estimator is well suited to this setting: the dependent variable (refugee return counts) is non-negative and highly right-skewed with a mass of observations at or near zero. PPML handles this distributional feature while remaining consistent under heteroskedasticity, unlike log-linearized OLS which requires dropping zero-valued observations.

4.3 Independent Variables

The theory highlights four sets of determinants: asylum-country push factors, asylum-country quality of life, origin-country conditions, and transition costs. For asylum-country push factors (H1), *Conflict in COA* is coded using UCDP data as 0 (no conflict), 1 (low-intensity, 25–999 battle deaths), or 2 (high-intensity, 1,000+ battle deaths) (UCDP, 2024), and entered as indicator variables with no conflict as the reference category. *Forced Return* is an ordinal measure of coercive return policies at the asylum–origin dyad level, hand-coded from the World Refugee Survey and USHR archival records. It takes values 0 (none), 1 (moderate), and 2 (severe), and is entered as indicator variables with no forced return as the reference category. *Moderate* captures threats, encouragement, or attempts to induce return without policy implementation, or implemented policies targeting fewer than 10 percent of the refugee stock; *severe* captures implemented policies intended or expected to affect at least 10 percent. Coding reflects the policy itself, not realized return. Table 6 in the Appendix provides examples.

For asylum quality of life (H2), *GDP (COA)* is the log of GDP per capita (World Bank), and *Education (COA)* is mean years of schooling for the population aged 20–24, drawn from the Wittgenstein Centre Human Capital Data Explorer and linearly interpolated from five-year to annual frequency. *Refugee Rights* is the DWRAP index of legal rights afforded to refugees in the asylum country (Blair, Grossman and Weinstein, 2022). For origin-country conditions (H3), *Conflict in COO*, *GDP (COO)*, and *Education (COO)* are coded analogously to their asylum-country counterparts. To capture non-violent state repression, I include *Civil Liberties Restrictions (COO)*, the Freedom House civil liberties index (1 = most free, 7 = least free).

For transition costs (H4), *Conflict Duration* is the log of cumulative years of conflict in the origin country. *Urban* is an ordinal measure of settlement type, coded 3 if the vast majority of refugees reside in non-camp settings, 2 if most do, and 1 if most reside in camps; it is hand-coded from the World Refugee Survey and UNHCR archival records. *Repatriation Assistance* is the log of UNHCR repatriation funding per member of the origin country's global refugee population. Funding is hand-coded from UNHCR Executive Committee documents (1980–2009) and UNHCR Yearbooks (2010–2023) and is available for a smaller subset of dyad-years; it is therefore tested in a separate specification. Section 6 assesses whether the results are robust to a wide range of alternative measures of conflict, broader persecution, welfare, and transition costs. All continuous variables are standardized on the estimation sample.

5 Results

Table 2 presents the main PPML results on refugee return. The dependent variable is the annual return rate with a mean of 11.0 percent on the Model 2 estimation sample.[12] Model 1 includes the core independent variables on security and push factors for H1 and H3; Model 2 adds the quality-of-life variables in origin and asylum; Model 3 adds repatriation assistance, which I test separately because it is available for only a subset of observations; Model 4 runs Model 2 on the sample of dyad-years for which there is no asylum-country conflict or severe forced return policies. I focus on Model 2 below. For each hypothesis, I report coefficient estimates and predicted return rates. Section 5.5 then turns to the aggregate pattern (H5).

[12]The regression sample is smaller than the broader filtered sample reported in Table 7 of the Appendix (mean 5.3 percent) because PPML with fixed effects drops dyads without within-dyad variation in returns. Percentage-point translations below are anchored to the regression-sample mean of 11.0 percent.

Table 2: Poisson Pseudo-Maximum Likelihood Estimates of Refugee Return

Dependent Variable:	Total Repatriation			
Model:	(1)	(2)	(3)	(4)
H1: Asylum-country push				
Conflict in COA: High	1.058***	0.8444**	1.127**	
	(0.3041)	(0.2840)	(0.3796)	
Conflict in COA: Low	0.4685†	0.4574†	0.9039*	
	(0.2762)	(0.2372)	(0.3966)	
Forced Return: Severe	1.410***	1.408***	1.505***	
	(0.2698)	(0.2587)	(0.2732)	
Forced Return: Moderate	0.4979*	0.3539†	0.2941	
	(0.2461)	(0.2009)	(0.2660)	
H2: Asylum quality of life				
GDP (COA)		-0.6088†	-0.3654	-0.9564*
		(0.3515)	(0.4568)	(0.3990)
Education (COA)		-0.0580	-0.0176	-0.6659
		(0.3688)	(0.3827)	(0.5623)
Refugee Rights		0.0608	-0.0885	-0.4737*
		(0.1668)	(0.2215)	(0.1896)
H3: Origin-country conditions				
Conflict in COO: High	-0.1816	0.0630	0.1813	0.3959
	(0.3453)	(0.2896)	(0.3553)	(0.5906)
Conflict in COO: Low	0.1904	0.0442	0.0827	-0.1200
	(0.3214)	(0.2119)	(0.2497)	(0.4407)
Civil Liberties Restrictions (COO)	-0.3897	-0.5748***	-0.2523	-0.5748†
	(0.2475)	(0.1456)	(0.2864)	(0.3182)
GDP (COO)		0.5129†	0.6353	1.061***
		(0.2845)	(0.4482)	(0.2923)
Education (COO)		0.0483	0.8472†	-0.4462
		(0.2305)	(0.4984)	(0.4881)
H4: Transition costs				
Conflict Duration		-0.0268	-0.1414	0.0904
		(0.0969)	(0.1329)	(0.1443)
Urban		0.0018	0.0767	0.0278
		(0.1417)	(0.2332)	(0.1067)
Repatriation Assistance			0.3970**	
			(0.1222)	
Dyad & Year FE	Yes	Yes	Yes	Yes
Sample	Full	Full	Full	No-push
Observations	2,616	2,177	1,287	1,107
Squared Correlation	0.52120	0.83692	0.87708	0.82274
Pseudo R^2	0.70120	0.75721	0.77669	0.74822

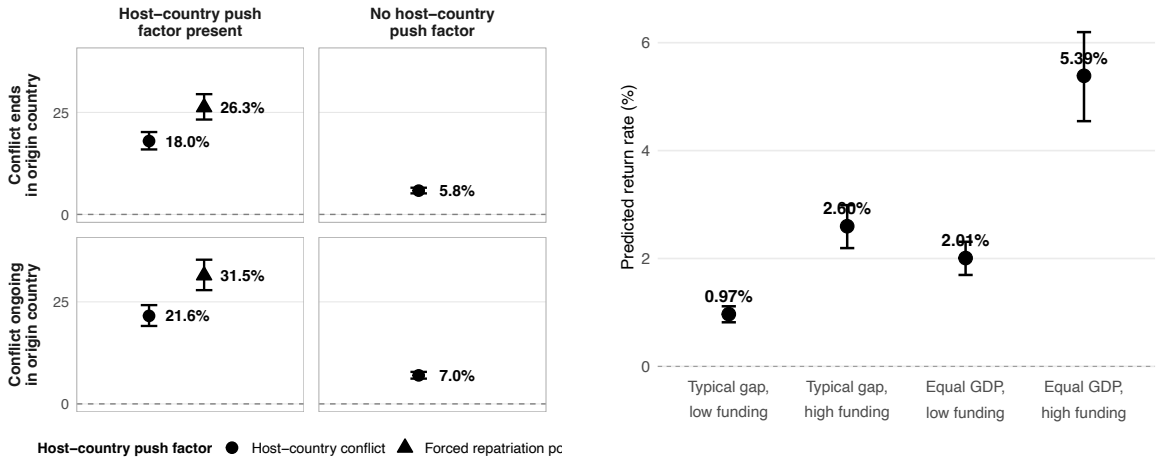
Clustered (Dyad) standard-errors in parentheses
*Signif. Codes: ***: 0.001, **: 0.01, *: 0.05,* † : 0.1

Notes: COO = country of origin; COA = country of asylum. Model 1 includes the three core push predictors. Model 2 adds covariates capturing relative quality of life and origin-country conditions. Model 3 adds UNHCR repatriation assistance, available for a smaller subset of dyad-years. Model 4 restricts the sample to dyad-years without push factors—no COA conflict at either intensity and no severe forced return. All models are Poisson pseudo-maximum likelihood with dyad and year fixed effects and the log of the lagged refugee stock included as an offset. Continuous variables are standardized. Standard errors are clustered at the dyad level and shown in parentheses. Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$.

Figure 3: Predicted Repatriation Rates

(a) By origin-country conflict and asylum-country push

(b) By relative quality of life and repatriation funding



Note: Panel (a) shows predicted repatriation rates computed by setting the relevant indicators and averaging predicted values over all dyad-years in the estimation sample. The left column varies origin-country conflict, holding asylum-country push factors at one; the right column varies origin-country conflict, holding host-country push factors at zero. Panel (b) shows predicted repatriation rates under no host-country push factor and peace in the origin country. The "typical gap" columns hold origin and asylum GDP at their respective sample medians; the "equal GDP" columns set both to the pooled midpoint. Low and high funding correspond, respectively, to no UNHCR repatriation funding and the 90th percentile of funding per capita. Using Model 3 in Table 2. Error bars are bootstrapped 95 percent confidence intervals (500 replications).

5.1 H1: Host-Country Push

H1 predicts that return rises when the host country imposes coercive policies or when security conditions in the asylum country deteriorate. The results strongly support this prediction. A shift from no forced return policy to severe forced return is associated with an approximately 34 percentage point increase in the return rate (1.408, $p < 0.001$), roughly three times the sample mean and the largest effect in the model. High-intensity asylum-country conflict produces the next-largest effect, raising the return rate by approximately 15 percentage points (0.844, $p < 0.01$). Low-intensity asylum-country conflict and moderate forced return produce smaller but still positive effects, on the order of 5 to 6 percentage points each (0.457, $p < 0.10$ and 0.354, $p < 0.10$, respectively). The two largest push-factor effects are far larger than any origin-side coefficient discussed below.

Figure 3a translates these estimates into predicted return rates, mirroring the 2×2 typology in Table 1. When there is no host-country push and origin-country conflict has ended, the predicted return rate is 5.8 percent. The presence of a host-country push factor produces substantially higher rates: host-country conflict yields 18.0 percent under origin-country peace and 21.6 percent under ongoing origin conflict, while forced return policy yields 26.3 and 31.5 percent, respectively. Push factors thus generate substantial return even when conflict is ongoing at home, consistent with the key prediction of H1 that return may occur during origin-country conflict when asylum conditions deteriorate sufficiently.

5.2 H2: Asylum Quality of Life

H2 predicts that return becomes less likely as quality of life in asylum improves. I capture asylum quality of life with three variables: GDP per capita in the host country, average years of education for young people in the host country, and a measure of refugee rights. In the full-sample specification (Model 2), these effects are weak. A one-standard-deviation increase in asylum-country GDP is

associated with an approximately 5 percentage point reduction in the return rate (-0.609, $p < 0.10$); the coefficients on education (-0.058) and refugee rights (0.061) are not statistically distinguishable from zero.

In the no-push sample (Model 4), however, asylum quality of life matters more. A one-standard-deviation increase in asylum-country GDP is associated with a 60 percent reduction in the return rate (-0.956, $p < 0.05$), and a one-standard-deviation increase in refugee rights produces a 38 percent reduction (-0.474, $p < 0.05$). In the absence of coercive push factors, refugees are less likely to return when host-country incomes are higher and when their legal status in asylum is more secure. Formal interaction tests confirm this conditional pattern, but only for the economic dimension: the asylum-country GDP effect roughly doubles in magnitude when push factors are absent, but there is no interaction effect for refugee rights (Section 6).

5.3 H3: Origin-Country Conditions

H3 predicts that return rises as origin-country security and quality of life improve. The results support the quality-of-life component of this prediction, but not the expectation that improved security increases return. Neither high- nor low-intensity origin-country conflict is statistically distinguishable from zero. On the basis of the PPML estimates alone, we cannot reject the null that origin-country conflict has any effect on return (see robustness checks).

Other origin-country conditions, however, matter substantially. A one-standard-deviation increase in civil liberties restrictions is associated with a 5 percentage point reduction in the return rate, a 44 percent reduction relative to the sample mean (-0.575, $p < 0.001$). Origin-country GDP has the expected positive sign and a slightly larger magnitude, though it is less precisely estimated: a one-standard-deviation increase raises the return rate by approximately 7 percentage points (0.513, $p < 0.10$). Both effects are substantially smaller than the severe-forced-return and high-intensity asylum-conflict effects in H1.

The predicted probabilities in Figure 3a reinforce this reading. Within each push category, the shifts between ongoing and ended origin-country conflict are small in magnitude and not in the direction H3 anticipated. They are dwarfed by the across-column differences, which reflect the presence or absence of a host-country push factor and rest on more precisely estimated coefficients. Combined with the strongly negative civil liberties coefficient, the results suggest that refugees respond to political and economic conditions in the origin country, but not to the security environment per se.

5.4 H4: Transition Costs

H4 predicts that return falls as the cost of moving increases and rises when resources to cover repatriation are available. Of the three variables capturing transition costs, only repatriation assistance is significantly associated with return. Urban integration and conflict duration are statistically and substantively indistinguishable from zero, suggesting that, at least in this dyadic, cross-national setting, neither settlement type nor accumulated time in asylum systematically predicts return.

Repatriation assistance, available for the smaller subset of dyad-years in Model 3, is strongly associated with higher return. A one-standard-deviation increase in UNHCR repatriation funding per capita is associated with an approximately 5 percentage point increase in the return rate, a 49 percent increase relative to the sample mean (0.397, $p < 0.01$). This effect is similar in magnitude to the civil liberties effect in H3 and the asylum-country GDP effect in H2, but considerably smaller than the severe-forced-return and high-intensity asylum-conflict effects in H1.

Figure 3b shows how quality of life and repatriation funding interact when origin-country conflict

Table 3: Counterfactual decomposition

Counterfactual	Δ returns
GDP parity (host = origin)	+86.3%
Origin civil liberties at midpoint (FH = 4)	+53.9%
No repatriation funding	-45.1%
No asylum-country conflict	-36.1%
No forced repatriation policy	-26.9%
No origin-country conflict	-8.5%

Note: Change in predicted returns when each factor is shifted to a benchmark value, summed over the Model 4 estimation sample (dyad-years with non-missing repatriation funding). GDP parity sets origin and asylum log GDP to the pooled midpoint; civil liberties to FH = 4; repatriation funding to zero; conflict and forced-return counterfactuals zero out both intensity dummies.

has ended and push factors are absent. At a typical GDP gap, raising funding from zero to its 90th-percentile value lifts the predicted rate from 0.97 to 2.60 percent; with origin and asylum GDP equalized, the same funding shift moves the rate from 2.01 to 5.39 percent. Both factors jointly shape return, but even their combined effect leaves the predicted rate is well below the 18–32 percent rates produced by host-country push factors in Figure 3a. In the absence of push, pull factors and external resources generate only modest return.

5.5 Aggregate Patterns

The regression estimates show which factors drive return within dyads. To explain why most return occurs during conflict globally, I use a counterfactual simulation to assess the aggregate magnitude of each factor's contribution. For each counterfactual, I set the relevant predictor to zero (or, for GDP, to the value corresponding to equal GDP per capita across host and origin; for civil liberties, to the midpoint score of 4), recompute predicted returns for every dyad-year in the estimation sample, and sum across the full panel.

The largest counterfactual effect comes from closing the economic gap between host and origin: setting GDP to parity would have increased predicted returns by 86.3 percent. The next-largest single factor is origin-country repression: improving civil liberties would have raised predicted returns by 53.9 percent. Three further factors contribute substantially: withdrawing UNHCR repatriation funding entirely would have reduced predicted returns by 45.1 percent, eliminating asylum-country conflict by 36.1 percent, and removing forced repatriation policies by 26.9 percent. By contrast, removing origin-country conflict has only a small aggregate effect, and one that runs against H3's predicted direction. This pattern echoes the regression evidence: it is repression and economic conditions, not war-ending, that drive the origin-side share of aggregate return.

These aggregate effects depend not only on the magnitude of each factor's impact, but also on how frequently these conditions occur. I document four descriptive facts about their distribution. First, asylum-country push factors are widespread. Figure 4 shows that among the largest refugee-hosting dyads, 82.5 percent experienced asylum-country conflict and 72.5 percent had a forced return policy at some point. Across the full sample, 20.2 percent of dyad-years involve asylum-country conflict, comparable to the 28.0 percent with origin-country conflict. Consistent with the theory, 77.5 percent of returns occur in years with at least one asylum-country push factor.

Second, quality of life in asylum typically exceeds that in the origin country: outside Europe and North America, GDP per capita is higher in asylum than origin countries on average ($2,752 vs. $1,040).

