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The Impact of Refugee Shocks on Host Countries: A Scoping Review*

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Abstract: This article provides a systematic overview of the academic literature on the impact of "refugee shocks" – the sudden arrival of large numbers of refugees – on host countries. A scoping review was conducted using Google Scholar in September 2022 to describe the literature, drawing on 4,576 effects from 123 quantitative studies with no restrictions on countries, year of publication, type of publication, or the reported topics. This broad scope acknowledges that refugee shocks potentially affect many areas of life. A synthesis was carried out by aggregating and using regression models. We find an increase in studies on refugee shocks after 2015 and that the most commonly studied shocks took place in the Middle East and Europe. About two-thirds of the effects concern economic outcomes in the host country, while few cover health or environmental outcomes. Across topics, about half of the analyses indicate no statistically significant effect. Studies generally report normatively positive effects on education and generally negative effects on wages and employment in the host country. Refugee shocks tend to be associated with an increase in votes for the radical right. Future studies should address refugee shocks beyond the Western countries that are studied most closely and focus on understanding the dynamics of how different actors react to the arrival of refugees.

Keywords: Migration · Refugees · Scoping review · Economy · Attitudes

1 Introduction

Outbursts of political oppression, open conflict, war, or environmental disasters often lead to sudden large movements of refugees (*Becker/Ferrara* 2019; *Hein* 1993), which may give the impression that levels of migration are increasing. In mid-2024, the UN refugee agency UNHCR estimated that 122.6 million people worldwide were forcibly

* This article has an Online Appendix with supplementary material: https://www.comparativepopulationstudies.de/index.php/CPoS/article/view/712/446

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displaced (*UNHCR* 2025a). Around two-thirds of all refugees came from just four countries: Syria, Venezuela, Ukraine, and Afghanistan. This involuntary movement of people across borders and within countries can have significant consequences for refugees and host populations, especially when refugees arrive suddenly and in large numbers (*Dustmann et al.* 2019). Comparing the European reactions to Ukrainian refugees in 2022 and Syrian refugees in 2015 (e.g., *Ly/Boyd* 2025), however, suggests that depending on the situation, public and institutional support can vary even though the consequences for the host country remain unknown at the moment when refugees arrive.

The effect of migration on economies and societies are widely studied for voluntary migration by labor migrants (e.g., *Becker/Ferrara* 2019; *Caiumi/Peri*, 2024; *Peri* 2016). However, we cannot simply extrapolate from labor migrants to the effect of refugees on host countries. Forced migration means that refugees are driven away from their countries and do not primarily choose where they go based on economic considerations (*Collier* 2013). The situation from which they depart means that refugees do not necessarily have the skills or experience to meet economic demand in host countries (*Borjas* 2019; *Brücker et al.* 2018; *Dustmann et al.* 2017).

From the perspective of the host countries, there is another essential difference in that refugees tend to arrive unexpectedly, not necessarily in sync with economic cycles and demand for labor, and they may come in comparatively large numbers. This is why the literature refers to "refugee (supply) shocks" (*Borjas/Monras* 2017). To what extent the effects on host countries vary between refugees and labor migrants remains an empirical question to which this review hopes to contribute by synthesizing what is known about the effects of refugee shocks on host societies more broadly. Throughout the article, we refer to "refugees" and do not differentiate between asylum seekers and refugees because such a distinction can be superficial and blurry (*Hamlin* 2021)[1] and indeed does not apply to all contexts. For example, Turkey only introduced its first asylum law in 2013 (*UNHCR* 2025b).

A refugee shock is defined by its unexpected occurrence and the large number of refugees arriving in a region, which has the potential to change the local economy, its infrastructure, and social services.[2] A refugee shock can affect the host country in many domains, be it the economy and the labor market, housing, politics, schools, healthcare, or the environment. The effects can be beneficial or detrimental to the residents of the host country, depending on the context and on how policymakers and the rest of the population react to the shock. Given adequate institutional

[1] Legally, a distinction is made between a person who has applied for protection but whose decision is pending ("asylum seeker") and a person who has been granted refugee status ("refugee"). Some jurisdictions limit their definition to the 1951 Convention Relating to the Status of Refugees (commonly known as the Geneva Convention). Asylum seekers may be rejected but still be provided subsidiary protection. Beyond legal circles (e.g., in the media, policymaking, sociological scholarship, etc.), the two terms tend to be conflated and used inconsistently, with a tendency to use "refugees" as the umbrella term.

[2] We could not identify a more precise definition, noting that "unexpected" and "large numbers" are open to interpretation.

capacity, countries can learn from prior shocks. However, the responses to the so-called refugee crisis of 2015 and the reactions to Ukrainian refugees in 2022 arguably showed that European countries were ill-prepared for the sudden arrival of large numbers of refugees in both instances (*Carrera et al.* 2015; *Maurer et al.* 2023). Without proper management, perceptions of negative consequences and threats could predominate among the population, opening opportunities for right-wing populism that can undermine social cohesion and democratic governance and weaken economic development (*Fortunato/Pecoraro* 2022; *Funke et al.* 2023; *Spittler* 2018).

Historically, work on the effect of refugee shocks focused on the labor market, where an exogenous supply shock provides a strong case for testing relevant theories (*Peri* 2016). The literature, however, has expanded its focus, and individual studies have analyzed the effect of refugee shocks in many dimensions (*Becker/Ferrara* 2019; *Peri* 2016). Reflecting the many ways in which refugee shocks can affect host countries, these studies span disciplines across the social sciences, making an overview difficult because different (sub-)disciplines tend to focus on different outcomes. Here we provide a scoping review – a systematic snapshot of the expanding literature on refugee shocks – to characterize what is known about refugee shocks and how they are studied in quantitative research. As a review of the literature, our approach is somewhat similar to *Verme* and *Schuettler* (2021), who reviewed 49 papers and collected 762 empirical results restricted to economic outcomes (wages, employment, prices) and household well-being. Here, we take a much broader view and include a wider range of domains with the aim of understanding which factors the literature focuses on. This allows us to identify where research has concentrated and where gaps remain, reflecting both the diversification of recent studies and public concerns about potential negative effects beyond unemployment (*Özkan et al.* 2025).

