The security implications of transnational population movements: A meta-analysis

Tobias Böhmelt [iD] [†,*] and Marius Mehrl [iD] [‡]

[†]Department of Government, University of Essex, Colchester CO43SQ, UK and [‡]Ludwig-Maximilians-University Munich, Geschwister-Scholl Institute of Political Science, Munich 80538, Germany

*Corresponding author. Email: tbohmelt@essex.ac.uk

Abstract

Are migrants and refugees systematically linked to insecurity? This article, for the first time, takes stock of the interdisciplinary quantitative research on this question using meta-analysis. We compiled a unique dataset comprising more than 70 published studies across a variety of spatial and temporal scales covering 1951–2016. We show that an overall effect linking foreign-born populations to insecurity may exist, but there is little evidence for refugees or migrants consistently leading to more insecurity when assuming a disaggregated perspective. Specifically, foreign-born populations are unlikely to be systematically related to terrorism and hate crimes, while they can be associated with a higher risk of state-based disputes, inter-group conflict, and one-sided violence. This study adds to our understanding of the security implications of refugees and migrants as it sheds more light on the actual effect transnational population movements have on insecurity, thereby informing the research agenda in the years to come.

Keywords: migration; transnational population movements; meta-analysis; refugees; security

1. Introduction

Are migrants and refugees systematically linked to insecurity? This article, for the first time, takes stock of the interdisciplinary quantitative research on this question using meta-analysis. We compiled a unique data set comprising more than 70 published studies across a variety of spatial and temporal scales covering 1951–2016. We show that an overall effect linking foreign-born populations to insecurity may exist, but there is little evidence for refugees or migrants consistently leading to more insecurity when assuming a disaggregated perspective. Specifically, foreign-born populations are unlikely to be systematically related to terrorism and hate crimes, while they can be associated with a higher risk of state-based disputes, inter-group conflict, and one-sided violence. This study adds

to our understanding of the security implications of refugees and migrants as it sheds more light on the actual effect transnational population movements have on insecurity, thereby informing the research agenda in the years to come.

According to the United Nations (2019), the total population of international migrants has risen to more than 272 million by the year 2019. Likewise, the UNHCR (United Nations High Commissioner for Refugees 2019) suggests that there were 29.4 million international refugees and asylum-seekers worldwide in 2019, forced to flee their homes from conflicts and to settle in other states. The scale of international migration and refugees makes transnational population movements a global phenomenon. Indeed, it has become one of the most pressing policy issues of our time, not only since the 2015 European refugee and migration crisis, sparking a heated debate among practitioners, policymakers, and public institutions. Leaving a country to live in another state abroad, voluntarily or forced, is determined by multiple forces (Cornelius and Rosenblum 2005; Moore and Shellman 2007; Breunig, Cao and Luedtke 2012), and research emphasizes consistently that this can offer valuable gains for both foreign-born populations and their host societies (Cornelius and Rosenblum 2005; Dustmann and Frattini 2014; Bove and Elia 2017a,b; Hainmueller, Hangartner and Pietrantuono 2017; d'Albis, Boubtane and Coulibaly 2018): for example, migration usually leads to a higher economic growth of host states and enhances an individual's personal economic condition; moreover, refugees can escape conflict and repression, thus improving personal safety circumstances; and research has rejected the claim that they are a burden for host nations' economic performance or fiscal balance. However, despite the obvious gains for host countries and foreign-born populations, large population inflows stemming from refugees and economic migrants also present receiver states with administrative and, potentially quite severe, security challenges (Dowty and Loescher 1996; Adamson 2006; Böhmelt, Bove and Gleditsch 2019).

Focusing on the latter, politicians and public opinion seem to converge on the claim that migrants and refugees are a security risk. For example, the Polish President, Andrzej Duda, stated in 2017 that 'there is no doubt that the growing wave of terrorism is linked to migration' and that 'migrants pose a security threat' (Radio Poland 2017). Furthermore, the German Chancellor, Angela Merkel, said that, 'the refugee flow was even used to smuggle terrorists' (Reuters 2016). And the European Union frames transnational population movements as a 'security issue' (e.g. Huysmans 2000, 2006; Geddes 2008; Van Munster 2009; Léonard and Kaunert 2019). At the same time, anecdotal evidence and recent studies show that news about terrorist attacks can trigger negative views of immigrants among the general public (Finseraas, Jakobsson and Kotsadam 2011; Legewie 2013; Schüller 2016). However, although there is a large quantitative literature examining whether international refugees and migrants crossing borders are associated with more insecurity in the form of, for example, a higher risk of civil conflict or interstate disputes (Salehyan and Gleditsch 2006; Salehyan 2008), terrorism (Milton, Spencer and Findley 2013; Bove and Böhmelt 2016; Dreher, Gassebner and Schaudt 2017), fighting between groups (Bartusevičius and Gleditsch 2019; Böhmelt, Bove and Gleditsch 2019), or one-sided violence (Fisk 2018; Bohnet and Rüegger 2019), these scientific studies using quantitative methods are diverse and focus on different outcomes (albeit the same

underlying latent concept), making it difficult to obtain a rigorous overview of the genuine impact transnational population flows have on insecurity.

Thus, we still lack a clear understanding of migrants and refugees comprising threats and risks to insecurity. Addressing this shortcoming is essential, though, as it informs policymaking: for example, do we need migration management policies designed to minimize security threats or those that embrace the diverse benefits in-migration can have for host societies. Research on the security implications of migration is therefore extremely policy relevant and speaks to a core component of societal polarization, but—given the large and diverse set of available studies—it is also in severe need of a general assessment regarding its overall findings. We provide such a study that will also clarify to what extent policymaking corresponds to an observable relationship between population movements and heightened insecurity.