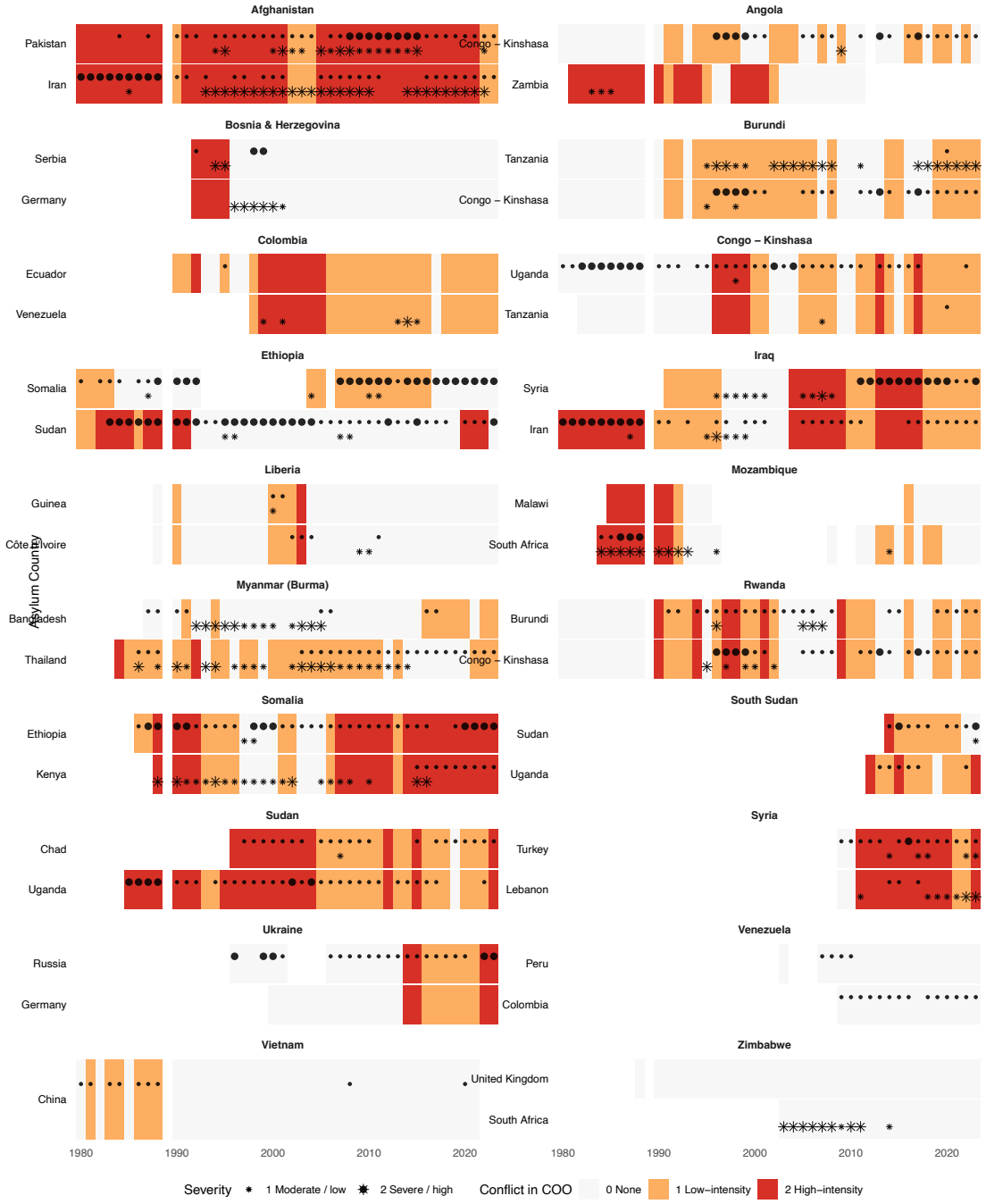
In origin-peace years without push factors, origin-richer dyads host only 24 percent of refugees yet account for 43 percent of returns, confirming that return is disproportionately concentrated where the origin country offers better economic prospects. Third, transition costs are high. Repatriation funding is typically modest in scale: even among origin-country-years that received any UNHCR repatriation funding, 27 percent were allocated less than $100 per returnee, with a median of $265. The distribution is highly skewed: a small number of generously funded operations pull the mean to $889 per returnee, while most returns take place with far less international support.

Fourth, origin-country repression continues beyond conflict. Among origin countries that experienced both peace and conflict during the sample period, 88 percent of refugees come from "Not Free" countries in years of high-intensity war; this falls only modestly, to 82 percent, when the same origins are at peace.[13]

These conditions explain the aggregate patterns in Section 2. Because asylum-country shocks are frequent, much of global return is driven by host-country push during ongoing conflict. The end of armed conflict, by contrast, rarely produces large-scale repatriation: repression continues after war ends, quality of life in asylum typically exceeds that at home, and transition costs remain high.

[13]The corresponding origin-country-year shares are 79 percent during high-intensity conflict and 54 percent during peace.

Figure 4: Origin-Country Conflict and Asylum-Country Push in Major Refugee Situations



Note: The 20 largest refugee-producing origin countries and their two largest asylum countries. Each tile represents a dyad-year. Background color indicates origin-country conflict intensity. Circles denote asylum-country conflict; stars indicate forced return policies.

6 Alternative Explanations and Robustness

I address the main alternative explanations here; full results are reported in Appendix Tables 8–19 and Figure 5. The main concern is that UCDP conflict measures may not capture the kind of definitive war termination that refugee return requires. I re-estimate the model using Fearon's (2017) civil war coding (which dates discrete war episodes rather than annual conflict thresholds), logged battle deaths, lagged origin-country conflict, a de-escalation indicator, an indicator for peace agreements, and broader political violence (PITF). Origin-country conflict is generally null, with the expected negative sign emerging only in the Fearon specification and with a smaller magnitude than asylum-side push factors.

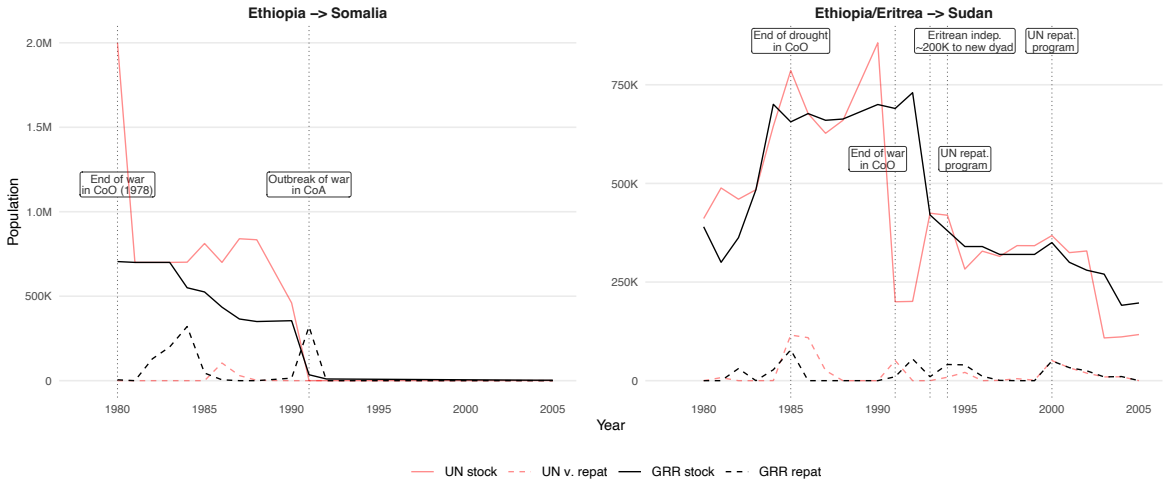
I conduct a range of additional measurement and sample checks. I examine a wider set of repression measures: ethnic exclusion (EPR), political terror (PTS), and genocide or politicide (PITF). The EPR analysis finds that members of dominant ethnic groups are more likely to return. I use voluntary returns and a three-year moving average as alternative dependent variables; replace continuous GDP with quartile dummies to relax linearity assumptions; add UNHCR per-refugee funding as a proxy for repatriation funding; examine ethnic group asylum-country power (EPR-TEK); exclude unregistered refugees from the stock in the offset; and restrict the sample to the WRS period (1980–2008), to only refugees who originally fled armed conflict rather than other forms of persecution, to the top three asylum countries per origin, and to dyads with asylum countries outside Europe and North America. To address potential reverse causality—the concern that large refugee populations may themselves contribute to host-state conflict—I lag all independent variables by one year and exclude dyads associated with the "refugee warrior" hypothesis (Zolberg, Suhrke and Aguayo, 1989; Salehyan and Gleditsch, 2006).

I re-estimate under OLS on logged returns, two-way clustering by origin and asylum, and negative binomial (which relaxes the Poisson equidispersion assumption). I also add origin-by-year fixed effects, which absorb all time-varying origin-country confounders and identify asylum-side variables from variation across hosts within the same origin-year. Because returns are highly concentrated in a small number of canonical episodes, I assess whether the estimates are carried by those cases by dropping the top dyads and dyad-years and, separately, restricting the sample to the top ten dyads alone. A pooled PPML specification omits dyad fixed effects to exploit cross-case variation across the full panel rather than the smaller within-dyad sample, and an interaction model lets pull-factor coefficients vary by whether asylum-country push is present, testing whether push and pull operate conditionally rather than independently. Finally, leave-one-out analyses iteratively exclude each origin country, asylum country, and region; severe forced return policies are stable across every exclusion, with no single unit driving the result.

The asylum-side push channels remain the most robust predictors of return: severe forced return is significant in nearly all specifications, and asylum-country conflict and origin-country repression retain their signs throughout, though precision varies. Origin-country conflict is generally null, with the expected negative sign emerging in the aforementioned Fearon specification, the lagged IV model, and when the top 5 percent of dyad-years are dropped; even where significant, the magnitudes remain smaller than those of the push factors. The interaction model further shows that origin-country GDP becomes a stronger predictor of return when asylum-side push is absent, consistent with pull factors operating conditionally rather than uniformly.

7 Case Study: Ethiopian Refugees in Somalia and Sudan

Figure 5: Returns of Ethiopian/Eritrean refugees from Somalia and Sudan (1980–2005)



Note: The 1993 drop in refugee stock in the Ethiopia/Eritrea → Sudan panel reflects splitting of this dyad into Ethiopia and Eritrea at Eritrean independence; approximately 200,000 refugees previously recorded under Ethiopia were reassigned to the new dyad. In the Ethiopia → Somalia panel, civil war broke out in Somalia in 1991, but UCDP begins coding the conflict as severe from 1988. *Source*: GRR and WRS archives.

The statistical analysis above identifies which factors predict return within dyads and presents descriptive patterns to understand global trends across all protracted refugee situations. To trace the theory's mechanisms in a specific context, I examine two dyads from the same origin country that together illustrate the core mechanisms. Ethiopian displacement produced two major refugee populations during the Cold War: ethnic Somalis who fled the Ogaden War into Somalia, and Tigrayans and Eritreans who fled the civil war into Sudan. Figure 5 plots refugee stocks and returns for both dyads and overlays UNHCR data on the GRR estimates, demonstrating the substantial data discrepancies described for this case in Section 4.1.

Ethiopia → Somalia: Push-Driven Return

An estimated 700,000 Ethiopians were displaced into Somalia by the Ogaden War in 1977–78. In the early 1980s, the end of active fighting in the Ogaden, combined with a UNHCR repatriation program providing cash grants and six months of food rations, generated substantial return among refugees. The transition costs for these refugees were comparatively low: most were living in camps in poor conditions rather than integrated into Somali communities, and had been in asylum for only a few years.[14] Yet more than half chose to stay. As conditions in the camps improved and a local settlement program allowed refugees to cultivate land, expected quality of life in Somalia came to exceed what many anticipated at home, even after insecurity in the origin country had fallen.[15]

By 1990–1991, a new wave of Ethiopian refugees, largely Oromos displaced by forced villagization, had joined the remaining Ogaden refugees. Ethiopia remained insecure. Yet mass return occurred,

[14] Initial camp conditions were severe: "Problems of water supply, firewood stripped from an almost bare landscape, disease and starvation face refugees and relief officials daily" (WRS, Somalia, 1981).

[15] By the mid-1980s, conditions had improved to the point where local Somalis obtained food in the camps, "where conditions are often better than in the surrounding desert" (WRS, Somalia, 1985).

effectively ending the protracted situation. The driver was not improving conditions at home but the collapse of conditions in asylum:

> "Beginning in December 1990, as fighting in the Somali civil war intensified in areas where the refugees lived, UNHCR personnel were evacuated from Somalia, and assistance programs for the refugees stopped. Large numbers of Ethiopian refugees began fleeing Somalia and returning to Ethiopia... Only some 35,000 Ethiopians who were trapped at Qoryoley refugee camp or who fled from various camps to Mogadishu expecting to find help there stayed in Somalia." *(WRS, Somalia, 1991–1992)*

This episode illustrates Hypothesis 1: when insecurity in asylum rises sufficiently, refugees return even when the origin country remains insecure. It corresponds to the lower-left cell of Table 1, where origin-country conflict is ongoing but there is a host-country push present, so refugees return.

Ethiopia/Eritrea → Sudan: Non-Return Despite Peace

The second dyad tells a contrasting story. An estimated 700,000 Tigrayans and Eritreans fled Ethiopia's civil war into Sudan beginning in the 1960s. This case illustrates that the end of conflict is not sufficient to prompt return when transition costs are high and quality of life in asylum exceeds that at home (Hypotheses 2 and 4).

In May 1991, the Mengistu regime fell and the EPLF took control of Eritrea, ending the conflict. Under conventional accounts, this should have triggered large-scale repatriation. Instead, only about 10,000 returned in the year of independence. A dispute between the Eritrean government and UNHCR over repatriation funding prevented the launch of a return program; Eritrea demanded more rehabilitation assistance than donors were willing to provide. Without adequate support to reduce transition costs, the return condition remained unsatisfied for most refugees even though the origin country was at peace.

A repatriation program began in 1994 and generated some return, approximately 81,000 over two years, but roughly 320,000 remained. The stalled return was attributed to "financial disputes over the scope of the repatriation program, and deteriorating relations between the governments of Sudan and Eritrea" (WRS, Sudan, 1997), alongside insecurity at the border. When a second program launched around 2000, providing transportation, reintegration grants, and housing, return accelerated: approximately 130,000 repatriated over five years, consistent with Hypothesis 4's prediction that reducing transition costs increases return. Yet even then, approximately 200,000 refugees chose to remain. In 2002, UNHCR invoked the cessation clause, revoking Eritreans' refugee status and requiring them to "repatriate, file individualized asylum claims to remain in Sudan as refugees, or take steps to become permanent legal residents of Sudan" (WRS, Sudan, 2003). Only 20,000 repatriated; the vast majority stayed.

The archival evidence points to quality-of-life considerations as the primary explanation. On the origin side, a survey found that roughly 85 percent of refugee households indicated that assistance levels in Eritrea would be a major determinant of their return decision (WRS, Sudan, 1997). On the asylum side, refugees had built substantial lives over decades. By the early 1990s, half lived in camps with access to food aid, health and education programs, and technical training, often among relatives or co-ethnics and renting agricultural land, while the other half lived in urban areas.[16] When encouraged to return in 2001, for example, many chose to remain longer to harvest their crops.[17] For

[16] "Eritrean refugees who had lived for decades in settlements in the east among relatives or members of similar ethnic groups were able to farm and graze their livestock" (WRS, Sudan, 2005). Camp residents "received food aid, health and education programs, literacy and technical training, and special aid for women and children from UNHCR and other assistance groups. About 12,000 children attended 30 refugee schools in the camps" (WRS, Sudan, 1999).

[17] "Many other would-be returnees chose to remain longer in Sudan to harvest their crops" (WRS, Sudan, 2002). This

this population, the quality of life built over decades of exile exceeded what they expected in Eritrea, and they opted to stay even after conflict had ended and transition costs had been reduced.

8 Conclusion

This paper revisits a foundational assumption in the study of forced displacement: that refugees return when peace is restored in their countries of origin. Using the new Global Refugee Return dataset, covering all protracted refugee situations from 1980 to 2023, I show that this account is incomplete. Most large-scale returns occur not after peace agreements but when refugees are pushed out of asylum by host-country conflict or forced return policies, frequently while war continues at home. When conflict ends, refugees often remain because repression in their origin country continues, their expected quality of life in asylum exceeds what they would gain from returning, and because the costs of uprooting lives built over years or decades of exile are high. This challenges not only existing micro-level studies of return, but a core premise of the international refugee regime: that refugees flee conflict, receive protection in asylum, and return once the conditions that caused their displacement have ended.