Verme and *Schuettler* (2021) recently reviewed the effects of refugee shocks on the economy, showing that most estimated effects on native employment and wages are small and often indistinguishable from zero. When substantively meaningful effects can be observed, they tend to be negative for natives' wages and employment – consistent with neoclassical theory (*Borjas/Monras* 2017; *Verme/Schuettler* 2021). These effects are concentrated among young and informal workers who do not benefit from labor-market complementarity (*Caiumi/Peri* 2024). *Verme* and *Schuettler* (2021) also document short-run increases in food and rent prices, declines for labor-intensive products and services, and inconclusive evidence on household well-being.

Drawing on a comprehensive scoping review and systematic coding of existing quantitative studies on the effect of refugee shocks on host countries (see *Munn et al.* 2018 on scoping reviews), we characterize the existing literature, identify the focus and broad directions of findings in existing work, and highlight questions that have to date largely been ignored. Geographically, we find that most studies focus on the Middle East and Europe. Even though the scope has increased, economic outcomes still dominate the literature. Work on the political and social effects of refugee shocks is growing, whereas analyses of health and environmental

outcomes remain rare. Around half the studies report no statistically detectable effect of refugee shocks on the host country and its population. Overall, the effects of refugee shocks are heterogeneous, and we suggest that future work should focus on understanding the dynamics of how different actors react to the arrival of refugees to better understand how host countries can increase their resilience to refugee shocks.

2 Data and methods

A scoping review examines the size and nature of existing research using a predetermined sampling strategy (*Grant/Booth* 2009). The focus lies on characterizing the literature and what is known, rather than complete coverage of all studies, as is done in systematic reviews and meta-analyses (*Munn et al.* 2018; *Petticrew/Roberts* 2006). We followed guidelines originating in the medical sciences that are now widespread across disciplines to ensure transparent reporting, notably the PRISMA statement (*Tricco et al.* 2018). The PICO protocol is used to clearly state the search strategy and inclusion criteria (*Scientific Research Division* 2022; population, intervention, control, outcome). Following this terminology, we included all countries (population), all effects attributed to the sudden arrival of large numbers of refugees (intervention, no control), and all reported topics (outcome). We chose this broad approach because it allows us to identify possible gaps in the literature, in the sense of topics and approaches that are absent or underrepresented in existing work. No restrictions were applied regarding geography, the year of publication, or the year of the shock. Methodologically, we focused on quantitative studies because this facilitates summarizing and aggregating results systematically while also reducing the risk of bias to a limited extent (*Guyatt et al.* 2008; *Lewin et al.* 2018). Given the similarity of methodological approaches and the reliance on an exogenous event, we refrained from individually assessing the risk of bias of each included study. Relevant risks of bias would be selection biases, publication biases, non-representative samples, or unclear causal identification strategies. The use of register data or large population surveys means that most studies would fall in the same category if we used an established approach such as the GRADE criteria (*Guyatt et al.* 2008).

The search was conducted using Google Scholar in September 2022, which was chosen for its broad coverage and inclusion of so-called "gray literature" (e.g., research reports not published in academic journals, such as working papers). Even though Google Scholar includes more "gray" literature than other databases, it typically fails to discover papers on personal websites and not all work is publicly available as download. We designed a protocol for the eligibility, identification, and screening of studies.[3] According to the protocol, we searched for relevant studies

[3] Drafted before data collection, the protocol was not formally pre-registered (eligibility criteria, search strings). The coding scheme that is part of the protocol was adapted during the project as new domains emerged. The final protocol is archived alongside the replication materials: https://osf.io/ytu82.

Tab. 1: Keywords used in the search

Search strings
refugee supply shocks
sudden refugee crisis
asylum seeker inflows
refugee inflows impact host country
refugee shock impact
impact of refugee inflows
sudden arrival of refugees
refugee shock
sudden refugee inflows
sudden refugee waves
unexpected refugee crisis
unprecedented refugee crisis

Source: own design

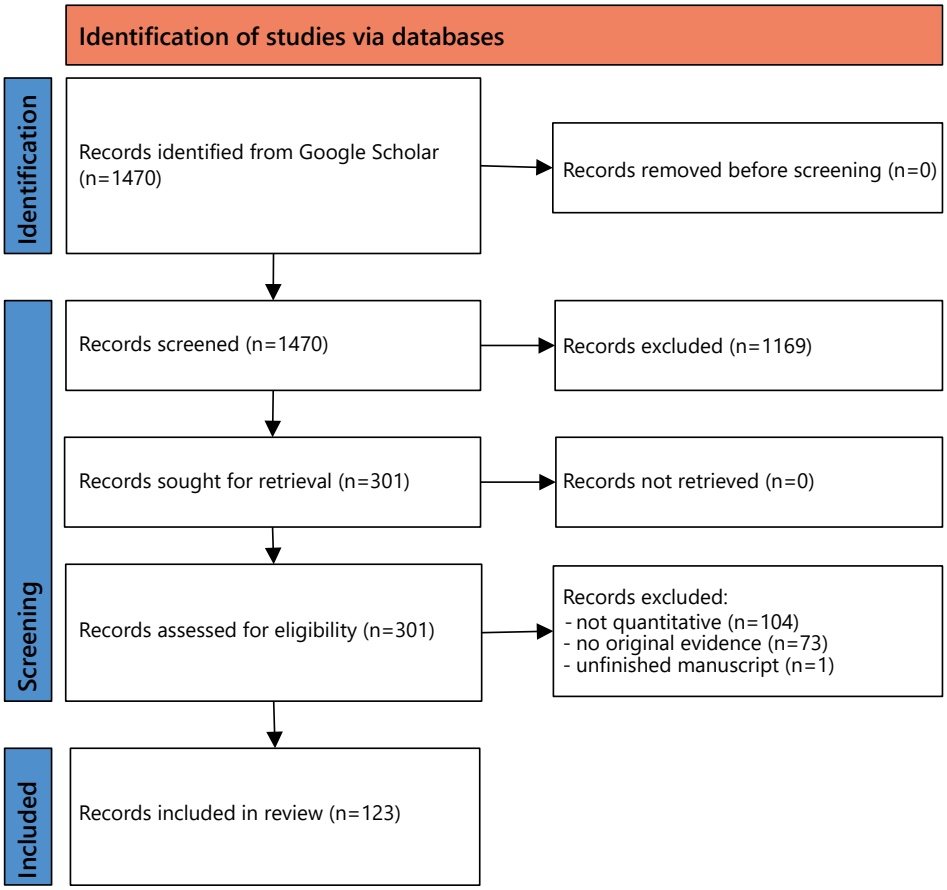
for each keyword until we had two full pages of results on Google Scholar with no relevant papers. Given that results are ranked by "relevance," this approach mimics considerations of diminishing returns used by machine-learning-assisted approaches such as ASReview (*van de Schoot et al.* 2021). The search terms included in the protocol are shown in Table 1. All search terms were entered without quotation marks.[4]