The analysis proceeds in three steps. First, descriptive patterns document the core empirical puzzle: returns are rare in most dyad-years, concentrated in a small number of episodes, and disproportionately occur while conflict persists in the country of origin. Second, panel models show that asylum-country push factors—forced return policies and host-country conflict—are stronger predictors of return than origin-country conditions and that, in the absence of push factors, return depends on relative quality of life and transition costs. Predicted return rates under theoretically motivated scenarios map directly onto the formal model: asylum-country push factors generate high levels of return regardless of whether conflict has ended at home, while return remains low in their absence, especially when quality of life in asylum is comparatively high and resources for return are scarce. Third, an archival case study of Ethiopian refugees in Somalia and Sudan traces these mechanisms in practice, showing how the collapse of conditions in asylum drove mass return to ongoing conflict in one case, while high transition costs and favorable conditions in exile sustained non-return despite peace in another.

These findings have three implications. First, they challenge repatriation as a "durable solution" and underscore the fragility of international refugee law. Voluntary return after peace can be welfare-improving when conditions at home improve and refugees have the resources to return safely. But the evidence here suggests that such cases are less common than assumed. If many historical returns instead reflect forced policies or war in asylum, treating them as "solutions" obscures the conditions under which refugees leave and the harms they may face upon return (Fransen, Ruiz and Vargas-Silva, 2017; Schwartz, 2019; Blair, Van Dijcke and Wright, 2026). More broadly, the findings raise normative and legal questions about what host states owe refugees when the war that produced their displacement has ended, but refugees wish to remain and may face repression upon return.

Second, the results have implications for how donor governments and international organizations allocate resources in repatriation contexts. Information campaigns often emphasize improved security, yet refugees are also highly sensitive to economic conditions, political freedoms, and the costs of rebuilding their lives. The evidence presented here suggests that UNHCR financial support for repatriation and rehabilitation can facilitate return, and strengthens the case for greater investment by international organizations and private industry in post-conflict livelihoods, rights, and public services. At the same time, continued efforts to secure permanent residency and local integration for refugees that want to remain in host countries may better serve their welfare than promoting return.

is supported by the fact that the largest annual returns of this population was not after conflict but during it: in 1985, 78,000 refugees returned following the resumption of rains in Ethiopia (WRS, Sudan, 1986), despite ongoing conflict.

Third, this research raises questions about the reliability of existing refugee data. The discrepancies between UNHCR figures and the corrected estimates in the GRR dataset suggest that prior findings based on official statistics may warrant revisiting. UNHCR data often exclude unregistered populations, whose formal refugee status is frequently revoked precisely to facilitate deportation, and omit spontaneous and forced returns from repatriation counts. Incorporating archival and expert sources, as this study does, offers one way to address these gaps.

Future research should examine several questions that emerge from this analysis. What explains cross-national and temporal variation in the adoption of forced return policies? Under what conditions do international organizations successfully constrain host-country coercion? And what are the welfare consequences of return for refugees who repatriate under pressure, particularly those who return to ongoing conflict? This analysis has focused on the forced repatriation of refugees already residing within the territory of an asylum country, but two related dynamics outside its scope remain poorly measured: maritime pushbacks and other non-arrival policies in high-income countries, and circular movements between origin and asylum that fall outside a simple refugee–returnee binary (FitzGerald, 2019; Goodwin-Gill, 2011; Masterson and Vidarte, 2026).

Taken together, the evidence presented here implies a reframing of refugee return. Repatriation should be analyzed as a political process structured by host-country choices and regional dynamics, rather than viewed primarily as the downstream effect of conflict termination in origin countries. Understanding why refugees return, and whether such returns serve their interests, requires attention to the conditions of asylum, not only the prospects for peace at home.

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Push, Not Peace: Reconsidering the Drivers of Refugee Return

Mae MacDonald

Supplementary Materials

Table of Contents

1 Global Refugee Return (GRR) Dataset

The Global Refugee Return (GRR) dataset is an original global dataset on refugee stocks, returns, and the conditions shaping repatriation. It covers origin–asylum dyad-years from 1980 to 2023. The dataset makes three core contributions: (1) improved stock and repatriation data that corrects systematic errors in UNHCR figures and incorporates forced returns; (2) new indicators of *de facto* coercive return policies as actually implemented; and (3) UNHCR financing data for asylum-country operations and repatriation programs.

Unit of analysis. Each observation records conditions for refugees from a specific country of origin residing in a specific country of asylum in a given year.

Geographic coverage. The dataset includes all **origin countries** with at least 25,000 refugees in exile in any given year, consistent with UNHCR's threshold for a protracted refugee situation. For each origin country, the dataset includes **asylum countries** that together account for at least 75% of the origin's total refugee population, calculated using UNHCR refugee stock data. Dyad-years in which no refugee population is present are excluded, as they are uninformative for the study of repatriation and incompatible with the Poisson offset specification used in the main models.

The dataset contains 7,526 dyad-year observations across 293 dyads (87 origin countries and 93 asylum countries).

Temporal coverage. The dataset spans 1980–2023. The year 1989 is missing for all variables coded from the World Refugee Survey (WRS), because the 1990 WRS report was not published.

Primary sources. GRR draws on four primary sources: (1) the World Refugee Survey (WRS), 1980–2008, providing annual country reports on refugee stocks and durable solutions; (2) the U.S. Department of State Country Reports on Human Rights Practices (USHR), 2009–2023, with data extracted from Section 2.d on freedom of movement; (3) UNHCR Executive Committee (ExCom) reports and archival documents, 1980–1997; and (4) UNHCR statistical yearbooks and reports, 1998–2023. Variables derived from these sources were hand-coded by the author and research assistants, with each case coded by one assistant and verified by the author. Additional variables are drawn from the UCDP Armed Conflict Dataset, the Ethnic Power Relations (EPR) Dataset, DWRAP (Blair et al., 2022), the World Bank World Development Indicators, and the CEPII GeoDist dataset.

1.1 Codebook

Tables 1–5 describe all variables used in the main analysis. Variables with the prefix `a_` refer to asylum-country characteristics, `o_` to origin-country characteristics, and `d_` to dyad-level variables. Variable suffixes follow a consistent convention: `_z` denotes a standardized (z-scored) variable, `_l` a log-transformed variable, and `_zl` a standardized log-transformed variable. In the regression models, several variables are transformed for estimation. Binary high/low indicators (e.g., `a_conflict_high`, `a_conflict_low`) are derived from the ordinal variables by splitting into separate dummies for the high and low categories, with zero as the reference. Continuous variables used in standardized or logged form in the regressions are noted below; standardization is performed on the estimation sample (dyad-years with more than 1,000 refugees in the previous year). The dependent variable is `trepat` (count of returnees), and `refugees` enters as the offset, lagged one year.

Table 1: Codebook: Identifiers

Variable	Description
`id`	Unique dyad identifier, formatted as COO–COA.
`year`	Year of observation.
`coo`	Country of origin name.
`coo_iso`	Country of origin ISO 3166-1 alpha-3 code.
`coa`	Country of asylum name.
`coa_iso`	Country of asylum ISO 3166-1 alpha-3 code.

Table 2: Codebook: Stock and Return Variables

Variable	Description	Source
`refugees`	Stock of forcibly displaced persons in the dyad at year-end, including refugees, asylum-seekers, individuals in refugee-like situations, and unregistered refugees. Primary stock variable.	WRS (1980–2008); UNHCR + USHR unregistered (2009–2023)
`refugees_formal`	Stock of forcibly displaced persons excluding unregistered refugees.	WRS (1980–2008); UNHCR (2009–2023)
`trepat`	Total refugees repatriated (voluntary + forced).	Derived: `vrepat` + `frepat`
`vrepat`	Voluntary repatriation count.	WRS (1980–2008); UNHCR (2009–2023)
`frepat`	Forced repatriation count.	WRS (1980–2008); USHR (2009–2023)

Table 3: Codebook: Asylum-Country Variables (prefix: `a_`)

Variable	Description	Source
`a_conflict`	Conflict intensity in the asylum country (UCDP): 0 = none, 1 = low (25–999 battle deaths), 2 = high (≥1,000). In regressions, split into `a_conflict_high` (=1 if 2) and `a_conflict_low` (=1 if 1); no conflict is the reference category.	UCDP Armed Conflict Dataset
`a_conflict_bd`	Battle deaths in the asylum country (UCDP 'best' estimate). Available from 1989.	UCDP Battle-Related Deaths Dataset
`a_forced`	Coercive forced-return policies in the asylum country at the dyad level: 0 = none; 1 = moderate (threats or encouragement to induce return without policy implementation, or implemented policies targeting <10% of the refugee stock); 2 = severe (implemented policies intended or expected to affect ≥10% of the refugee stock). Coding reflects the policy itself, not realized return. In regressions, split into `a_forced_high` (severe) and `a_forced_low` (moderate); no forced return is the reference category. See Table 6 for example coding.	Hand-coded from WRS and USHR
`a_camp`	Ordinal share of the refugee population living in camps: 0 = no camps, 1 = <10% in camps, 2 = 10–50%, 3 = 50–95%, 4 = 95–100%.	Hand-coded from WRS and USHR
`a_camp_most`	Binary: 1 if most refugees live in camps (`a_camp` ∈ {3, 4}), 0 otherwise.	Derived from `a_camp`
`a_urban_z`	Standardized (z-score) measure of settlement type. Underlying ordinal variable: 3 if no camps or <10% in camps (`a_camp` ∈ {0, 1}), 2 if 10–50% in camps (`a_camp` = 2), 1 if 50–100% in camps (`a_camp` ∈ {3, 4}).	Derived from `a_camp`
`a_funding`	UNHCR funding allocated to the asylum country (USD, country-year level).	UNHCR ExCom (1980–2009); UNHCR Yearbooks (2010–2023)
`a_funding_pp`	UNHCR funding per refugee in the asylum country. In regressions, used in standardized log form (`a_funding_pp_zl`).	Derived: `a_funding` / asylum-country refugee stock
`a_rights`	Refugee rights index (inverse-covariance weighted) from DWRAP. In regressions, standardized (`a_rights_z`).	Blair et al. (2022)

Table 3: Codebook: Asylum-Country Variables (prefix: `a_`) *(continued)*

Variable	Description	Source
`a_gdp_l`	Log GDP per capita of the asylum country.	World Bank WDI
`a_edu`	Mean years of schooling for the 20–24 age cohort in the asylum country (a near-completion measure of recent educational attainment), linearly interpolated from 5-year reporting intervals to annual frequency.	Wittgenstein Centre
`a_region`	World Bank regional classification of the asylum country.	World Bank

Table 4: Codebook: Origin-Country Variables (prefix: `o_`)

Variable	Description	Source
`o_conflict`	Conflict intensity in the origin country (UCDP): 0 = none, 1 = low (25–999 battle deaths), 2 = high (≥1,000). Matched to the specific conflict driving displacement. Missing for non-conflict displacement (e.g., Venezuela). In regressions, split into `o_conflict_high` and `o_conflict_low`; no conflict is the reference category.	UCDP Armed Conflict Dataset
`o_conflict_bd`	Battle deaths in the origin country (UCDP 'best' estimate). Available from 1989. Matched to the specific conflict producing refugees.	UCDP Battle-Related Deaths Dataset
`o_conflict_years`	Cumulative years of any armed conflict in the origin country. In regressions, used in standardized log form (`o_conflict_years_zl`), captured as $\log(\text{years} + 0.01)$ and standardized.	Derived from UCDP Armed Conflict Dataset
`o_funding_repat_pp`	UNHCR repatriation funding allocated to the origin country, divided by the origin's global refugee population (USD per refugee). In regressions, used in standardized log form (`o_funding_repat_pp_zl`).	UNHCR ExCom (1980–1999); UNHCR Yearbooks (2011–2023). 2000–2010 missing.
`o_eth_name`	Name of the refugee group's ethnic identity (e.g., "Kurds," "Tutsi," "Bosniaks/Muslims").	EPR Refugee Dataset
`o_eth_id`	EPR group identifier (`gwgroupid`) for the refugee group.	EPR Refugee Dataset; EPR Dataset
`o_eth_status`	EPR power-status category of the refugee group in the origin country (categorical: monopoly, dominant, senior partner, junior partner, powerless, discriminated, irrelevant, self-exclusion, state collapse).	EPR Dataset
`o_eth_high`	Binary: 1 if the refugee group holds high political status ('monopoly,' 'dominant,' 'senior partner,' or 'junior partner'), 0 otherwise.	EPR Dataset; EPR Refugee Dataset
`o_eth_low`	Binary: 1 if the refugee group holds low political status ('discriminated' or 'powerless'), 0 otherwise.	EPR Dataset; EPR Refugee Dataset
`o_eth_power`	Ordinal power score (0–6) derived from `o_eth_status`: 6 = monopoly, 5 = dominant, 4 = senior partner, 3 = junior partner, 2 = state collapse, 1.5 = discriminated, 1 = powerless, 0.5 = irrelevant, 0 = self-exclusion.	Derived from `o_eth_status`
`o_eth_cat`	Three-category collapse of `o_eth_status`: "In Power" (monopoly, dominant, senior/junior partner), "Excluded" (powerless, discriminated), or "Other" (irrelevant, self-exclusion, state collapse).	Derived from `o_eth_status`

Table 4: Codebook: Origin-Country Variables (prefix: `o_`) *(continued)*

Variable	Description	Source
`o_eth_inpower`	Binary: 1 if the refugee group is "In Power," 0 otherwise. Equivalent to `o_eth_high`.	Derived from `o_eth_status`
`o_eth_excluded`	Binary: 1 if the refugee group is "Excluded," 0 if "In Power," NA for "Other" categories. Differs from `o_eth_low` in coding "Other" as NA rather than 0.	Derived from `o_eth_status`
`o_eth_claim`	Binary indicator for whether the rebel group in the conflict producing refugees has made an exclusive claim to fight on behalf of an ethnic group (ACD2EPR).	ACD2EPR (Wucherpfennig et al.)
`o_civlib_z`	Freedom House Civil Liberties index for the origin country, standardized.	Freedom House
`o_terror_z`	Political Terror Scale for the origin country, standardized.	Political Terror Scale (Amnesty International, Human Rights Watch, U.S. State Department)
`o_genocide`	Binary indicator for genocide or politicide in the origin country.	PITF Genocide/Politicide Dataset
`o_pitf_any`	Binary indicator for any PITF political violence in the origin country (ethnic war or revolutionary war).	PITF Ethnic/Revolutionary War Datasets
`o_pagree`	Binary indicator for a peace agreement signed in the origin country in a given year.	UCDP Peace Agreement Dataset
`o_gdp_l`	Log GDP per capita of the origin country.	World Bank WDI
`o_edu`	Mean years of schooling for the 20–24 age cohort in the origin country (a near-completion measure of recent educational attainment), linearly interpolated from 5-year reporting intervals to annual frequency.	Wittgenstein Centre
`o_region`	World Bank regional classification of the origin country.	World Bank

Table 5: Codebook: Dyad-Level Variables (prefix: `d_`)

Variable	Description	Source
`d_distance`	Distance between origin and asylum countries (km). In regressions, used in log form (`d_distance_l`).	CEPII GeoDist
`d_contig`	Binary: 1 if the countries share a border, 0 otherwise.	CEPII GeoDist

1.2 Forced Return Measurement

The *Forced Return* variable is hand-coded from the qualitative country narratives in the *World Refugee Survey*. Non-zero dyad-years are assigned to one of two categories—*moderate* or *severe*—using two criteria: (i) whether forced return is implemented or only threatened, and (ii) the share of the refugee stock the policy is intended or expected to affect.

A dyad-year is coded **severe** when the asylum government implements a forced return policy intended or expected to affect at least 10% of the refugee stock. Severe policies include large-scale arrests and deportations, non-renewal of residence cards or refugee status, closures of camp schools and marketplaces, and cuts to food aid expressly intended to induce return. A dyad-year is coded **moderate** when the asylum government either (a) threatens or encourages forced return without policy implementation (e.g., political rhetoric, parliamentary debate, public ultimatums), or (b) implements a forced return policy targeting fewer than 10% of the refugee stock. The 10% threshold separates broad coercive policies—which we expect to

Table 6: Examples of Forced Return Policies

Moderate forced return policies	Severe forced return policies
"In a move protested by UNHCR, authorities in Congo-Brazzaville forced 19 asylum seekers back to Congo-Kinshasa in April." (COD–COG, 2002)	"South Africa enacted new legislation in 1991, the Aliens Control Act, giving immigration authorities even more power to seek out and deport Mozambicans... South Africa has forcibly repatriated thousands of Mozambican refugees to a land of deprivation and death in recent years. This practice violates international standards and must cease," USCR stated. (MOZ–ZAF, WRS 1993)
"The Tibetan refugee leadership encourages most of those on pilgrimages and many who come to study to return to Tibet, both to counteract the overwhelming Chinese presence in Tibet and because the two dozen Tibetan refugee settlements in India cannot absorb so many people." (CHN–IND, 1999)	"In April, the Government announced that it would expel all Rwandans whose cases it rejected and the number of applicants declined substantially... Deterred by the low acceptance rates, some 2,000 never registered with the Government and more than 10,500 of those who registered dropped their claims and returned." (RWA–BDI, WRS 2006)
"There were scattered reports that the government intended to expel Palestinians who had not arrived in 1948, but who had come to Lebanon from other Arab countries, such as Egypt and Syria. If implemented, this could affect up to 50,000." (PAL–LEB, 1993)	"The events in Zaire produced strains in Congo that resulted in the Congolese authorities forcibly deporting some 10,000 Zaireans in November." (COD–COG, WRS 1992)
"UNHCR expressed concern that some refugees were being manipulated to repatriate prematurely to Congo-Kinshasa based on misinformation about conditions there. Some refugees reportedly repatriated and had to flee again to Rwanda because conditions in Congo-Kinshasa remained dangerous." (COD–RWA, 2000)	"Yemeni authorities forcibly returned 438 Somalis, at least 200 of whom were UNHCR-recognized refugees. They had been part of a group of 1,200 persons who had been rounded up in Aden as part of a sweep of the city for illegal immigrants." (SOM–YEM, 1996)
"In western Sudan, 45,000 Chadian refugees remain in UNHCR-assisted reception centers despite government and UNHCR attempts to persuade them to return to Chad."	"UNHCR protested when the government's roundup of 1,000 undocumented immigrants in January resulted in the detention of several refugees who possessed UNHCR permits. Persons judged to be undocumented were deported without UNHCR screening to determine claims to refugee status." (COD–ZMB, 1993)

materially shift return rates—from narrower actions targeting specific individuals or groups, which may stoke fear but are less likely to drive aggregate return.

Coding depends only on the policy itself, not on the return outcome. A policy that cuts food aid across all camps to induce return is coded as severe regardless of whether refugees subsequently repatriate. This rules out the most direct form of measurement endogeneity: the variable captures the policy environment refugees face rather than the return rate it is intended to predict.

Table 6 provides illustrative examples of moderate and severe coding decisions. The GRR codebook records a verbatim source quote for every non-zero observation, allowing external verification of all coding decisions.

1.3 Summary Statistics

Table 7 reports summary statistics for all variables included in the main specification. Statistics are computed on the estimation sample (dyad-years with more than 1,000 refugees in the previous year). Because repatriation funding data are available for a subset of years, statistics for the repatriation funding variable are computed on the smaller sample in which it is observed (matching Model 4 of Table 2 in the main paper).

Figure 1 shows the distribution of the dependent variable. The left panel displays the full range of total repatriation counts with the y-axis capped to show detail among non-zero values. The right panel plots positive values on a log scale, showing a roughly log-normal distribution among dyad-years with nonzero repatriation. The heavy concentration of zeros, extreme right skew, and count nature of the dependent variable motivate the use of Poisson pseudo-maximum likelihood estimation with a log lagged refugee stock as the offset.

1.4 Dyadic Return Patterns

Figures 2 and 3 plot refugee stocks and total returns over time for the 40 largest dyads in the dataset (top 20 origin countries by total displaced population, with the two largest asylum destinations for each).

Table 7: Summary Statistics (filtered sample: dyad-years with lagged refugee stock > 1,000)

Variable	Obs	Mean	Std. Dev.	Min	Max
Dependent variable, offset, and rate					
Total Repatriation	5066	5,183.620	38,309.679	0.000	1,295,000.000
Refugee Stock (Lagged)	5088	111,647.354	342,482.937	1,002.000	6,013,249.000
Return Rate (%)	5066	5.313	67.683	0.000	3,383.793
H1: Asylum-country push					
Conflict in COA: High	5088	0.069	0.254	0.000	1.000
Conflict in COA: Low	5088	0.171	0.377	0.000	1.000
Forced Return: Severe	4372	0.033	0.178	0.000	1.000
Forced Return: Moderate	4372	0.064	0.244	0.000	1.000
H2: Asylum quality of life					
GDP (COA)	5052	-0.000	1.000	-2.243	1.443
Education (COA)	5023	0.000	1.000	-2.493	1.390
Refugee Rights	4869	-0.000	1.000	-2.195	3.810
H3: Origin-country conditions					
Conflict in COO: High	5088	0.113	0.316	0.000	1.000
Conflict in COO: Low	5088	0.224	0.417	0.000	1.000
Civil Liberties Restrictions (COO)	5044	-0.000	1.000	-2.811	1.445
GDP (COO)	4821	-0.000	1.000	-2.991	2.221
Education (COO)	4895	-0.000	1.000	-2.364	1.830
H4: Transition costs					
Conflict Duration	5088	0.000	1.000	-0.774	1.859
Urban	4434	0.000	1.000	-1.583	0.753
Repatriation Assistance	2986	0.000	1.000	-0.542	2.394

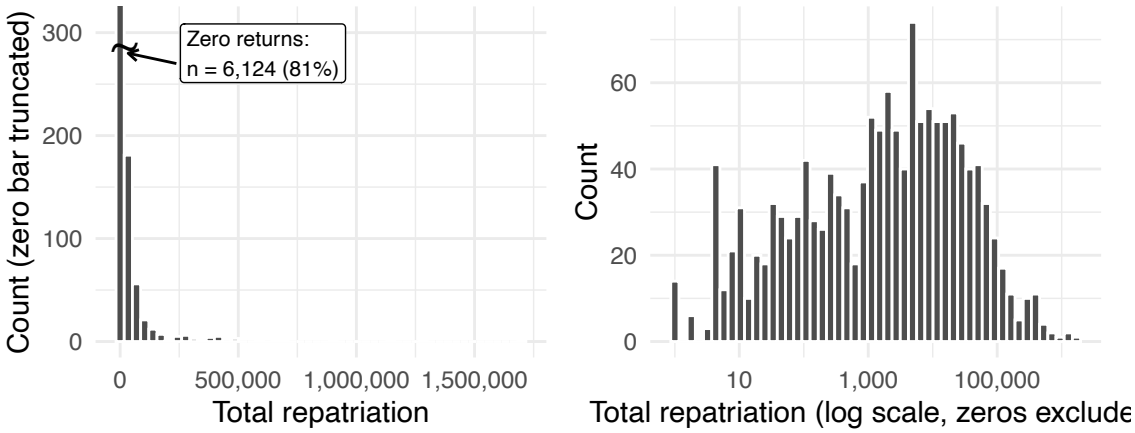

Figure 1: Distribution of the dependent variable (total repatriation). Left panel shows the raw distribution; right panel uses a log scale and excludes zeros.

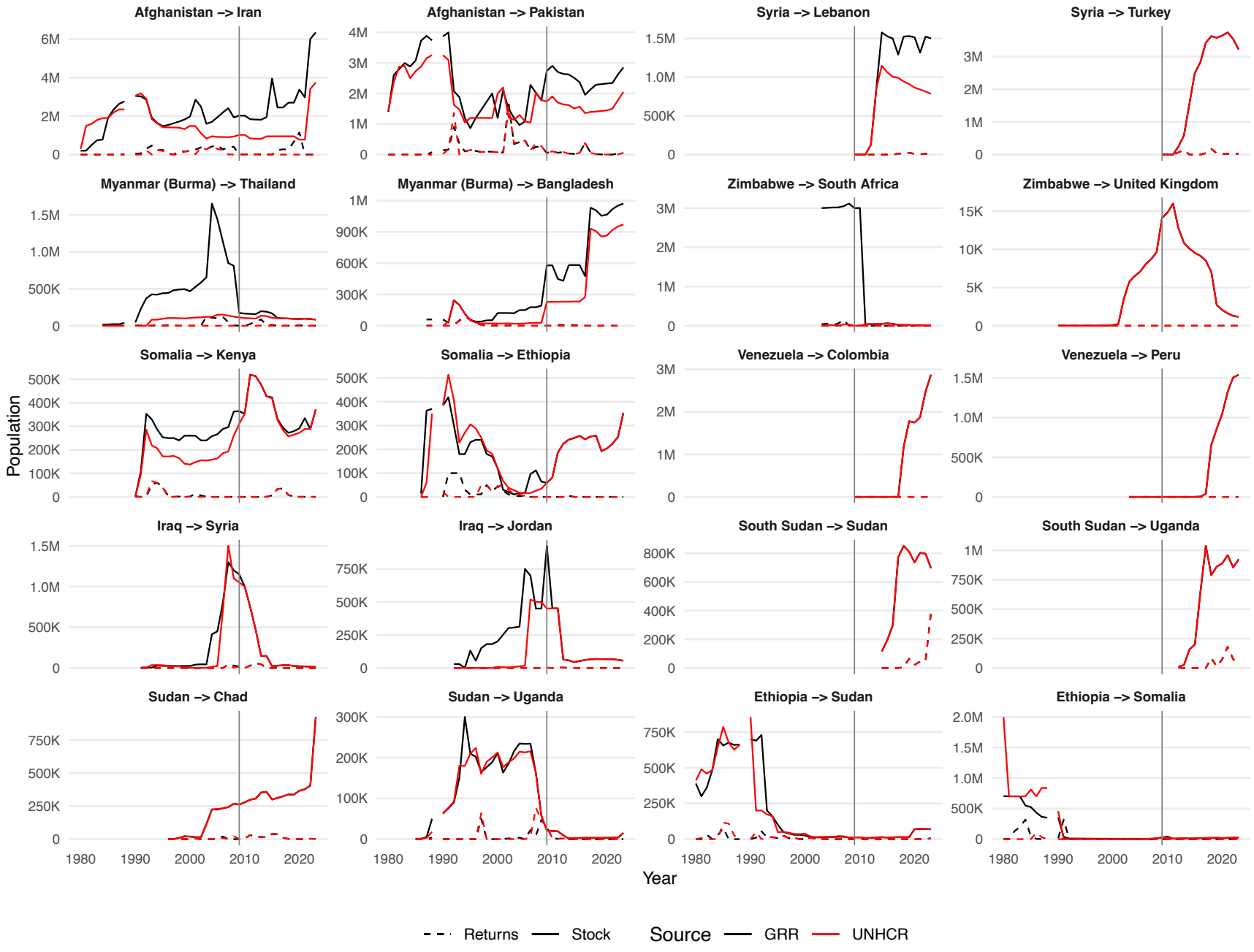

Figure 2: Refugee Stocks and Returns by Dyad (1 of 2)

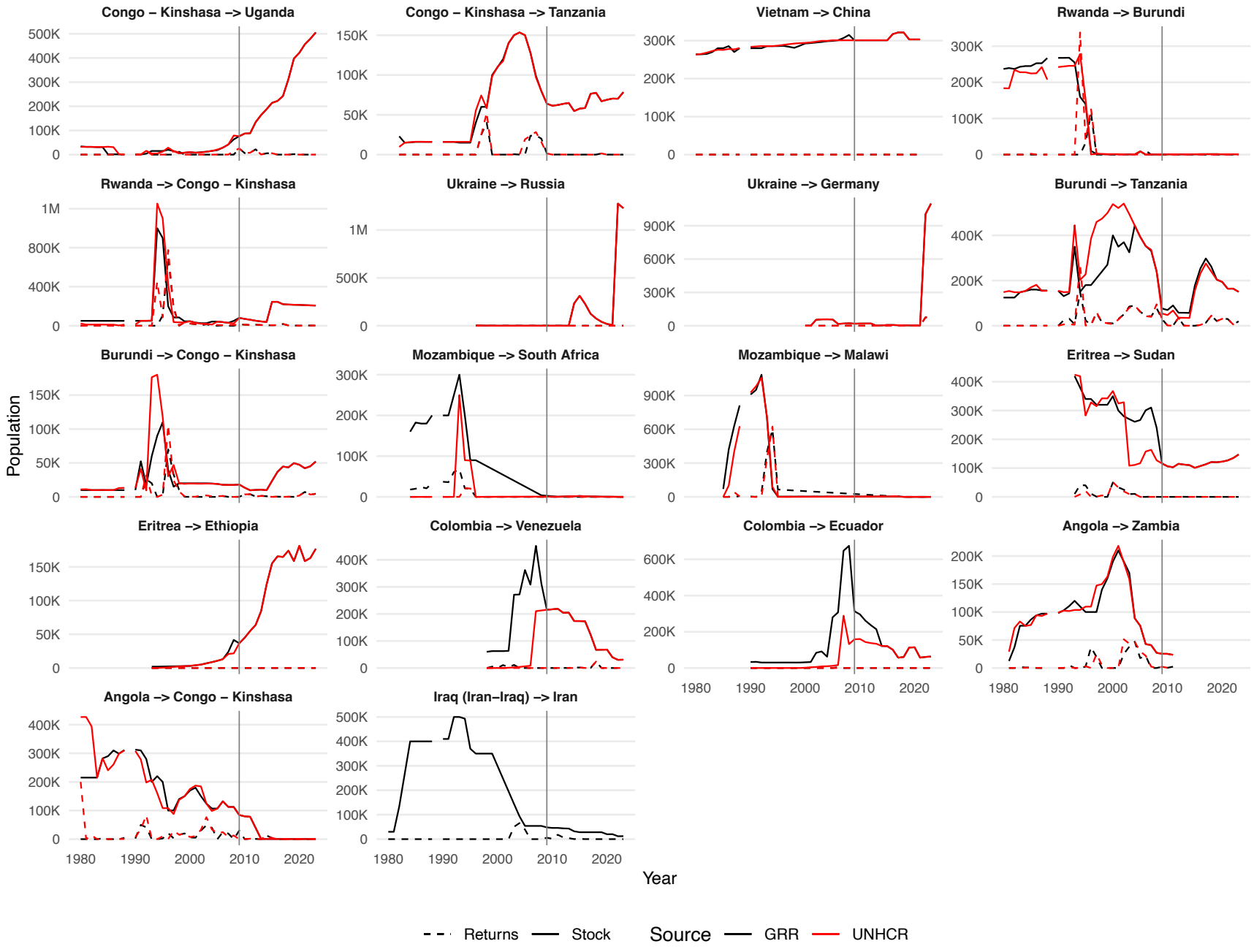

Figure 3: Refugee Stocks and Returns by Dyad (2 of 2)

2 Robustness Checks

The robustness checks in this section use the same estimation sample as the main specification in the paper: dyad-years with more than 1,000 refugees in the previous year, with the lagged refugee stock (`refugees_lag`) entering as the offset. The robustness checks are based on Model 2 in Table 2 of the main paper.

2.1 Alternative Measures of Return

Table 8 varies the dependent variable. Model 1 reproduces the baseline. Model 2 restricts to voluntary returns only, excluding cases coded as forced repatriation. Model 3 uses a centered three-year moving average of total returns, smoothing annual noise and accommodating lagged responses to changing conditions. The baseline results hold across both alternatives. The one divergence is moderate forced return, which is no longer significant in Model 2—consistent with these policies operating through coercion rather than inducing voluntary movement.

2.2 Alternative Measures of Conflict

Table 9 examines whether the results are sensitive to how conflict is measured. A central concern is that the UCDP variable switches between categories year by year, so a single year coded as peace between years of severe conflict may not reflect meaningful conflict resolution of the kind that would enable return. Model 1 reproduces the baseline. Model 2 replaces the binary UCDP conflict indicators with logged battle deaths, providing a continuous measure of conflict intensity (available from 1989 onward). Model 3 lags origin-country conflict by two years to test whether conflict conditions operate with a delay. Model 4 replaces the origin conflict dummies with a de-escalation indicator equal to one when conflict drops from high-intensity to low-intensity or no conflict, capturing transitions rather than levels.

Models 5 and 6 use Fearon's (2017) civil war coding, which identifies wars with clear beginnings and endings and is therefore better suited to capturing definitive war termination; these models use hand-coded case-specific matching to dyads and are restricted to 1980–2014. Model 6 additionally includes a post-conflict indicator equal to one in the three years following the end of a civil war. Model 7 adds an indicator for peace agreements (lagged) drawn from the UCDP Peace Agreements Dataset, merged to the origin country's active conflict via UCDP `conflict_id`. Model 8 adds the PITF measure of warfare and violence, which combines the PITF Ethnic War and Revolutionary War datasets and equals one in any country-year with an ongoing PITF episode of either type.

The asylum-country push coefficients are stable across all eight specifications. Origin-country conflict remains a weak predictor of return throughout. Origin conflict is statistically significant only under Fearon's civil war coding (Models 5–6) and the three-year post-conflict indicator (Model 6), though these coefficients remain smaller in magnitude than the push factors. The UCDP peace agreement indicator (Model 7) enters negative and significant, reinforcing the paper's central finding that formal peace does not predict return.