Some search terms, such as "refugee supply shocks" or "refugee inflows impact host country," yielded many relevant studies (i.e., few false positives among the first results), while others, such as "sudden arrival of refugees" or "refugee shock," produced very few relevant studies (i.e., many false positives).

As shown in Figure 1, we screened 1,470 results in Google Scholar, of which 301 entries seemed relevant based on the title and the two preview lines provided. Duplicates were removed. In a second step, we screened for ineligible studies using the abstract and full text. At this, stage we removed 104 non-quantitative studies, including purely qualitative studies and studies that simply claimed an effect without providing empirical evidence. During coding, we identified a further 73 studies that did not provide original evidence and one unfinished manuscript where we could not assess the evidence, leaving 123 relevant studies containing 4,576 individual effects.

[4] As a robustness check for whether the focus on English-language publications leads to problematic omissions, we also used French search strings, another language widely used in the scientific community. The strings are: *impact vagues de réfugiés, afflux de réfugiés impact, afflux de réfugiés impacts pour populations d'accueil, impact crise migratoire pour les pays d'accueil, choque de réfugiés impact*. These additional searches mostly resulted in duplicates, suggesting that for the present topic, a focus on English-language studies does not mischaracterize the academic literature.

Fig. 1: PRISMA flow chart of identification, screening, eligibility, and inclusion for the scoping review



Notes: 4,576 effects across 123 studies, covering both academic publications and gray literature (108 journal articles and preprints, 7 reports, 8 theses). The PRISMA framework is a reporting standard for evidence reviews that requires documenting each stage to clarify the scope of the evidence base and reduce selection bias.

Source: own design

Using color codes in Zotero (*Digital Scholarship* 2025), we identified the relevant information in the studies and coded it in a spreadsheet for further analysis. The predefined codebook variables and coding rules are listed in Table 2.[5]

[5] The codebook also included variables that we later discarded because they turned out to be difficult to code, or where coding was unreliable, see Online Appendix 2 for reliability assessments. The variable on subgroups was not used in the analysis because it proved difficult to code/aggregate into broader categories, and we could not convince ourselves that we could provide a reliable indicator.

Tab. 2: Variables in the review and codebook

Variable	Description	Notes
Year of shock	Calendar year of the refugee shock	
Host country and region	Country and world region receiving refugees	World regions according to *Inglehart* and *Norris* (2003)
Country and region of origin	Country and world region from which refugees arrived	World regions according to *Inglehart* and *Norris* (2003)
Topic of study (outcome)	Main focus of study, inductively aggregated into economic, environmental, health, political, social, and explicitly multi-topic studies	Specific examples as an illustration: - Economic: GDP growth, unemployment rates of local workers, sales, profits - Environmental: land use, work in agriculture - Health: mortality rates, hospital admission, stated well-being, height of children - Political: voter turnout, vote shares for different political parties attitudes towards immigration, stated attachment to the country - Social: crime rates, intermarriage, participation in social activities
Period covered by the data	Long-term > 5 years; short-term ≤ 5 years	Notions of "short-term" and "long-term" are invariably vague; in the absence of better reasons, this coding decision was made to correspond to typical business cycles
Type of data	Administrative data (inclusive register data), sample data, or both	
Subgroups (if any)	Effects on part of the population (e.g., women)	Not used in the analysis (unreliable aggregation, see Online Appendix 1)
Effect on host country	A measurable effect is reported (yes, no)	
Direction of effect (statistical)	Positive, negative, neutral (no clear difference from zero could be determined)	
Direction of effect (societal evaluation)	Normative coding: beneficial vs. harmful for society or workers	E.g., greater turnout = positive; lower wages = negative

Source: own design

The protocol initially focused on objective effects, but at a later stage, we also coded the direction of effects from a broader societal perspective. For illustration, higher voter turnout is coded as normatively positive, whereas greater support for radical-right parties is coded as negative.

For the purposes of the analysis, countries were grouped into regions. Specifically, the 26 host countries in the data were grouped into eight different world regions (see *Inglehart/Norris* 2003). A few studies pooled information on several host countries. In one study, the countries were geographically dispersed, and it was impossible to group them into a single region. The same regional categories were used to classify the refugees' country of origin. The topics of the studies were grouped into five different categories, one of which was generic, which includes assessments of multiple topics at the same time. The raw data and replication material for this review is available on OSF.

In terms of analysis, as is common for this kind of review, we largely rely on descriptive statistics to aggregate findings, which we carried out in R (*R Core Team* 2025). Where linear regression models are used, we used the default priors in the R package rstanarm (these are weakly informative to moderately regularize and stabilize computation), with effects clustered in studies (*Goodrich et al.* 2020). When exploring contextual effects, we used GDP per capita at constant 2015 US dollars and captured cultural distance with a simple approach based on the Inglehart-Welzel World Cultural Map 2023 (*Inglehart/Welzel* 2001; *WVS* 2023).[6]

3 Results: Research on the impact of refugee shocks

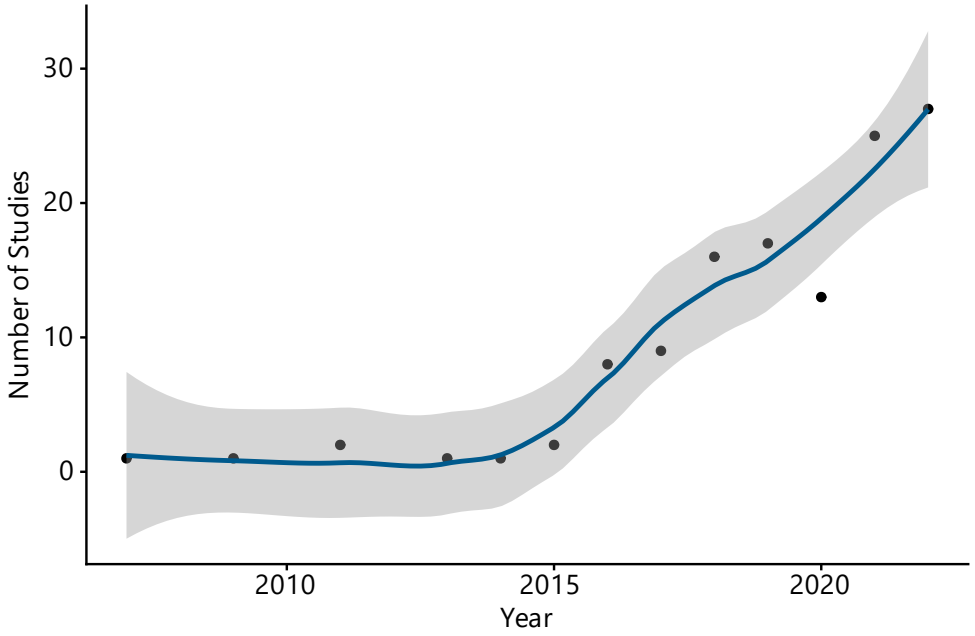
When examining the effect of refugee shocks, a little more than half of the studies use exclusively administrative data, around a third combine administrative and sample data, and around one in five rely entirely on sample data (Online Appendix 2). The reliance on administrative data may limit the analysis because the number and kind of variables included in register data are limited compared to dedicated surveys. Even though we can consider refugee shocks as natural experiments, and it could be argued that a simple comparison of means would be permissible (see *Dunning* 2011; *McBee* 2022), almost all the analyses use regression models of some kind.

Time and space

The number of studies on refugee shocks has increased since 2015. In Figure 2, we can see a noticeable increase in the number of publications, which include gray literature such as working papers and research reports. *Verme* and *Schuettler* (2021) reported a similar increase in publications in a narrower review focusing on economic outcomes.

[6] A refugee shock was coded as "distant" when, on that map, the refugees were from a different region than the host country and "close" if they were from the same region. The regions were determined by Inglehart and Welzel based on traditional versus secular values on the one hand, and survival versus self-expression values on the other hand. These dimensions provide a two-dimensional space.

Fig. 2: Number of studies in the scoping review by year of publication



Notes: The trend line is LOESS-smoothed (local polynomial regression with the default span of 2/3).

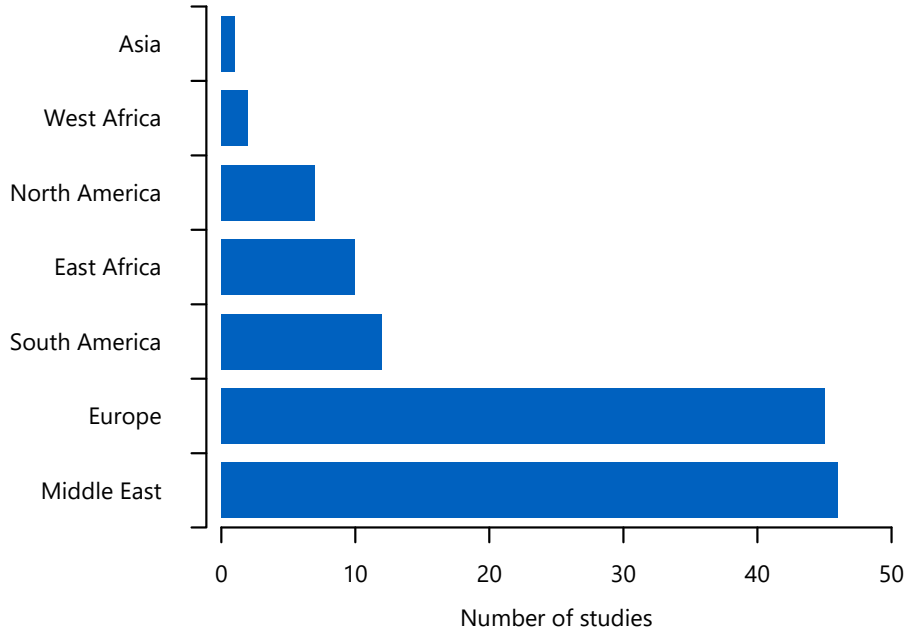
Source: own calculation

Across the studies, the most commonly studied world regions are the Middle East and Europe (Fig. 3). At the other end of the scale, our sample includes just one study set in Asia and two in West Africa. While these data do not differentiate the presence of refugee shocks from their being studied, we note that high- and middle-income countries are much better studied than low-income countries are, even though many refugees move to low-income countries (*UNHCR* 2022).

Within these world regions, some host countries are studied more than others (see Online Appendix 3 for specific countries). The largest number of studies covers Turkey, followed (at a distance) by Germany, Jordan, and Colombia. While refugee shocks do not occur in all countries, there is probably room for analyses of other host countries, although data availability may be a restricting factor. Six studies cover multiple countries.

The specific shock determines the country or region of origin of the refugees included in a study. In Online Appendix 4, we show that refugees from the Middle East are most commonly studied. Also notable is the category "multiple countries," which typically refers to refugees from different regions who are considered jointly. It is beyond the scope of this review to assess to what extent each of these cases constitutes a veritable external shock, although we note that the nature of shocks is generally not well-defined (i.e., what constitutes "many" refugees and a "sudden" arrival).