Table 8: Alternative Measures of the Dependent Variable

Dep. Var.:	Total Repatriation Total Returns	Voluntary Repatriation Voluntary Returns	Total Repat. (3-yr MA) 3-Year MA
Model:	(1)	(2)	(3)
Variables			
H1: Asylum-country push			
Conflict in COA: High	0.8444**	0.5992*	0.6753**
	(0.2840)	(0.2780)	(0.2298)
Conflict in COA: Low	0.4574†	0.0911	0.3749*
	(0.2372)	(0.2069)	(0.1887)
Forced Return: Severe	1.408***	0.8660***	1.001***
	(0.2587)	(0.2149)	(0.2232)
Forced Return: Moderate	0.3539†	0.0282	0.3749†
	(0.2009)	(0.2062)	(0.2117)
H2: Asylum quality of life			
GDP (COA)	-1.223†	-0.2420	-1.287†
	(0.7059)	(0.7169)	(0.6742)
Education (COA)	-0.1897	-0.2536	-0.1079
	(1.207)	(1.150)	(1.293)
Refugee Rights	0.0608	0.0908	0.0156
	(0.1668)	(0.1459)	(0.1736)
H3: Origin-country conditions			
Conflict in COO: High	0.0630	-0.1241	0.4041
	(0.2896)	(0.3077)	(0.2744)
Conflict in COO: Low	0.0442	0.0980	0.1463
	(0.2119)	(0.2222)	(0.1704)
Civil Liberties Restrictions (COO)	-0.5748***	-0.4952**	-0.5637***
	(0.1456)	(0.1673)	(0.1413)
GDP (COO)	0.6003†	0.3270	0.3868
	(0.3330)	(0.3558)	(0.2793)
Education (COO)	0.1426	-2.782**	0.0663
	(0.6804)	(0.9727)	(0.6229)
H4: Transition costs			
Conflict Duration	-0.0268	-0.0160	-0.0980
	(0.0969)	(0.1139)	(0.0930)
Urban	0.0018	-0.0007	0.0613
	(0.1417)	(0.1257)	(0.1398)
Fixed-effects			
Dyad	Yes	Yes	Yes
Year	Yes	Yes	Yes
Fit statistics			
Observations	2,177	2,143	2,065
Squared Correlation	0.83692	0.76697	0.86931
Pseudo R^2	0.75721	0.70160	0.79420

Clustered (Dyad) standard-errors in parentheses
*Signif. Codes: ***: 0.001, **: 0.01, *: 0.05, †: 0.1*

Standard errors clustered by dyad in parentheses. All models: Poisson PML with log(lagged refugee stock) offset and dyad and year fixed effects. Model 3 uses a centered 3-year moving average of total returns as the dependent variable.

Table 9: Robustness: Alternative Conflict Measures

Model:	Main (1)	Battle Deaths (2)	COO t-2 (3)	De-escalation (4)	Total Repatriation Fearon (5)	Fearon Post (6)	Peace Ag. (7)	PITF War (8)
Variables								
H1: Asylum-country push								
Conflict in COA: High	0.8444**		1.025***	0.7754**	1.015***	1.070***	0.8868**	0.8968**
	(0.2840)		(0.2786)	(0.2610)	(0.2807)	(0.2994)	(0.2887)	(0.2894)
Conflict in COA: Low	0.4574†		0.5493*	0.4197†	0.4116†	0.4855†	0.4721†	0.4488†
	(0.2372)		(0.2174)	(0.2249)	(0.2334)	(0.2506)	(0.2414)	(0.2385)
Battle Deaths (COA, log)		0.1396***						
		(0.0360)						
Forced Return: Severe	1.408***	1.301***	1.394***	1.457***	1.306***	1.330***	1.395***	1.429***
	(0.2587)	(0.2525)	(0.2568)	(0.2653)	(0.2267)	(0.2309)	(0.2480)	(0.2807)
Forced Return: Moderate	0.3539†	0.3567†	0.4366†	0.3700†	0.3432	0.3671†	0.3557†	0.3461†
	(0.2009)	(0.1822)	(0.2444)	(0.2067)	(0.2231)	(0.2113)	(0.1940)	(0.2066)
H2: Asylum quality of life								
GDP (COA)	-1.223†	-1.748**	-1.348†	-1.297†	0.1767	0.2567	-1.103	-1.165†
	(0.7059)	(0.5940)	(0.7181)	(0.7150)	(0.7047)	(0.7163)	(0.6837)	(0.7036)
Education (COA)	-0.1897	-0.0551	0.3174	-0.1855	0.9626	1.091	-0.1250	-0.2383
	(1.207)	(1.174)	(1.237)	(1.193)	(1.373)	(1.437)	(1.204)	(1.204)
Refugee Rights	0.0608	0.2288	0.1268	0.0570	0.0102	0.0245	0.0776	0.0411
	(0.1668)	(0.1655)	(0.1795)	(0.1652)	(0.1403)	(0.1317)	(0.1703)	(0.1717)
H3: Origin-country conditions								
Conflict in COO: High	0.0630						-0.0495	-0.0089
	(0.2896)						(0.3084)	(0.2893)
Conflict in COO: Low	0.0442						-0.0307	-0.0046
	(0.2119)						(0.2146)	(0.2200)
Battle Deaths (COO, log)		0.0036						
		(0.0356)						
Conflict in COO: High (t-2)			0.0284					
			(0.2124)					
Conflict in COO: Low (t-2)			-0.0541					
			(0.1494)					
De-escalation (COO)				-0.4603†				
				(0.2381)				
Civil War (COO, Fearon)					-0.8161***	-0.4469†		
					(0.2175)	(0.2506)		
Post-Conflict 3yr (COO)						0.4928*		
						(0.2280)		
PITF War/Violence (COO)								2.262
								(1.741)
Civil Liberties Restrictions (COO)	-0.5748***	-0.5570***	-0.5437***	-0.5925***	-0.5612**	-0.6104***	-0.5757***	-0.6000***
	(0.1456)	(0.1456)	(0.1536)	(0.1492)	(0.1719)	(0.1788)	(0.1507)	(0.1454)
GDP (COO)	0.6003†	0.6086*	0.6844*	0.5838†	0.3385	0.3498	0.5776†	0.6183†
	(0.3330)	(0.2687)	(0.3423)	(0.3249)	(0.3134)	(0.3142)	(0.3310)	(0.3437)
Education (COO)	0.1426	0.1391	-0.1468	0.0932	-2.687**	-2.690**	0.3673	0.1044
	(0.6804)	(0.6830)	(0.5999)	(0.6727)	(1.016)	(0.9870)	(0.6975)	(0.6845)
H4: Transition costs								
Conflict Duration	-0.0268	-0.0458	0.0068	0.0159	0.2177*	0.1633	0.0341	-0.0464
	(0.0969)	(0.0749)	(0.0861)	(0.0756)	(0.0924)	(0.1035)	(0.0931)	(0.0928)
Urban	0.0018	-0.1096	0.0677	-0.0229	0.0313	0.0374	0.0052	0.0045
	(0.1417)	(0.1233)	(0.1408)	(0.1385)	(0.1357)	(0.1361)	(0.1404)	(0.1456)
dplyr = lag(o_pagree,1)							-0.3845*	
							(0.1840)	
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dataset	UCDP	UCDP	UCDP	UCDP	UCDP+Fearon	UCDP+Fearon	UCDP+PA	UCDP+PITF
Years	1980-2023	1989-2023	1980-2023	1980-2023	1980-2014	1980-2014	1980-2023	1980-2017
Fixed-effects								
Dyad	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fit statistics								
Observations	2,177	1,989	1,987	2,177	1,600	1,600	2,177	2,098
Pseudo R^2	0.75721	0.78001	0.77027	0.75893	0.75909	0.76171	0.75918	0.75883

Clustered (Dyad) standard-errors in parentheses
*Signif. Codes: ***: 0.001, **: 0.01, *: 0.05, †: 0.1*

All models: Poisson PML with log(lagged refugee stock) offset, dyad and year fixed effects. SEs clustered by dyad. Models 5–6 use Fearon (2017) civil war coding with case-specific dyad matching. Model 7 adds UCDP peace agreement indicator (t-1) merged via conflict_id. Model 8 adds PITF war/violence (ethnic + revolutionary, combined). PITF data ends in 2017. Variables included but not shown: Refugee Rights, Education (COA), Education (COO).

2.3 Alternative Measures of Repression

A separate concern, distinct from how conflict is measured, is that refugees may decline to return not because of active armed conflict but because of broader state repression that conflict measures do not capture. The Freedom House civil liberties measure (`o_civlib_z`) is included in the main specification; here I supplement it with three additional measures of origin-country repression and political exclusion. Because these measures vary in coverage—and because the EPR ethnic-status measures substantially reduce the estimation sample—I report them in two stages.

Political Terror Scale. The Political Terror Scale (PTS) measures state-perpetrated physical integrity violations—torture, political imprisonment, extrajudicial killings, and disappearances—on a 1–5 ordinal scale. I use the mean of three sources (Amnesty International, Human Rights Watch, and the U.S. State Department), standardized across the estimation sample (`o_terror_z`).

Genocide/politicide. A binary indicator equal to one in any country-year with an ongoing episode of genocide or politicide, drawn from the Political Instability Task Force (PITF) Geno-Politicide event dataset (`o_genocide`). The PITF episode list ends in 2017; observations after 2017 are coded as missing.

Ethnic political status (EPR). The ordinal EPR status variable (`o_eth_status`) takes nine values from 'self-exclusion' to 'monopoly'. Refugee groups are matched to EPR group identifiers via the EPR Refugee Dataset, which links populations of at least 2,000 refugees to EPR groups in neighboring or proximate asylum countries (within 950 km of the origin border). For dyads outside this coverage I code the refugee group manually from World Refugee Survey reports.[1] EPR coverage is unavailable for some refugee groups, reducing the estimation sample.

Table 10 reports the three specifications. Column 1 reproduces the main specification. Column 2 adds PTS and genocide/politicide on the full estimation sample. Column 3 additionally adds EPR ethnic political status on the smaller sample for which EPR coverage is available, with 'Dominant' as the reference category. The asylum-country push coefficients are stable across all three specifications, and Freedom House civil liberties continues to enter negatively. The EPR status coefficients all enter negative relative to Dominant, but the difference is only statistically significant among those that are Self-Excluded, Discriminated, and Senior Partner, or where there is State Collapse. Surprisingly, the genocide/politicide indicator enters positive and significant, opposite to expectation.

2.4 Alternative Independent Variable Measures

Table 11 tests sensitivity to how the independent variables are operationalized. Model 1 reproduces the baseline. Model 2 replaces continuous origin and asylum GDP per capita with quartile dummies (Q1 reference) to relax linearity assumptions; other controls retain their continuous form. Model 3 lags all independent variables by one year, addressing the endogeneity concern that asylum-country conflict and return are measured contemporaneously and that the positive coefficient could reflect reverse causality (the "refugee warrior" hypothesis in which refugee populations contribute to host-state conflict rather than the reverse). Model 4 adds UNHCR funding per refugee in the asylum country as a proxy for repatriation funding. Model 5 adds two indicators for the presence of transnational ethnic kin of the refugee group in the asylum country—whether kin are politically in power (Monopoly, Dominant, Senior Partner, or Junior Partner) and whether they are politically excluded (Powerless or Discriminated)—drawing on EPR-TEK 2021 (Vogt 2015).

The main results are stable across all five specifications. The one place of departure is Model 3, where origin-country high-intensity conflict becomes negative and significant. The UNHCR per-refugee funding

[1] The same ethnic group is carried forward as long as the refugee population is continuous; the assignment is set to missing when a discontinuity in the population could plausibly indicate a change in ethnic composition. Two case-specific adjustments warrant note: EPR classifies Somalis as 'irrelevant' within Somalia on grounds of ethnic homogeneity, and I reclassify this group as high-status; Peuhl/Goula refugees from the Central African Republic appear in the EPR Refugee Dataset but not in the EPR Power Dataset, and are coded as 'powerless' based on desk research. The 2021 EPR Refugee values are carried forward from 2020.

Table 10: Robustness: Alternative Repression Measures

	Total Repatriation		
	Main	+ PTS/Genocide	+ EPR Status
Model:	(1)	(2)	(3)
Variables			
H1: Asylum-country push			
Conflict in COA: High	0.8444**	0.8414**	0.9840**
	(0.2840)	(0.2921)	(0.3094)
Conflict in COA: Low	0.4574†	0.4196†	0.7155**
	(0.2372)	(0.2515)	(0.2613)
Forced Return: Severe	1.408***	1.345***	1.572***
	(0.2587)	(0.2796)	(0.3153)
Forced Return: Moderate	0.3539†	0.1940	0.1386
	(0.2009)	(0.2411)	(0.2460)
H2: Asylum quality of life			
GDP (COA)	-1.223†	-0.6826	-1.746**
	(0.7059)	(0.7405)	(0.5644)
Education (COA)	-0.1897	0.3126	-0.2466
	(1.207)	(1.175)	(1.202)
Refugee Rights	0.0608	0.0752	0.2093
	(0.1668)	(0.1707)	(0.1540)
H3: Origin-country conditions			
Conflict in COO: High	0.0630	0.0819	0.2104
	(0.2896)	(0.3015)	(0.3191)
Conflict in COO: Low	0.0442	0.1557	0.4176†
	(0.2119)	(0.2063)	(0.2131)
Civil Liberties Restrictions (COO)	-0.5748***	-0.6150***	-0.4938**
	(0.1456)	(0.1669)	(0.1813)
Political Terror Scale (COO)		-0.1492	0.0038
		(0.1690)	(0.1381)
Genocide/Politicide (COO)		0.8225**	0.9942**
		(0.3118)	(0.3132)
Ethnic Status: Monopoly (COO)			-1.427
			(0.9231)
Ethnic Status: Senior Partner (COO)			-1.034*
			(0.4906)
Ethnic Status: Junior Partner (COO)			-0.6390
			(0.4924)
Ethnic Status: Powerless (COO)			-0.8370
			(0.5751)
Ethnic Status: Discriminated (COO)			-1.299*
			(0.5902)
Ethnic Status: State Collapse (COO)			-1.971***
			(0.5751)
Ethnic Status: Self-Excluded (COO)			-2.809***
			(0.8369)
GDP (COO)	0.6003†	0.4587	0.1707
	(0.3330)	(0.3390)	(0.2352)
Education (COO)	0.1426	-0.4212	-0.2873
	(0.6804)	(0.5928)	(0.5899)
H4: Transition costs			
Conflict Duration	-0.0268	-0.0129	-0.1514
	(0.0969)	(0.1021)	(0.0966)
Urban	0.0018	0.0141	-0.2509**
	(0.1417)	(0.1401)	(0.0892)
Fixed-effects			
Dyad	Yes	Yes	Yes
Year	Yes	Yes	Yes
Fit statistics			
Observations	2,177	1,856	1,443
Squared Correlation	0.83692	0.86171	0.90947
Pseudo R^2	0.75721	0.77768	0.80505

Clustered (Dyad) standard-errors in parentheses
*Signif. Codes: ***: 0.001, **: 0.01, *: 0.05, †: 0.1*

All models: PPML with log(lagged refugee stock) offset, dyad and year FE; SEs clustered by dyad. Column 1 reproduces Model 2 of Table 1. Column 2 adds the Political Terror Scale (mean of Amnesty/HRW/State Dept ratings) and a binary indicator for ongoing genocide/politicide (PITF). Column 3 adds EPR ordinal ethnic status (Dominant omitted as reference), reducing the sample to dyads with EPR Refugee Dataset coverage.

coefficient in Model 4 is large and positive; because UNHCR funding to asylum countries includes resources earmarked for repatriation, this most plausibly reflects active return programs rather than indicating that funding causally drives return.

2.5 Alternative Data Subsets

Table 12 tests whether the results hold across different subsets of the data and alternative specifications of the dependent variable and offset. Model 1 reproduces the baseline using the full GRR dataset (1980–2023). Model 2 restricts to the WRS period (1980–2008) to assess sensitivity to the data source transition in 2009, when the primary source shifts from the World Refugee Survey to U.S. State Department Country Reports on Human Rights Practices; the WRS period has richer source material on stocks, forced returns, and unregistered populations. Model 3 uses UNHCR voluntary returns as the dependent variable, providing a comparison against the official statistics that GRR is designed to correct. Model 4 substitutes formally registered refugees for the total refugee stock in the offset, providing a stricter denominator that excludes unregistered populations.

Model 5 excludes dyads associated in the literature with the "refugee warrior" hypothesis, under which refugee populations, camps, or exile communities may become militarized and contribute to conflict spillover in host states (Zolberg 1989; Salehyan and Gleditsch 2006).[2] Excluding these cases assesses whether the main results are driven by settings in which refugee presence may be more plausibly endogenous to asylum-country conflict. Model 6 excludes dyads with asylum countries in Europe and North America, given that WRS provides less detail on specific nationalities within high-income countries. Model 7 restricts to dyads where refugees originally fled armed conflict rather than non-war forms of persecution. Model 8 restricts to the top three asylum countries per origin by refugee stock, addressing concerns that refugees from some countries are more dispersed across multiple asylum destinations than others; because origins vary in the number of asylum countries they appear in, highly dispersed origins contribute more dyads and receive greater implicit weight when each dyad-year is weighted equally (see Section 2.5.1 below). The core results are robust across all eight specifications.

[2]The excluded dyads are: RWA–COD, RWA–TZA, AFG–PAK, KHM–THA, PSE–LBN, PSE–JOR, and NIC–HND.