Fig. 3: Number of studies by world region of the host country

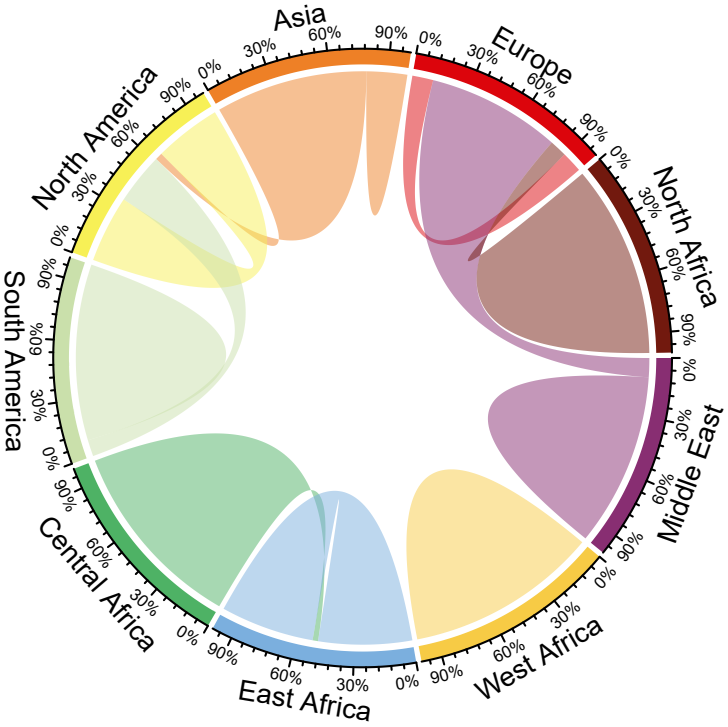


Notes: One study was counted multiple times because it contained multiple analyses of host countries in different world regions, resulting in 3 distinct entries.
Source: own calculation

In Figure 4, we examine the extent to which the studied refugee shocks capture intra-regional migration, that is, refugees coming from the same world region as the host country. Studies that group refugees from "multiple countries" are excluded. We can see that most of the studied refugee shocks concern intra-regional migration. In the figure, this is visible by connections that originate and end in the same region (compare *Abel/Sander* 2014; *UNHCR* 2022). This pattern of shocks due to intra-regional migration seems to characterize all but two regions. One of the exceptions is Europe, where studies largely examine refugees from the Middle East and, to a lesser degree, refugees from North Africa. This may change in the near future as the recent arrival of Ukrainian refugees is examined (see *Ruedin* 2025). The other exception is North America as a host region, where studies examine refugees from South America and Asia. Refugees from Central Africa play only a small role in the shocks studied in East Africa as a host region.

Another important aspect of studies on refugee shocks is when the shock took place, and the post-shock period that is examined. As we can see in Figure 5, there are many more studies on recent refugee shocks, indicated by lines at the right edge of the rug plot at the bottom of the figure. The figure also shows the post-shock period during or after which the effect is measured. In Online Appendix 5, we used a categorization into short-term effects (effects measured under six years after the shock) or long-term effects (measured six or more years after the shock).

Fig. 4: Regions of origin and destination of refugees in the selected studies



Notes: Regions are displayed around the circle as equal-sized sectors with distinct colors. Sectors are connected with arcs if there is a migration flow. The color of the arc is that of the region of origin. The size of the arc is proportional to number of studies. For instance, we can see that for the refugees covered in the studies who originate in the Middle East (purple sector), most remain in the region. The smaller share of refugees from the Middle East who migrate to Europe (purple arc connecting the two world regions) constitutes a large part of the shocks in Europe, as is visible in the large size of the purple arc when looking at the red sector (Europe).

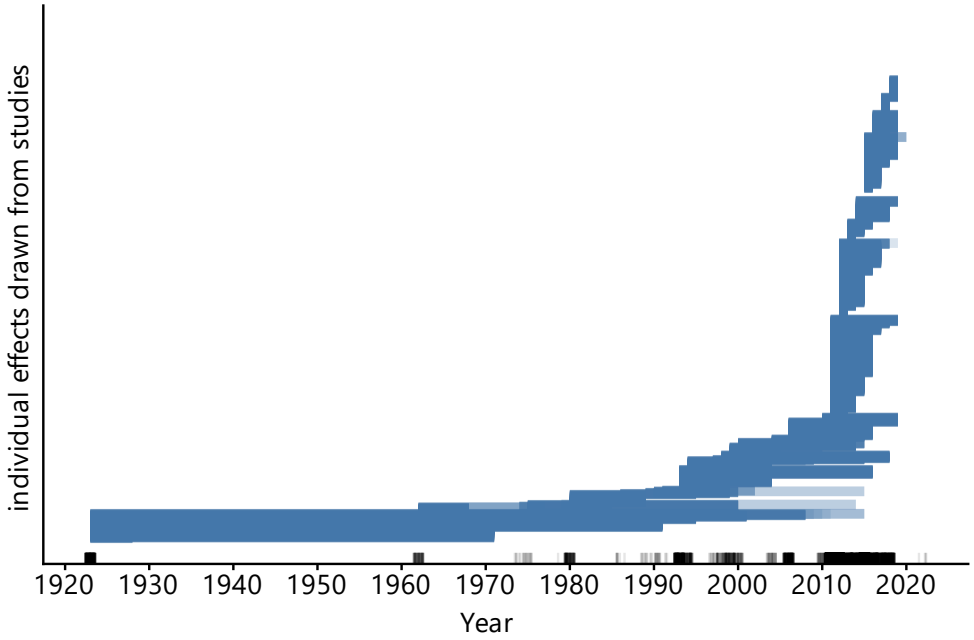
Source: own calculation

A great majority of individual effects are short-term according to this classification. In Figure 5, each horizontal line is an individual effect, with the lines are overlapping vertically to focus on the general trend. The longer the line representing an individual effect, the longer the studied post-shock period.

Topics and outcomes studied

Studies on the effect of refugee shocks on host countries cover different topics. Here, we classify the topics into five broad categories, plus a category that accounts for studies with outcomes pertaining to multiple topics (Table 3). About half the studies cover the effect of refugee shocks in economic terms. By contrast, there are hardly any studies that cover effects on health or the environment. Social and political topics are covered to roughly the same degree, about 20 times. While many

Fig. 5: Post-shock period



Notes: The y-axis shows the post-shock time period under study in each individual effects drawn from the included studies of refugee shocks. Excluded are individual effects for which we do not have information on the exact year of the shock, individual effects that account for multiple shocks spread across time, and studies for which short-term and long-term effects are included in the same model.