Table 11: Robustness: Alternative Independent Variables

	Total Repatriation				
	Main	GDP Quartiles	Lagged IVs	+ Funding	+ Kin
Model:	(1)	(2)	(3)	(4)	(5)
Variables					
H1: Asylum-country push					
Conflict in COA: High	0.8444**	1.035***	0.7797**	0.5812	0.8774**
	(0.2840)	(0.2812)	(0.2585)	(0.4046)	(0.2855)
Conflict in COA: Low	0.4574†	0.5098†	0.3290†	0.4577	0.4737*
	(0.2372)	(0.2638)	(0.1844)	(0.2785)	(0.2386)
Forced Return: Severe	1.408***	1.407***	0.8954***	1.548***	1.391***
	(0.2587)	(0.3000)	(0.2357)	(0.3117)	(0.2596)
Forced Return: Moderate	0.3539†	0.4849*	0.4541	0.3248	0.3673†
	(0.2009)	(0.2096)	(0.3102)	(0.2364)	(0.2091)
H2: Asylum quality of life					
GDP (COA)	-1.223†		-0.7375	-1.420†	-1.236†
	(0.7059)		(0.7653)	(0.8331)	(0.7092)
GDP (COA): Q2		0.2906			
		(0.3387)			
GDP (COA): Q3		0.2728			
		(0.4509)			
GDP (COA): Q4		-0.0337			
		(1.690)			
Education (COA)	-0.1897	0.3041	-0.8594	-0.7843	-0.2200
	(1.207)	(1.138)	(1.305)	(1.378)	(1.200)
Refugee Rights	0.0608	0.0833	0.0887	-0.0489	0.0626
	(0.1668)	(0.1703)	(0.1985)	(0.1976)	(0.1692)
Co-ethnic Kin in Power (COA)					-0.5366
					(0.5469)
Co-ethnic Kin Excluded (COA)					0.2122
					(0.4164)
H3: Origin-country conditions					
Conflict in COO: High	0.0630	-0.0895	-0.5092*	-0.2428	0.0447
	(0.2896)	(0.2963)	(0.2508)	(0.3382)	(0.2961)
Conflict in COO: Low	0.0442	0.0262	-0.2741	-0.2517	0.0313
	(0.2119)	(0.2119)	(0.1974)	(0.2467)	(0.2136)
Civil Liberties Restrictions (COO)	-0.5748***	-0.6202***	-0.3438*	-0.4100*	-0.5747***
	(0.1456)	(0.1732)	(0.1631)	(0.1710)	(0.1518)
GDP (COO)	0.6003†		0.2164	0.8167*	0.5847†
	(0.3330)		(0.3131)	(0.3706)	(0.3320)
GDP (COO): Q2		-0.1806			
		(0.2846)			
GDP (COO): Q3		-0.0405			
		(0.4298)			
GDP (COO): Q4		0.3670			
		(0.4457)			
Education (COO)	0.1426	0.6379	-0.1633	-0.4630	0.1180
	(0.6804)	(0.7441)	(0.6806)	(0.6899)	(0.6796)
H4: Transition costs					
Conflict Duration	-0.0268	-0.0348	0.1269	0.0902	-0.0164
	(0.0969)	(0.0971)	(0.0925)	(0.0969)	(0.0999)
Urban	0.0018	-0.0029	-0.4273**	0.3123	-0.0291
	(0.1417)	(0.1477)	(0.1559)	(0.2185)	(0.1463)
UNHCR Funding p.p. (COA)				0.7133**	
				(0.2291)	
Fixed-effects					
Dyad	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes
Fit statistics					
Observations	2,177	2,177	2,022	1,798	2,177
Pseudo R^2	0.75721	0.75286	0.75195	0.78031	0.75882

Clustered (Dyad) standard-errors in parentheses
*Signif. Codes: ***: 0.001, **: 0.01, *: 0.05, †: 0.1*

Poisson PML, log(lagged stock) offset, dyad + year FEs, SEs clustered by dyad. M1: main (Table 1, M2). M2: GDP (COO/COA) quartiles (Q1 ref.). M3: lagged IVs. M4: + UNHCR funding p.p. (z-log). M5: + kin in power/excluded indicators (EPR-TEK 2021).

Table 12: Robustness: Alternative Datasets, Periods, Samples, and Offsets

Dep. Var.:	Total Repatriation		Voluntary Repatriation	Total Repatriation				
	Main	WRS	UNHCR	Formal.Off	Excl.Warrior	Excl.ENA	War.Orig	Top.3.COA
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables								
H1: Asylum-country push								
Conflict in COA: High	0.8444**	1.028**	0.5992*	0.8163**	0.5554*	0.8723**	0.8087**	0.8811**
	(0.2840)	(0.3591)	(0.2780)	(0.2998)	(0.2414)	(0.2916)	(0.2896)	(0.2946)
Conflict in COA: Low	0.4574†	0.4147	0.0911	0.4592*	0.5143*	0.4557†	0.4838*	0.4687†
	(0.2372)	(0.2740)	(0.2069)	(0.2266)	(0.2309)	(0.2365)	(0.2383)	(0.2589)
Forced Return: Severe	1.408***	1.221***	0.8660***	1.444***	1.650***	1.360***	1.376***	1.367***
	(0.2587)	(0.2345)	(0.2149)	(0.2870)	(0.3163)	(0.2635)	(0.2602)	(0.2668)
Forced Return: Moderate	0.3539†	0.1625	0.0282	0.2878	0.3026	0.3016	0.3641†	0.3631†
	(0.2009)	(0.2016)	(0.2062)	(0.2008)	(0.2516)	(0.2316)	(0.1984)	(0.2044)
H2: Asylum quality of life								
GDP (COA)	-1.223†	0.2817	-0.2420	-1.118†	-1.737**	-1.311†	-1.218†	-1.310†
	(0.7059)	(0.8639)	(0.7169)	(0.6762)	(0.5994)	(0.7109)	(0.7211)	(0.7398)
Education (COA)	-0.1897	0.7960	-0.2536	-0.1551	0.2936	0.1180	-0.1344	-0.4872
	(1.207)	(1.915)	(1.150)	(1.106)	(1.112)	(1.166)	(1.253)	(1.255)
Refugee Rights	0.0608	0.0555	0.0908	0.0686	0.0608	0.0855	0.0532	0.0950
	(0.1668)	(0.1677)	(0.1459)	(0.1710)	(0.1560)	(0.1649)	(0.1889)	(0.1769)
H3: Origin-country conditions								
Conflict in COO: High	0.0630	-0.0824	-0.1241	0.0823	-0.3010	0.0599	0.0749	0.0383
	(0.2896)	(0.3104)	(0.3077)	(0.3083)	(0.3149)	(0.2947)	(0.2864)	(0.3076)
Conflict in COO: Low	0.0442	0.1601	0.0980	-0.0277	-0.1812	0.0889	0.0472	0.0562
	(0.2119)	(0.2274)	(0.2222)	(0.2296)	(0.2079)	(0.2162)	(0.2098)	(0.2177)
Civil Liberties Restrictions (COO)	-0.5748***	-0.6436**	-0.4952**	-0.4355*	-0.5591***	-0.6625***	-0.6071***	-0.5809***
	(0.1456)	(0.2211)	(0.1673)	(0.1951)	(0.1607)	(0.1452)	(0.1465)	(0.1489)
GDP (COO)	0.6003†	0.4231	0.3270	0.5409†	0.4609	0.5367	0.6148†	0.6012†
	(0.3330)	(0.4137)	(0.3558)	(0.2839)	(0.2967)	(0.3469)	(0.3371)	(0.3475)
Education (COO)	0.1426	-3.159*	-2.782**	1.473*	-0.2088	0.0074	0.0872	0.2482
	(0.6804)	(1.525)	(0.9727)	(0.6667)	(0.6801)	(0.5800)	(0.6922)	(0.7778)
H4: Transition costs								
Conflict Duration	-0.0268	0.0728	-0.0160	-0.0034	0.0538	-0.0603	-0.0206	-0.0254
	(0.0969)	(0.1378)	(0.1139)	(0.1095)	(0.0990)	(0.0942)	(0.0978)	(0.1027)
Urban	0.0018	0.1124	-0.0007	0.0121	0.1213	0.0208	-0.0139	0.0002
	(0.1417)	(0.1540)	(0.1257)	(0.1578)	(0.1683)	(0.1418)	(0.1459)	(0.1497)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dataset	GRR	WRS	UNHCR	GRR	GRR	GRR	GRR	GRR
Years	1980-2023	1980-2008	1980-2023	1980-2023	1980-2023	1980-2023	1980-2023	1980-2023
Fixed-effects								
Dyad	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fit statistics								
Observations	2,177	1,173	2,143	2,103	2,115	1,734	2,004	1,857
Pseudo R^2	0.75721	0.76644	0.70160	0.74792	0.76109	0.76313	0.75759	0.75626

Clustered (Dyad) standard-errors in parentheses
*Signif. Codes: ***: 0.001, **: 0.01, *: 0.05, †: 0.1*

All models: Poisson PML with log(lagged refugee stock) offset, dyad and year fixed effects. Standard errors clustered by dyad. Model 3 uses UNHCR voluntary returns as the dependent variable. Model 4 uses formally registered refugees (refugees_formal_lag) as the offset rather than the total refugee stock. Model 5 excludes dyads linked in the literature to the refugee warrior hypothesis. Model 6 excludes dyads with asylum countries in Europe and North America. Model 7 restricts to dyads where refugees originally fled armed conflict (o_pers_nonwar == 0). Model 8 restricts to the top 3 asylum countries per origin-year by refugee stock.

2.5.1 Distribution of Asylum Countries

Origins vary in the number of asylum destinations they appear in, because the sample construction rule includes asylum countries for each origin until the cumulative displaced population reaches 75% of the origin's total. Figure 4 shows the distribution: most origins are concentrated in a small number of hosts, while a subset are dispersed across many (e.g., Ukraine appears in ten asylum countries). Table 13 lists the origins that appear in more than three asylum countries.

Because more-dispersed origins contribute more dyads, they receive greater implicit weight under equal dyad-year weighting, which could shift the estimand if peripheral hosts differ systematically from major ones. To assess sensitivity to this feature, I restrict the sample to the top three asylum countries per origin-year (preserving the full data for most origins), reported as Model "Top.3'' in Table 12. The main findings are robust to this restriction.

Table 13: Origins with more than three asylum countries in the analytic sample

Origin (ISO3)	No. asylum countries	Asylum countries (ISO3)
UKR	10	CZE, DEU, ESP, GBR, ITA, NLD, POL, RUS, SVK, USA
YEM	10	CAN, DEU, DJI, EGY, JOR, MYS, NLD, SDN, SOM, USA
COD	7	BDI, COG, RWA, TZA, UGA, ZAF, ZMB
GEO	7	AUT, DEU, FRA, GBR, ITA, UKR, USA
IRN	7	DEU, GBR, IRQ, NLD, SWE, TUR, USA
BGD	6	CAN, FRA, IND, ITA, USA, ZAF
CIV	6	AGO, FRA, GHA, GIN, ITA, LBR
GIN	6	AGO, BEL, DEU, FRA, ITA, USA
PAK	6	AFG, CAN, DEU, GBR, ITA, USA
SRB	6	AUT, CHE, DEU, FRA, GBR, ITA
BIH	5	DEU, HRV, SRB, SWE, USA
BLR	5	DEU, FRA, POL, SWE, USA
COG	5	COD, FRA, GAB, USA, ZAF
EGY	5	AUS, CAN, DEU, ITA, USA
LBN	5	CAN, DEU, SWE, SYR, USA
MAR	5	AUT, DEU, ESP, FRA, ITA
ROU	5	CAN, DEU, HUN, SWE, USA
TJK	5	AFG, KGZ, RUS, TKM, UZB
ALB	4	DEU, FRA, GBR, USA
CHL	4	CAN, MEX, SWE, USA
CMR	4	DEU, NGA, TCD, USA
CUB	4	BRA, MEX, URY, USA
GHA	4	DEU, GBR, ITA, TGO
IRQ	4	DEU, IRN, JOR, SYR
KEN	4	CAN, ETH, USA, ZAF
NGA	4	CMR, DEU, ITA, NER
PER	4	CAN, ESP, ITA, USA
POL	4	CAN, DEU, SWE, USA
RUS	4	AUT, DEU, FRA, USA
SDN	4	ETH, SSD, TCD, UGA
SEN	4	GMB, GNB, ITA, MRT
TUR	4	CHE, DEU, FRA, IRQ
VEN	4	BRA, COL, ESP, PER

2.5.2 Excluding Top Cases

The empirical distribution of refugee return is heavily skewed: the top five percent of dyad-years account for 88.1 percent of all returns. Because PPML identification is weighted by event counts, this concentration raises the question of whether the main estimates are carried by a small number of canonical episodes. Table

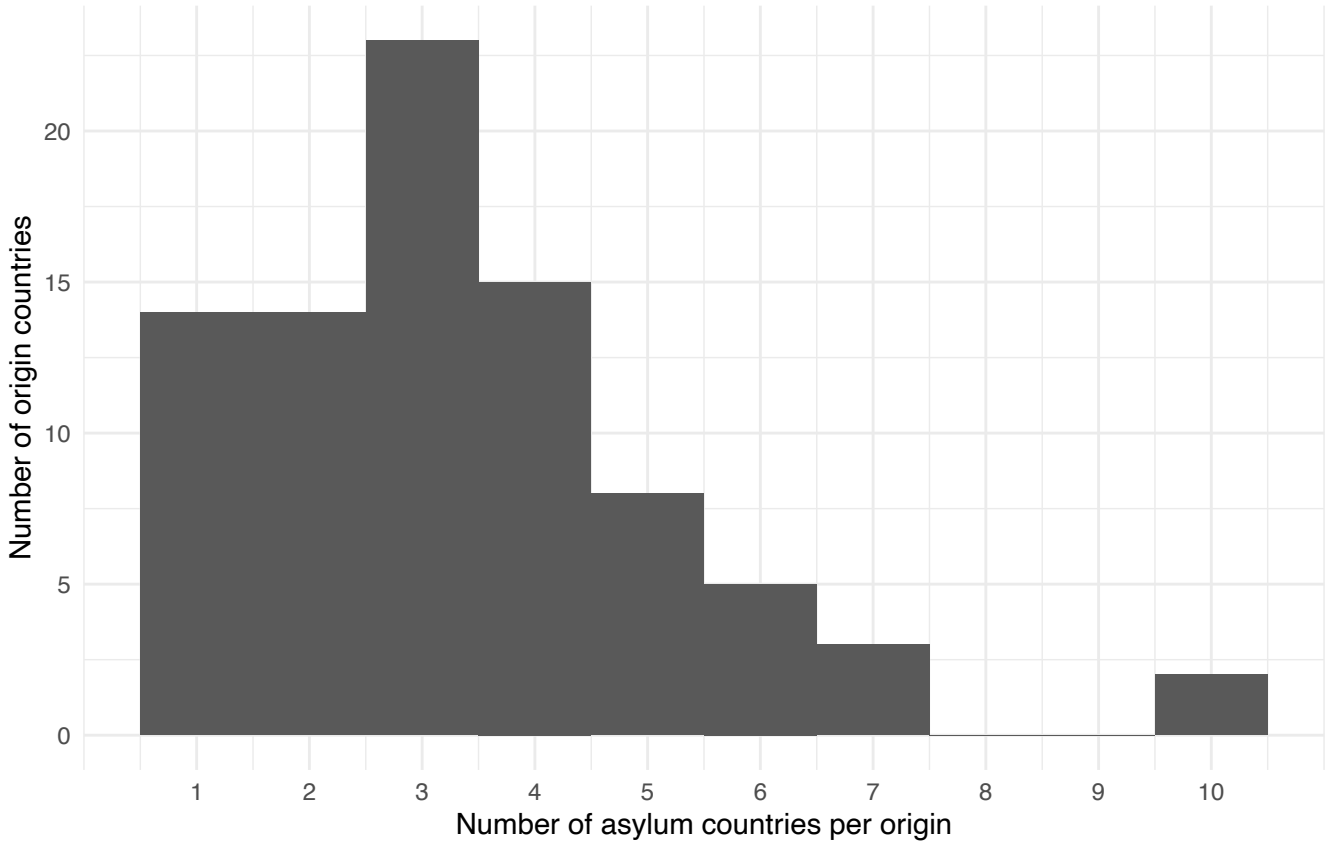

Figure 4: Histogram of the number of unique asylum countries per origin

14 addresses this in two ways: by re-estimating Model 2 after dropping high-mass cases, and by re-estimating on the top ten dyads only.

By and large, the patterns hold. Severe forced return remains robust across the drop-cases columns and is positive but not significant within the top ten dyads. High-intensity asylum-country conflict is weakly significant in Models 2 and 3. Low-intensity asylum-country conflict attenuates when top cases are dropped but enters strongly significant within the top ten dyads, indicating that this association is concentrated in the major return episodes rather than appearing uniformly across the panel. Origin-country conflict enters negative and significant in Model 5, consistent with H3 in this subsample.