Source: own calculation

Tab. 3: Topic of the studies (outcomes)

	Number of studies
Economic	67
Political	21
Social	19
Multi-topic	9
Health	6
Environmental	1

Notes: The "multi-topic" category accounts for studies that include outcomes from multiple categories.

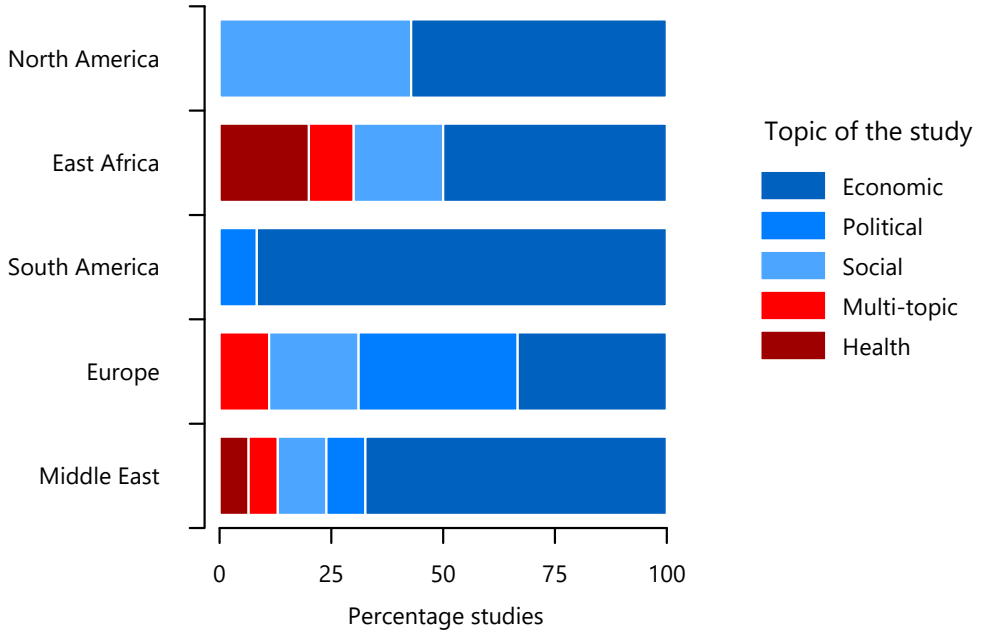
Source: own calculation

studies include multiple outcomes within a particular topic (e.g., unemployment, inflation, and wages), few studies take a comprehensive perspective and include outcomes across the different broad categories that we coded. A focus on specific outcomes strengthens the analysis in individual papers, but implies a single study will not provide a comprehensive picture of the range of effects refugee shocks can have.

Looking at the topics by region of the host country, we can see that depending on the region, the distribution of topics varies (see Fig. 6). While economic aspects are generally dominant (in dark blue), we see clear variation across regions for the other topics. For example, in Europe and the Middle East, there is more diversity in the topics studied compared to the Americas. Political topics are mostly studied in Europe (blue), whereas social topics are more common in North America (light blue). Given the broad categories we use for regions and topics, we do not see a clear reason for these differences beyond data availability and researcher interest.

When looking at outcomes at the level of individual effects, we can differentiate more detailed areas of interest than at the study level (Fig. 7). The figure shows the nine most common areas of interest among a total of twelve categories that we coded (Online Appendix 7; not shown in the figure are the categories with fewer

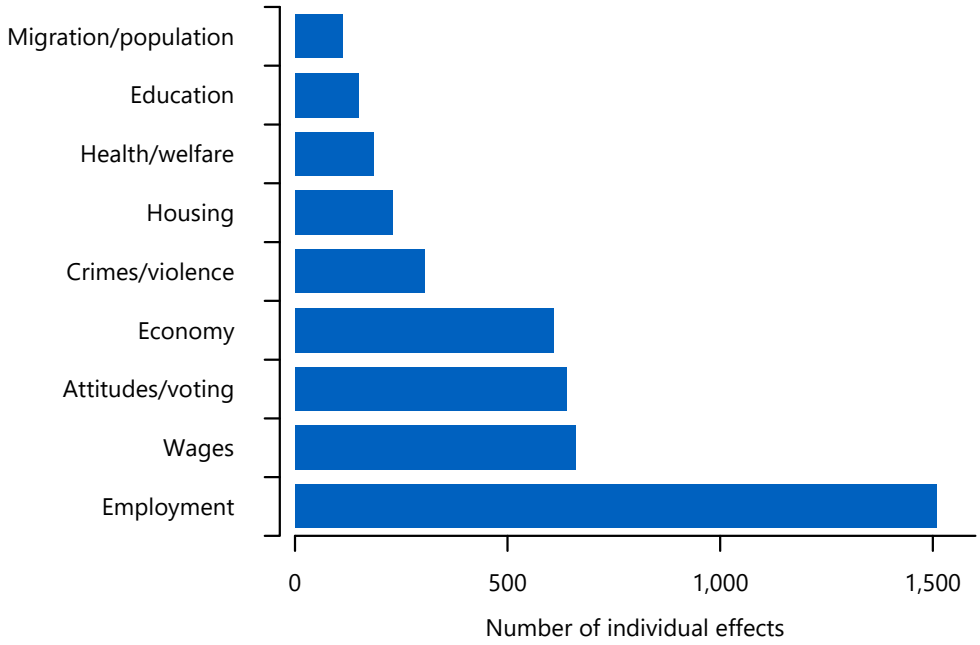
Fig. 6: Topic of studies by world region (N≥7 studies per region)



Notes: Excluded are studies that deal with multiple receiving regions or account for refugees from different world regions. Studies are counted more than once if they address several pairs of host country and region of origin in separate analyses. For better visibility, we excluded the few studies with host countries in Asia and West Africa. See Online Appendix 6 for a full table.

Source: own calculation

Fig. 7: Topic of the effects (outcomes studied)



Notes: See Online Appendix 7 for a table including further categories with fewer than 100 effects.

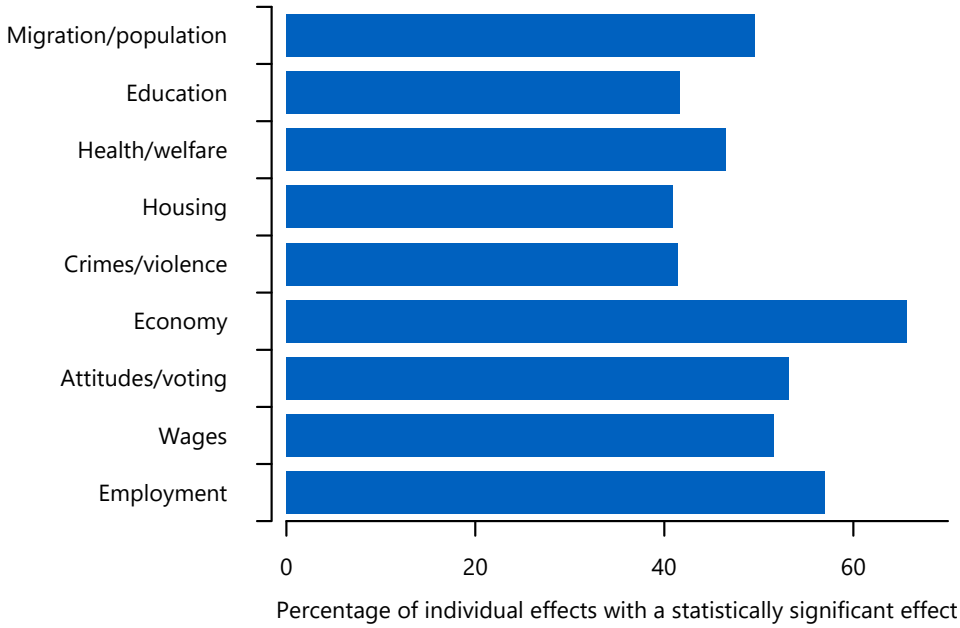
Source: own calculation

than 100 effects: finances (e.g., personal wealth, disposable income), environment (e.g., land use, crop production), and social and political outcomes (e.g., activism, intermarriage). In line with the results at the study level, economic aspects are studied most frequently, notably (un-)employment, wages, and the economy more broadly (e.g., inflation, GDP, rental prices). We suspect that this order of effects studied reflects data availability rather than theoretical considerations. Beyond economic outcomes, we observe studies on attitudes and voting most commonly. Studies that include health are much less common, by comparison.

Effect of refugee shocks

In this final section, we examine whether the studies found a statistically significant association between the refugee shock and outcomes in the host country for various topics, followed by an assessment of the direction of the effects (positive/negative). All studies draw on the exogenous nature of the refugee shocks as a source for causal claims, but we did not assess to what extent causality is credible given the exact design of the studies. Overall, a little more than half the analyses showed a statistically significant effect (Online Appendix 8). Figure 8 shows the distribution across topics: the economy is the topic for which analyses most often find a statistically significant effect, followed by employment and attitudes/voting.

Fig. 8: Statistically significant effects by topic



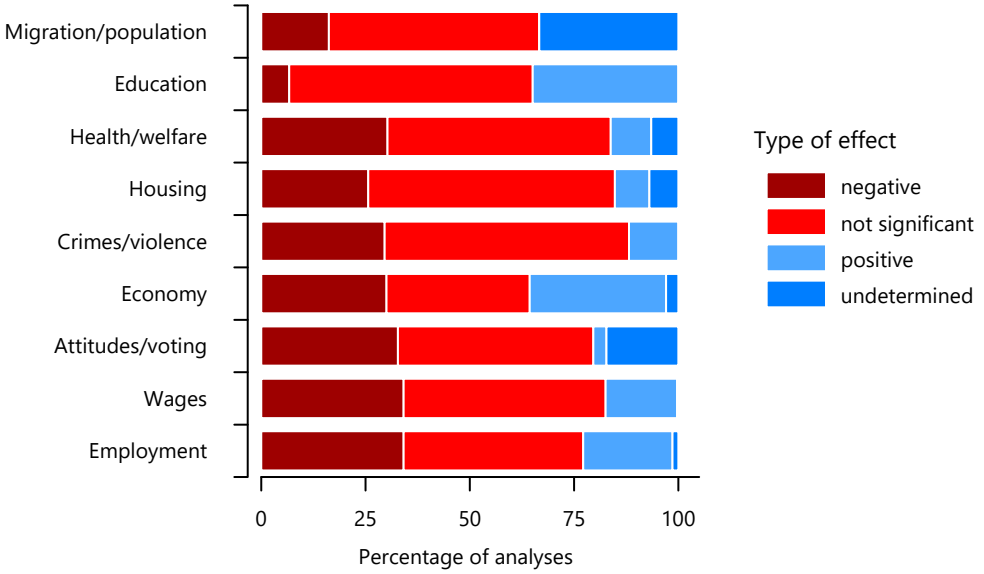
Notes: For better visibility, topics with fewer than 100 effects are excluded in this figure.
Source: own calculation

Education is the topic for which analyses least often identify a statistically significant effect.[7]

Looking at the direction of effects, we cannot always determine whether the effect was normatively positive or negative for society at large or local workers. For instance, if non-extreme parties gained votes as a result of a refugee shock, we consider the normative consequences of the effect "undetermined." Figure 9 emphasizes that the kind of effect varies by outcome and that the absence of a substantial effect is widespread (i.e., the association is not significantly different from zero). Depending on the topic, the category "undetermined" is important. Notably, for the category of migration/population (e.g., population growth, birth rates) and for attitudes/voting (e.g., electoral success for certain non-extremist parties), we could not normatively assess the effect for society or workers. Looking at the figure, we note that the largest share of positive effects is for the economy in general (e.g., GDP growth), and education (e.g., increased literacy rates). The largest share of negative effects is for employment, wages, attitudes/voting, the economy in general (which makes this category the most polarized), and health/welfare.

[7] Online Appendix 9 shows that analyses of long-term effects tend to be more likely to find a statistically significant effect than analyses focusing on short-term effects, which is likely a reflection of the topics and shocks measured. In our view, the correct interpretation is simply that both short-term and long-term effects can be measured.

Fig. 9: Normative consequences of the effects



Notes: Excluded for better visibility are topics with fewer than 100 effects. Effects that cannot clearly be classified as normatively positive or negative overall were classified as "undetermined." "Not significant" refers to statistical significance.