Table 14: Robustness: Concentration of Returns

Dependent Variable:	Total Repatriation				
Model:	Full (m2) (1)	Drop top 5 dyads (2)	Drop top 1% yrs (3)	Drop top 5% yrs (4)	Top 10 dyads (5)
H1: Asylum-country push					
Conflict in COA: High	0.8444**	0.4719†	0.5420†	0.1779	0.9066†
	(0.2840)	(0.2858)	(0.2779)	(0.2609)	(0.5202)
Conflict in COA: Low	0.4574†	0.3220	0.2837	0.1328	1.428**
	(0.2372)	(0.2765)	(0.2596)	(0.2006)	(0.4368)
Forced Return: Severe	1.408***	1.678***	1.526***	1.442***	0.6964
	(0.2587)	(0.2605)	(0.2004)	(0.4048)	(0.6192)
Forced Return: Moderate	0.3539†	0.1443	0.4458†	0.6907**	0.4111
	(0.2009)	(0.2571)	(0.2293)	(0.2360)	(0.3708)
H2: Asylum quality of life					
GDP (COA)	-1.223†	0.0386	-0.6179	0.1230	-2.148
	(0.7059)	(0.7872)	(0.6166)	(0.6502)	(1.486)
Education (COA)	-0.1897	-0.2527	-0.1585	0.5541	4.965†
	(1.207)	(1.330)	(1.315)	(0.8672)	(2.622)
Refugee Rights	0.0608	0.0712	0.0637	0.0134	0.4324*
	(0.1668)	(0.1443)	(0.1541)	(0.1057)	(0.1726)
H3: Origin-country conditions					
Conflict in COO: High	0.0630	-0.1826	-0.2732	-0.4860†	-0.9223*
	(0.2896)	(0.3157)	(0.3104)	(0.2951)	(0.3946)
Conflict in COO: Low	0.0442	-0.1018	-0.0704	-0.3931*	-0.2219
	(0.2119)	(0.2252)	(0.2079)	(0.1849)	(0.3028)
Civil Liberties Restrictions (COO)	-0.5748***	-0.6371**	-0.5815**	-0.3249	-0.8649**
	(0.1456)	(0.2190)	(0.1948)	(0.2227)	(0.2694)
GDP (COO)	0.6003†	0.6004†	0.4055	0.5709*	0.6869
	(0.3330)	(0.3615)	(0.2751)	(0.2709)	(0.6087)
Education (COO)	0.1426	-1.638	-1.685†	-1.909*	-0.5267
	(0.6804)	(1.151)	(0.9416)	(0.7800)	(1.169)
H4: Transition costs					
Conflict Duration	-0.0268	0.1464	0.1251	0.0799	0.2662
	(0.0969)	(0.1129)	(0.1007)	(0.1107)	(0.2042)
Urban	0.0018	-0.0248	0.0407	0.1144	-0.1248
	(0.1417)	(0.1495)	(0.1555)	(0.1516)	(0.3696)
Fixed-effects					
Dyad	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes
Fit statistics					
Observations	2,177	2,031	2,138	1,919	252
Squared Correlation	0.83692	0.57660	0.45731	0.31061	0.97312
Pseudo R^2	0.75721	0.61198	0.54915	0.40753	0.90743

Clustered (Dyad) standard-errors in parentheses
*Signif. Codes: ***: 0.001, **: 0.01, *: 0.05, †: 0.1*

2.6 Alternative Specifications

Table 15 varies the model specification. Model 1 reproduces the baseline Poisson model. Model 2 uses OLS with log returns as the dependent variable. Model 3 clusters standard errors two ways, by origin country and asylum country, to account for correlation across dyads sharing a common origin or destination rather than only within dyads. Model 4 estimates a negative binomial model, which relaxes the Poisson equidispersion assumption. Model 5 introduces origin-by-year fixed effects, which absorb all time-varying origin-country confounders (including origin-country conflict, ethnic status, and conflict years) and identify asylum-side variables from variation across hosts within the same origin-year.

The results hold across all five specifications. Severe forced return is positive and significant throughout, and asylum-country conflict retains its sign everywhere, with reduced precision under OLS and negative binomial (Models 2 and 4). The origin-by-year fixed effects model (Model 5) recovers the asylum-side baseline, confirming that the main asylum-side patterns are not driven by unobserved time-varying origin-country shocks.

2.6.1 Pooled Specification

The within-dyad PPML estimates identify effects from year-to-year variation conditional on dyad fixed effects. I complement these with a pooled PPML specification that retains year fixed effects but omits dyad fixed effects, allowing identification from both within- and between-dyad variation. Log dyadic distance, absorbed by dyad fixed effects in the within specification, is added here as a standard gravity control. A further motivation for the pooled specification is sample coverage: two-way fixed-effects PPML restricts identification to dyads with sufficient within-cluster variation in the outcome, dropping a substantial share of the panel. The pooled specification draws on the full dataset, allowing me to assess whether the principal associations hold across the broader population of dyads.

The principal push channels hold under pooled identification. The main difference is that, when examining variation across cases, asylum-country GDP seems to be a stronger predictor of non-return and, surprisingly, both greater refugee rights in asylum and worse origin-country education outcomes predict higher rates of return.

2.6.2 Interaction Effects

The within-dyad estimates treat push and pull factors as independent predictors of return. A natural extension is that the two operate conditionally: when asylum-country push factors are present, return is driven by host-state pressure; when they are absent, return becomes responsive to the quality-of-life differentials and origin-country conditions emphasized in the conventional pull account. I test this by re-estimating Model 2 with an indicator for the absence of any asylum-country push factor (`no_push` $= 1$ when neither asylum-country conflict nor forced return is recorded), interacted with origin-country conflict and the full set of pull-factor covariates. The main effects identify the association during active push; the sums of main effects and interaction terms identify it during the absence of push.

Table 17 shows that the conditional logic operates through economic pull factors specifically. Origin GDP is positive under both regimes, with magnitude roughly doubling under no-push; asylum GDP is negative throughout, with similar amplification. The remaining pull factors and origin-country conflict show no significant conditional pattern, and the push-factor coefficients are essentially unchanged across specifications. The economic dimension of the pull mechanism therefore intensifies in the absence of push, while the broader set of pull factors does not.

2.7 Outliers

Figure 5 presents leave-one-out analyses that iteratively exclude each origin country, asylum country, origin region, and asylum region and re-estimate the main model. Coefficients are stable across most exclusions; Table 18 reports the cases where excluding a region produces a sign change or absolute coefficient shift exceeding one. The largest shift is on severe forced return, which strengthens—from 1.41 to roughly 2.7—when Sub-Saharan Africa is dropped as either an origin or an asylum region, reinforcing rather than weakening the

Table 15: Robustness: Alternative Specifications

Dep. Var.:	Total Repatriation	log(trepat+1)	Total Repatriation		
	Main	OLS	Two-way.CL	Neg.Binom	Origin.x.Year
Model:	(1)	(2)	(3)	(4)	(5)
	Poisson	OLS	Poisson	Neg. Bin.	Poisson
Variables					
H1: Asylum-country push					
Conflict in COA: High	0.8444**	0.5641	0.8444**	0.8091	1.539**
	(0.2840)	(0.4939)	(0.2691)	(0.6163)	(0.5854)
Conflict in COA: Low	0.4574†	0.3313	0.4574*	0.4407	0.7422*
	(0.2372)	(0.3194)	(0.2295)	(0.3984)	(0.3654)
Forced Return: Severe	1.408***	4.733***	1.408***	3.493***	1.945***
	(0.2587)	(0.4569)	(0.2470)	(0.6617)	(0.4839)
Forced Return: Moderate	0.3539†	1.534***	0.3539	1.919**	1.019**
	(0.2009)	(0.3109)	(0.2537)	(0.7013)	(0.3433)
H2: Asylum quality of life					
GDP (COA)	-1.223†	-0.6331	-1.223	0.1313	-0.4410
	(0.7059)	(0.6218)	(0.7454)	(1.184)	(1.219)
Education (COA)	-0.1897	1.079	-0.1897	0.8980	-0.4104
	(1.207)	(0.7000)	(1.052)	(1.479)	(1.037)
Refugee Rights	0.0608	0.1608	0.0608	0.2409	0.0515
	(0.1668)	(0.1967)	(0.1520)	(0.3302)	(0.1718)
H3: Origin-country conditions					
Conflict in COO: High	0.0630	-0.7726†	0.0630	0.5414	-0.5091
	(0.2896)	(0.4279)	(0.2523)	(0.5192)	(0.8173)
Conflict in COO: Low	0.0442	-0.3622	0.0442	-0.2311	-0.0808
	(0.2119)	(0.2652)	(0.1804)	(0.2815)	(0.5371)
Civil Liberties Restrictions (COO)	-0.5748***	-0.4933**	-0.5748***	-0.6912†	
	(0.1456)	(0.1769)	(0.1571)	(0.4055)	
GDP (COO)	0.6003†	0.2202	0.6003	-0.1316	
	(0.3330)	(0.2577)	(0.3667)	(0.5578)	
Education (COO)	0.1426	-1.130	0.1426	-5.079*	
	(0.6804)	(0.8182)	(0.6194)	(2.245)	
H4: Transition costs					
Conflict Duration	-0.0268	0.3077*	-0.0268	0.3983*	0.2355
	(0.0969)	(0.1353)	(0.0931)	(0.1886)	(0.2406)
Urban	0.0018	-0.5553**	0.0018	-0.3255	0.1381
	(0.1417)	(0.1791)	(0.1755)	(0.2861)	(0.2080)
log(refugees_lag)		0.6959***			
		(0.0936)			
Controls	Yes	Yes	Yes	Yes	Yes
Estimator	Poisson	OLS	Poisson	Neg. Binom.	Poisson
Clustering	Dyad	Dyad	Origin + Asylum	Dyad	Dyad
DV	trepat	log(trepat+1)	trepat	trepat	trepat
Fixed-effects					
Dyad	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	
coo_iso-Year					Yes
Fit statistics					
Observations	2,177	3,722	2,177	2,177	1,318
Pseudo R^2	0.75721	0.14676	0.75721	0.03629	0.89392

*Signif. Codes: ***: 0.001, **: 0.01, *: 0.05, †: 0.1*

All models include dyad fixed effects. Standard errors in parentheses. Model 2 uses OLS with log returns as DV. Model 3 clusters by origin and asylum country. Model 4 uses negative binomial. Model 5 adds origin-by-year fixed effects; origin-side coefficients absorbed by these FE are automatically dropped.

Table 16: Pooled PPML: Identification Across and Within Dyads

Dependent Variable:	Total Repatriation		
Model:	(1)	(2)	(3)
H1: Asylum-country push			
Conflict in COA: High	1.120***	0.7280*	0.5230
	(0.3188)	(0.2834)	(0.3359)
Conflict in COA: Low	0.6105*	0.3760†	0.3835
	(0.2515)	(0.2159)	(0.2859)
Forced Return: Severe	1.242***	1.232***	1.495***
	(0.2327)	(0.2062)	(0.2354)
Forced Return: Moderate	0.0881	0.1953	0.0382
	(0.2574)	(0.2122)	(0.2862)
H2: Asylum quality of life			
GDP (COA)		-0.6947**	-0.8481**
		(0.2211)	(0.2942)
Education (COA)		0.0978	0.2400
		(0.1430)	(0.1613)
Refugee Rights		0.1713*	0.0945
		(0.0827)	(0.0998)
H3: Origin-country conditions			
Conflict in COO: High	-0.0536	-0.1978	-0.0440
	(0.3101)	(0.2760)	(0.2712)
Conflict in COO: Low	0.4496	-0.0665	0.0575
	(0.2933)	(0.2478)	(0.2568)
Civil Liberties Restrictions (COO)	-0.2392	-0.6153***	-0.4542**
	(0.1885)	(0.1004)	(0.1401)
GDP (COO)		-0.1962	-0.3525†
		(0.1385)	(0.1885)
Education (COO)		-0.5122***	-0.3214*
		(0.1071)	(0.1377)
H4: Transition costs			
Conflict Duration		0.0423	-0.0266
		(0.0958)	(0.1135)
Urban		-0.0305	0.0616
		(0.0971)	(0.1151)
Repatriation Assistance			0.4838***
			(0.1237)
Log Distance	0.1831	0.0787	0.0425
	(0.1697)	(0.1405)	(0.1375)
Fixed-effects			
Year	Yes	Yes	Yes
Fit statistics			
Observations	4,260	3,689	2,175
Squared Correlation	0.35787	0.72604	0.74608
Pseudo R^2	0.55121	0.68827	0.69694

Clustered (Dyad) standard-errors in parentheses
*Signif. Codes: ***: 0.001, **: 0.01, *: 0.05, †: 0.1*

Table 17: Conditional Effects of Pull Factors

Dependent Variable:	Total Repatriation	
Model:	Main (1)	+ intx (2)
H1: Asylum-country push		
Conflict in COA: High	0.8444**	1.277***
	(0.2840)	(0.2979)
Conflict in COA: Low	0.4574†	0.6806*
	(0.2372)	(0.2707)
Forced Return: Severe	1.408***	1.641***
	(0.2587)	(0.3100)
Forced Return: Moderate	0.3539†	0.5410*
	(0.2009)	(0.2618)
H2: Asylum quality of life		
GDP (COA)	-1.223†	-0.9991
	(0.7059)	(0.6752)
Education (COA)	-0.1897	-0.4609
	(1.207)	(1.240)
Refugee Rights	0.0608	0.1579
	(0.1668)	(0.1649)
H3: Origin-country conditions		
Conflict in COO: High	0.0630	0.0743
	(0.2896)	(0.3337)
Conflict in COO: Low	0.0442	0.1409
	(0.2119)	(0.2671)
Civil Liberties Restrictions (COO)	-0.5748***	-0.5698***
	(0.1456)	(0.1670)
GDP (COO)	0.6003†	0.4321
	(0.3330)	(0.3655)
Education (COO)	0.1426	0.2404
	(0.6804)	(0.6598)
H4: Transition costs		
Conflict Duration	-0.0268	0.0417
	(0.0969)	(0.1459)
Urban	0.0018	-0.0371
	(0.1417)	(0.1695)
Conditional effects under no-push regime		
No Push		0.5728
		(0.4268)
Civil Liberties Restrictions (COO) × No Push		0.0565
		(0.2339)
No Push × Conflict in COO: High		-0.3208
		(0.5978)
No Push × Conflict in COO: Low		-0.3018
		(0.4349)
No Push × GDP (COO)		0.5071*
		(0.2266)
No Push × GDP (COA)		-0.6559†
		(0.3348)
No Push × Urban		0.0769
		(0.1949)
No Push × Conflict Duration		-0.0437
		(0.1892)
No Push × Refugee Rights		-0.2325
		(0.2259)
No Push × Education (COA)		0.3201
		(0.2814)
No Push × Education (COO)		-0.2496
		(0.2899)
Fixed-effects		
Dyad	Yes	Yes
Year	Yes	Yes
Fit statistics		
Observations	2,177	2,177
Squared Correlation	0.83692	0.84643
Pseudo R^2	0.75721	0.76271

Clustered (Dyad) standard-errors in parentheses
*Signif. Codes: ***: 0.001, **: 0.01, *: 0.05, †: 0.1*

central finding. The remaining flagged shifts—on GDP (COA), moderate forced return, and origin-country conflict—occur on coefficients that are at most marginally significant in the main specification and revert to non-significance after the drop, so they do not alter the substantive interpretation.

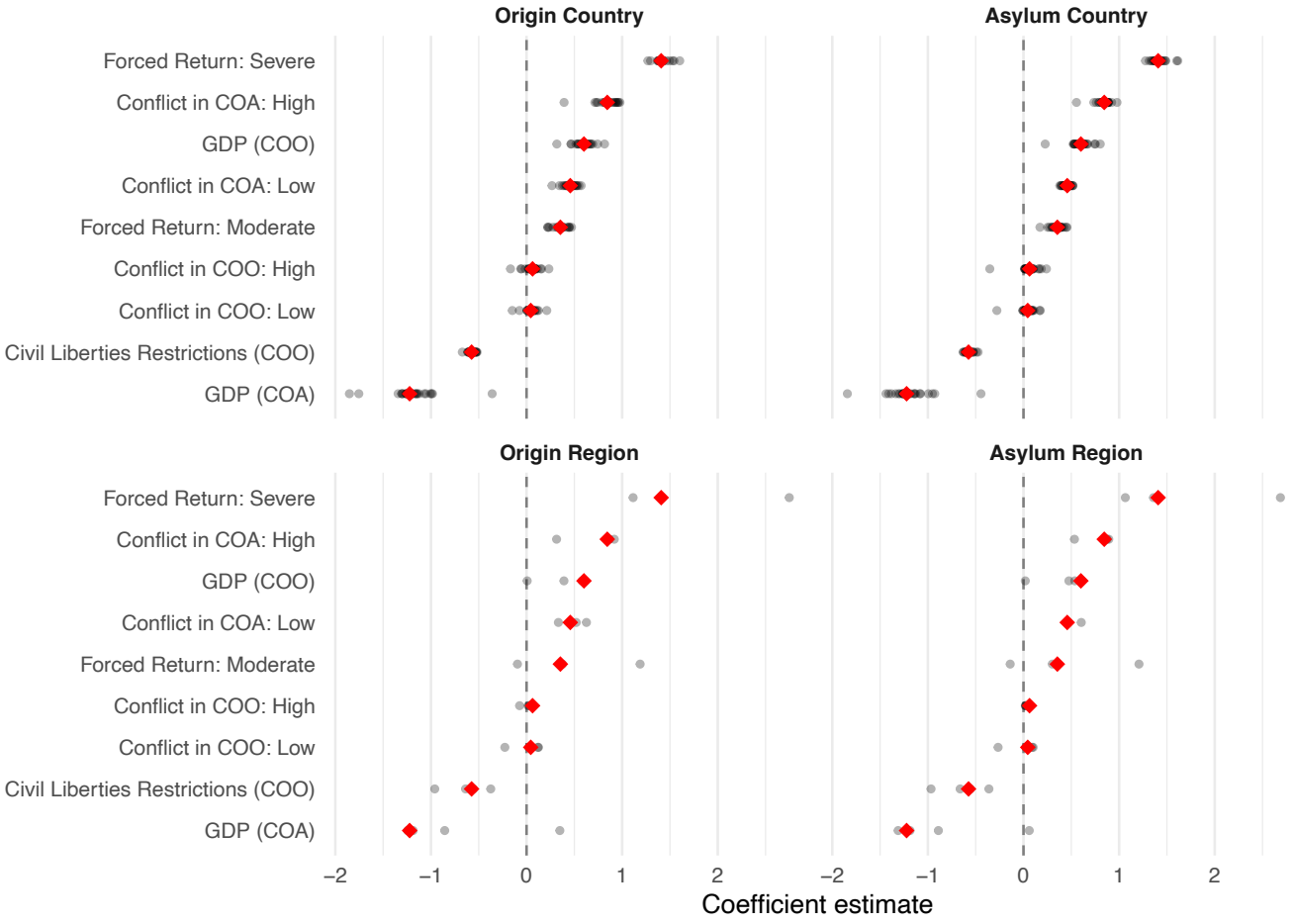

Figure 5: Coefficient stability across leave-one-out analyses

Table 18: Influential Regions: Coefficients with Sign Changes or Large Shifts

Variable	Region Dropped	Drop Type	Main Est.	New Est.	Change
Forced Return: Severe	Sub-Saharan Africa	Origin Region	1.408***	2.748***	1.340
Forced Return: Severe	Sub-Saharan Africa	Asylum Region	1.408***	2.687***	1.279
Forced Return: Moderate	Asia & MENA	Asylum Region	0.354+	-0.139	0.493
Forced Return: Moderate	Asia & MENA	Origin Region	0.354+	-0.095	0.449
GDP (COA)	Sub-Saharan Africa	Origin Region	-1.223+	0.348	1.571
GDP (COA)	Sub-Saharan Africa	Asylum Region	-1.223+	0.060	1.283
Conflict in COO: High	Asia & MENA	Origin Region	0.063	-0.073	0.136
Conflict in COO: Low	Sub-Saharan Africa	Asylum Region	0.044	-0.266	0.310
Conflict in COO: Low	Sub-Saharan Africa	Origin Region	0.044	-0.227	0.271

Note: Table shows regions whose exclusion causes sign changes or absolute coefficient shifts above 1. Stars indicate significance of each coefficient: + p<0.10, * p<0.05, ** p<0.01, *** p<0.001. Bold rows indicate sign reversals where the new coefficient remains statistically significant at p<0.05; sign flips on coefficients that fall back to non-significance after exclusion are shown but not bolded.

Table 19: Most influential dyads: top five single-dyad drops by absolute coefficient change, per variable.

Variable	Dyad	Main Est.	New Est.	Change
Conflict in COA: High	RWA-COD	0.844**	0.476*	0.368
Conflict in COA: High	AGO-COD	0.844**	0.960***	0.116
Conflict in COA: High	IRQ-IRN-IRN	0.844**	0.952***	0.108
Conflict in COA: High	UGA-COD	0.844**	0.946***	0.102
Conflict in COA: High	CIV-LBR	0.844**	0.929**	0.084
Conflict in COA: Low	MMR-THA	0.457+	0.275	0.182
Conflict in COA: Low	KHM-THA	0.457+	0.572*	0.114
Conflict in COA: Low	ETH-SOM	0.457+	0.380	0.078
Conflict in COA: Low	RWA-COD	0.457+	0.386	0.071
Conflict in COA: Low	SOM-ETH	0.457+	0.387	0.070
Forced Return: Severe	RWA-COD	1.408***	1.656***	0.248
Forced Return: Severe	BDI-TZA	1.408***	1.607***	0.199
Forced Return: Severe	AFG-IRN	1.408***	1.269***	0.139
Forced Return: Severe	SOM-ETH	1.408***	1.488***	0.080
Forced Return: Severe	MOZ-MWI	1.408***	1.483***	0.075
Forced Return: Moderate	AFG-IRN	0.354+	0.235	0.118
Forced Return: Moderate	SOM-ETH	0.354+	0.455*	0.101
Forced Return: Moderate	MMR-THA	0.354+	0.257	0.097
Forced Return: Moderate	ETH-SOM	0.354+	0.447*	0.093
Forced Return: Moderate	RWA-COD	0.354+	0.275	0.079
GDP (COA)	AFG-IRN	-1.223+	-0.360	0.863
GDP (COA)	KHM-THA	-1.223+	-1.862**	0.639
GDP (COA)	UGA-COD	-1.223+	-1.525*	0.302
GDP (COA)	LBR-GIN	-1.223+	-0.994	0.229
GDP (COA)	MMR-BGD	-1.223+	-0.995	0.228
Civil Liberties Restrictions (COO)	BDI-TZA	-0.575***	-0.635***	0.060
Civil Liberties Restrictions (COO)	LBR-GIN	-0.575***	-0.522***	0.053
Civil Liberties Restrictions (COO)	LKA-IND	-0.575***	-0.525***	0.049
Civil Liberties Restrictions (COO)	IRQ-IRN-IRN	-0.575***	-0.528***	0.047
Civil Liberties Restrictions (COO)	AFG-IRN	-0.575***	-0.528**	0.047
Conflict in COO: High	RWA-COD	0.063	-0.198	0.261
Conflict in COO: High	ETH-SOM	0.063	0.240	0.177
Conflict in COO: High	MOZ-MWI	0.063	0.186	0.123
Conflict in COO: High	ETH-ERI-SDN	0.063	-0.026	0.089
Conflict in COO: High	AGO-COD	0.063	-0.022	0.085
Conflict in COO: Low	RWA-COD	0.044	-0.212	0.256
Conflict in COO: Low	ETH-SOM	0.044	0.176	0.131
Conflict in COO: Low	MOZ-MWI	0.044	0.168	0.124
Conflict in COO: Low	AGO-COD	0.044	-0.025	0.069
Conflict in COO: Low	ETH-ERI-SDN	0.044	-0.015	0.059
GDP (COO)	KHM-THA	0.600+	0.320	0.281
GDP (COO)	SOM-ETH	0.600+	0.752*	0.152
GDP (COO)	MMR-BGD	0.600+	0.744*	0.144
GDP (COO)	RWA-COD	0.600+	0.742*	0.141
GDP (COO)	IRQ-IRN-IRN	0.600+	0.720*	0.119

Note: Table reports, for each key variable, the five dyads whose exclusion produces the largest absolute change in the coefficient. Stars indicate significance of each coefficient: + p<0.10, * p<0.05, ** p<0.01, *** p<0.001. Bold rows indicate sign reversals where the new coefficient remains statistically significant at p<0.05.

3 Literature Review

Table 20: List of studies for Figure 2 in the main paper

Journal	Authors	Year	Title	Population
Columbia University Press (book)	Adelman, Howard; Barkan, Elazar	2011	No Return, No Refuge: Rites and Rights in Minority Repatriation	Multiple (minorities)
Working Paper (EBRD)	Adema, Joop; Aksoy, Cevat Giray; Giesing, Yvonne; Poutvaara, Panu	2026	Refugee Return	Ukrainian
IMR	Al Husein, Nawras; Wagner, Natascha	2023	Determinants of Intended Return Migration among Refugees: A Comparison of Syrian Refugees in Germany and Turkey	Syrian
Working Paper (World Bank-UNHCR Joint Data Center)	Alrababah, Ala; Casalis, Marine	2024	Understanding Refugee Return: Key Findings, Gaps, and Future Research	Multiple
BJPS	Alrababah, Ala; Masterson, Daniel; Casalis, Marine; Hangartner, Dominik; Weinstein, Jeremy	2023	The Dynamics of Refugee Return: Syrian Refugees and Their Migration Intentions	Syrian
Peace Economics, Peace Science and Public Policy	Arias, María Alejandra; Ibáñez, Ana María; Querubín, Pablo	2014	The Desire to Return during Civil War: Evidence for Internally Displaced Populations in Colombia	Colombian
International Migration Review	Barnett, Michael	2001	Humanitarianism with a Sovereign Face: UNHCR in the Global Undertow	Multiple
Forced Migration Review	Barnett, Michael	2001	UNHCR and the Ethics of Repatriation	Multiple
Cornell University Press (book)	Barnett, Michael; Finnemore, Martha	2004	Rules for the World: International Organizations in Global Politics	Multiple
J Development Economics	Beaman, Lori; Onder, Harun; Onder, Stefanie	2022	When Do Refugees Return Home? Evidence from Syrian Displacement in Mashreq	Syrian
Working Paper	Beber, Bernd; Roessler, Philip; Scacco, Alexandra	2021	Coping with Partition: Wealth, Security, and Migration in Post-Separation Sudan	South Sudanese
International Migration	Black, Richard; Gent, Saskia	2006	Sustainable Return in Post-conflict Contexts	Multiple
Berghahn Books (edited volume)	Black, Richard; Koser, Khalid	1999	The End of the Refugee Cycle?: Refugee Repatriation and Reconstruction	Multiple
JCR	Bove, Vincenzo; Di Salvatore, Jessica; Elia, Leandro	2025	What it Takes to Return: UN Peacekeeping and the Safe Return of Displaced People	South Sudanese
Cambridge University Press (book)	Bradley, Megan	2013	Refugee Repatriation: Justice, Responsibility and Redress	Multiple
World Development	Camarena, Kara Ross	2022	Repatriation during Conflict: A Signaling Analysis	Multiple
AJPS	Camarena, Kara Ross; Hägerdal, Nils	2020	When Do Displaced Persons Return? Postwar Migration among Christians in Mount Lebanon	Lebanese (Christians)
Refugee Survey Quarterly	Chimni, B. S.	1999	From Resettlement to Involuntary Repatriation: Towards a Critical History of Durable Solutions to Refugee Problems	Multiple

Table 20: List of studies for Figure 2 in the main paper *(continued)*

Journal	Authors	Year	Title	Population
Journal on Migration and Human Security	Crisp, Jeff; Long, Katy	2016	Safe and Voluntary Refugee Repatriation: From Principle to Practice	Multiple
JEMS	Di Saint Pierre, Francesca; Martinovic, Borja; De Vroome, Thomas	2015	Return Wishes of Refugees in the Netherlands: The Role of Integration, Host National Identification and Perceived Discrimination	Multiple (Afghan, Iranian, Iraqi, Somali)
International Migration	Dinçer, Osman Bahadır; Sahin-Mencütek, Zeynep	2025	Refugee Return, Reintegration, and Citizenship Practices in Post-Conflict Syria	Syrian
International Migration	Eastmond, Marita	2006	Transnational Returns and Reconstruction in Post-war Bosnia and Herzegovina	Bosnian
BJPS	Gerver, Mollie	2018	Refugee Repatriation and the Problem of Consent	South Sudanese
Political Studies	Gerver, Mollie; Simon, Miranda; Ghosn, Faten	2025	Refugee Resettlement and Preferences	Syrian
APSR	Ghosn, Faten; Chu, Tiffany S.; Simon, Miranda; Braithwaite, Alex; Frith, Michael; Jandali, Joanna	2021	The Journey Home: Violence, Anchoring, and Refugee Decisions to Return	Syrian
J Refugee Studies	Hardgrove, Abby	2009	Liberian Refugee Families in Ghana: The Implications of Family Demands and Capabilities for Return to Liberia	Liberian
African Studies Review	Harrell-Bond, Barbara E.	1989	Repatriation: Under What Conditions Is It the Most Desirable Solution for Refugees? An Agenda for Research	Multiple
Third World Quarterly [TBC]	Içduygu, Ahmet; Nimer, Maissam	2020	The Politics of Return: Exploring the Future of Syrian Refugees in Jordan, Lebanon and Turkey	Syrian
Journal of Immigrant and Refugee Studies	Kaya, Serdar; Orchard, Phil	2020	Prospects of Return: The Case of Syrian Refugees in Germany	Syrian
Journal of Immigrant and Refugee Studies	Kayaoglu, Ayselin; Şahin-Mencütek, Zeynep; Erdoğan, M. Murat	2021	Return Aspirations of Syrian Refugees in Turkey	Syrian
J Refugee Studies	Klinthäll, Martin	2007	Refugee Return Migration: Return Migration from Sweden to Chile, Iran and Poland 1973-1996	Chilean, Iranian, Polish
J Refugee Studies	Koser, Khalid	1997	Information and Repatriation: The Case of Mozambican Refugees in Malawi	Mozambican
Oxford University Press (book)	Long, Katy	2013	The Point of No Return: Refugees, Rights, and Repatriation	Multiple
UNHCR PDES Working Paper	Long, Katy	2010	Back to Where You Once Belonged: A Historical Review of UNHCR Policy and Practice on Refugee Repatriation	Multiple
J Refugee Studies	MacDonald, Anna; Porter, Holly	2020	The Politics of Return: Understanding Trajectories of Displacement and the Complex Dynamics of 'Return' in Central and East Africa	Multiple (Central/East African)
J Refugee Studies	Nandi, Sarah	2025	"We were together and we had our own family in each other": Refusing Repatriation and Forging Gendered Belonging as Hijra Refugees in Kolkata	Bangladeshi (Hijra)

Table 20: List of studies for Figure 2 in the main paper *(continued)*

Journal	Authors	Year	Title	Population
JEMS	Omata, Naohiko	2013	The Complexity of Refugees' Return Decision-Making in a Protracted Exile: Beyond the Home-Coming Model and Durable Solutions	Liberian
J Refugee Studies	Sahin-Mencütek, Zeynep	2021	Governing Practices and Strategic Narratives for Syrian Refugee Returns	Syrian
International Migration Review	Schwartz, Stephanie	2025	Return-Without-Refoulement [TBC: confirm exact title]	Burundian
J Refugee Studies	Stefanovic, Djordje; Loizides, Neophytos; Parsons, Samantha	2015	Home is Where the Heart Is? Forced Migration and Voluntary Return in Turkey's Kurdish Regions	Kurdish
International Migration	Stefansson, Anders H.	2006	Homes in the Making: Property Restitution, Refugee Return, and Senses of Belonging in a Post-war Bosnian Town	Bosnian
Book chapter (US Committee for Refugees)	Stein, Barry N.; Cuny, Frederick C.	1994	Refugee Repatriation during Conflict: Protection and Post-Return Assistance	Multiple
Conflict Management and Peace Science	Toft, Monica Duffy	2007	The Myth of the Borderless World: Refugees and Repatriation Policy	Multiple
Geopolitics	Um, Khatharya	2023	Refugee Return, Reintegration, and Sustainable Futurity: Politics, Pitfalls and Possibilities of Repatriation in Post/Conflict Situations	Cambodian; Burmese
Journal of Behavioral and Experimental Economics	Vakhitov, Volodymyr; Zaika, Nataliia; Kandul, Serhiy	2025	Return Intentions of Ukrainian Refugees: The Role of National Identity and Pride	Ukrainian
Comparative Migration Studies	Van Houte, Marieke; Siegel, Melissa; Davids, Tine	2016	Deconstructing the Meanings of and Motivations for Return: An Afghan Case Study	Afghan
Working Paper	Weber, Sigrid; Hartman, Alexandra	2022	Property Rights and Post-conflict Recovery: Theory and Evidence from IDP Return Movements in Iraq	Iraqi (Yazidi and Sunni Muslim)
Book chapter (Routledge)	Whitaker, Beth Elise	2003	Changing Priorities in Refugee Protection: The Rwandan Repatriation from Tanzania	Rwandan
J Refugee Studies	Zakirova, Komila; Buzurukov, Bilol	2021	The Road Back Home is Never Long: Refugee Return Migration	Multiple
J Refugee Studies	Zetter, Roger	2021	Refugees and Their Return Home: Unsettling Matters	Multiple
J Refugee Studies	Žíla, Ondřej	2026	'Partial Returns': Displacement, Mobility, and Translocal Connections in Post-war Bosnia and Herzegovina	Bosnian