Source: own calculation

Finally, we explored the role of economic and cultural contexts in shaping the effects of refugee shocks. We followed *Verme* and *Schuettler* (2021) in looking at the economic situation of the host country, considering GDP per capita following two intuitions. On the one hand, GDP per capita in a continuous way explores the assumption that richer countries will be better able to take action in reaction to refugee shocks. Online Appendix 10 finds no substantial differences for GDP per capita when measured in a continuous sense. On the other hand, considering levels of GDP per capita in a categorical way explores the argument by *Verme* and *Schuettler* (2021) that low levels of GDP per capita should also be associated with an ability to cope with refugee shocks because of international aid. Online Appendix 10 finds no substantially notable differences, with consistently large standard errors, to the extent that positive, negative, and null effects all seem equally plausible. An exception to this is that we can find more negative effects in high-income countries. We also examined the cultural distance between the refugees' country of origin and the host country. Here, Online Appendix 10 finds no clear association. We expected more negative results for attitudes and voting, but if anything, there is a tendency for *fewer* negative reactions when refugees are more distant. In sum, at the aggregate

level, we find no clear differences in the effect of refugee shocks on host countries depending on the context.[8]

4 Discussion and conclusion

This scoping review provides a description of the quantitative literature on the impact of refugee shocks on host countries, defined as the sudden arrival of large numbers of refugees. By including outcomes from different domains, we characterize the literature beyond purely economic outcomes (cf. *Verme/Schuettler* 2021). At its most basic level, the review identified a large increase in studies on the effects of refugee shocks after 2015. Most of the host countries studied in the reviewed literature are located in Europe and the Middle East, including South-South migration to some extent (*UNHCR* 2025a), but coverage is far from equal across world regions. In most of the shocks studied, the refugees come from the same global region as the host country, and most analysis is carried out within half a decade of the shock, capturing relatively short-term effects. If there is one headline finding from this review, it is that there is no homogeneous effect of refugee shocks on host countries, and that there is important variance in all aspects considered.

In the studies covered, economic outcomes were most common, followed by political and social ones. Health and the environment are much less commonly examined. The choice of outcome studied varies by world region, which may reflect the availability of data or different interests across research groups that are not obvious from the outside. For a more profound understanding of social phenomena, it is important to include different perspectives (*Piccoli et al.* 2023; *Smith* 2021; *Vanyoro* 2024), and future research should probably consider qualitative studies on the effects of refugee shocks for a deeper understanding of the processes leading to these outcomes. The combination of different kinds of evidence promises a better basis for identifying factors that can increase resilience to future refugee shocks. Another important question is whether and where there is any indication of institutional learning and adaptation, whereby the experience of previous exposure to refugee shocks increases (or decreases) the ability (and willingness) to handle the arrival of large numbers of refugees in a short time *(Maurer et al.* 2023). Here, targeted studies tracing individual countries are needed, because institutional settings, legal provisions, and capacity vary beyond what a scoping analysis can consider.

We find that many effects of refugee shocks on host countries are not statistically significant across both domains and regions (see also *Verme/Schuettler* 2021, who established this for wages and employment). Looking at the different domains, we can observe that statistically significant effects are more likely normatively negative

[8] Future work may examine other indicators of the business cycle, such as the unemployment rate, GDP *growth*, or inflation rates via the Consumer Price Index. This lies beyond the scope of this article, which is focused on characterizing the literature.

than positive. On the one hand, in this review, it is more common to find a negative effect in terms of employment, wages, or attitudes/voting behavior. On the other hand, when it comes to the economy overall – i.e., questions of economic growth – positive and negative effects seem balanced, and in the case of education, positive effects seem to dominate.

While the finding that the effects of refugee shocks on host countries are not homogeneous may be unsurprising, the effect does not simply appear to be a function of host country wealth or cultural distance. More work on the context in which refugees arrive and on refugee characteristics is needed (see *Berinsky et al.* 2023), but this should be done with research designs for this purpose rather than based on a scoping review that seeks to characterize the state of the literature (*Munn et al.* 2018). In such an analysis, the focus should be narrower than what a scoping review provides. Based on the present review, specific outcomes that seem promising are unemployment, wages, and support for radical-right parties (compare *Pecoraro et al.* 2025). Comparability across studies may pose a major challenge for other topics, notably for social and political outcomes. Moreover, the number of published studies may be too low at this stage to draw entirely on existing quantitative work. A disciplined approach that includes qualitative studies could overcome the limited number of studies to some extent (*Fairfield/Charman* 2022). We also identified a need for studies that cover multiple topics at the same time, which will help us understand the effects of refugee shocks more generally. To the extent that it is feasible, comparative analyses may identify which countries or contexts are particularly resilient to refugee shocks, building on the theoretical sketch by *Verme* and *Schuettler* (2021) or work by *Borjas* and *Monras* (2017).

Understanding the effect of refugee shocks is useful for predicting the likely effect of future refugee movements on host countries, caused by ongoing conflicts, climate change, or other drivers of displacement that continue to shape our world. The context of shocks is a particularly informative lens because the sudden and largely exogenous nature of inflows creates clean time (pre/post) and place (exposed vs. non-exposed) contrasts and minimizes interference from gradual integration, assimilation, or selection processes, thereby separating effects linked to the arrival itself from those that develop later (*Gorodzeisky* 2022; *van Heerden/Ruedin* 2019; *Laurence et al.* 2022).

To do so, however, and to meaningfully use the concept of a "shock" for understanding such effects, the concept itself needs unpacking, notably the aspects of "sudden" and "large" inflows, and how we define and implement them empirically. Furthermore, the contexts surrounding specific refugee groups should be given individual attention, rather than studying "all" refugees in a given country. We also need a more precise understanding of shock dynamics from the perspective of in-country variation. Refugee shocks are often concentrated in certain regions or cities and not evenly distributed across all areas (compare *Beerli et al.* 2020). Understanding dynamics also means tracing effects over time (*Turek et al.* 2021), and considering how political actors play a role in framing some events as crises and mobilizing media coverage (*Bolet/Foos* 2024; *Carvalho et al.* 2025; *Kelling/Monroe* 2023). This in

turn affects policy, perceptions, and individual behavior, including areas outside the Western countries that are studied most closely (*Smith* 2021).

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