Specifically, we shed new light on the security implications of international refugee and migration populations as we evaluate this relationship using meta-analysis (Hsiang, Burke and Miguel 2013; Buhaug et al. 2014). For the first time, we have compiled a unique data set comprising more than 70 quantitative studies with a broad range of spatial and temporal scales, across all regions in the world, and covering several disciplines (Economics, Political Science, and Sociology). The results suggest that an effect linking foreign-born populations and insecurity over a heterogeneous set of outcomes may exist, that is, when employing a broad definition of insecurity that encompasses state-based conflicts, hate crimes, inter-group fighting, terrorism, and one-sided violence. This is quantified as a 9 per cent increase in insecurity for each 1σ rise in (log-transformed) refugee and migrant populations. That said, we obtain little evidence for refugees or migrants leading to more insecurity across all those outcomes when assuming a disaggregated perspective. Specifically, based on a more narrowly defined approach that seeks to identify more homogeneous outcome variables, the meta-analysis does not converge on an insecurity-promoting influence across the outcomes. Terrorism or hate crimes, for example, are not obviously associated with or caused by refugees or international migrants. On the other hand, we show that the literature converges on an insecurity-promoting effect when it comes to state-based conflict risk as well as one-sided violence and intergroup disputes. In terms of the former, each 1σ rise in refugee and migrant populations leads to an increase of 18 per cent of insecurity. In terms of the latter two outcomes, we observe 12 per cent growth in insecurity for each 1σ increase in refugee and migrant populations for inter-group fighting and a 7 per cent rise when focusing on one-sided violence.

The sample of studies is based on systematic and rigorous selection criteria commonly employed for some of the most prominent studies of this kind (Hsiang, Burke and Miguel 2013; Buhaug et al. 2014). In the first place, we searched for quantitative research published in international peer-reviewed journals, having stocks of international migrants or refugees as the main independent variable and an 'insecurity-related' implication or consequence as dependent variable that primarily relates to organized political violence. To this end, we consider state-based conflict (interstate disputes and civil conflict), terrorism, inter-group conflict, and one-sided violence, but we also take into account hate crimes as one form of largely unorganized, but potentially political violence. Ultimately, our search identified more than 70 studies, which we narrowed down to 20 analyses for our main results, comprising 12 journals from Economics, Political Science, and Sociology and 19

authors, covering all countries and regions across the globe in 1951–2016. The focus on 20 analyses is based on the rationale to (1) minimize variation in the type of outcomes defining insecurity, (2) capture a largely homogeneously defined 'treatment' (foreign-born population stocks), (3) try to maximize a common spatio-temporal scale that is, nonetheless sampled in, if possible, non-overlapping locations, and (4) use similar model specifications across datasets (Buhaug et al. 2014).

This study has crucial implications for our understanding of the security implications of international refugees and migrants across several disciplines as it contributes to measuring the effect transnational population movements have on insecurity with more precision, but also helps informing the research agenda in the years to come. On one hand, we add to those studies that actually quantify the overall impact of refugees and migrants on insecurity-related phenomena. The public discourse is overly characterized by populist statements and prejudice, but lacks systematic evidence although a large number of studies systematically exploring the security implications of foreign-born populations is available. By synthesizing their estimated effects, we are able to shed new light on the overall influence refugees and migrants have. Unlike what conventional wisdom and the public discourse may suspect, however, we find little evidence for an all-encompassing insecurity-promoting effect of refugees and migrants. Merely stating that refugees or migrants are a security risk or blaming migrants for terrorism (Reuters 2016; Radio Poland 2017) is, therefore, more than misleading, especially as we are unable to detect anything but a null effect of population movements on terrorism. Even when focusing on a more homogeneous set of studies, effects are often not clear across the board, small in substance, or based on a limited number of studies. These results show that the construction of migration and asylum as security issues (see, e.g. Huysmans 2000; Bigo 2002; Ceyhan and Tsoukala 2002; Bourbeau 2011; Léonard and Kaunert 2019) may be based on scientific evidence that is not as strong as previously anticipated. At the same time, and this constitutes a shortcoming of our analysis that future research must address, when finding an effect for state-based conflicts or inter-group violence, we lack data on perpetrators and victims (but see Buhaug et al. 2014). This research and the findings presented in the following crucially inform the future research agenda as we highlight the need to shed light on the contextual factors that may give rise to violence targeting or perpetrated by refugees and migrants, and we emphasize the need for more fine-grained data that allow us to distinguish more clearly between foreign-born victims or perpetrators in our research.

2. Design

For the meta-analysis, we originally identified more than 70 quantitative, longitudinal studies that examine insecurity, broadly defined, as a function of transnational population movements (refugee/migration stocks or flows). We then employed more rigorous selection criteria (outlined in the previous section and discussed in the Supplementary data) with a view toward analytical consistency and representativeness, that is, we exclude non-published working papers and studies where replication materials are not publicly available or the authors did/could not provide replication materials upon request; we further omit studies based on population flows (although we include them in the Supplementary

data) (McAlexander 2020) as opposed to stocks, and analyses on internally displaced populations, intrastate migration, and works focusing on variables that only comprise some aspect of foreign-born populations such as spatial lags (Bove and Böhmelt 2016; Böhmelt and Bove 2020a, b). We also concentrate on the five most commonly analyzed forms of (organized) political violence, namely state-based conflict, hate crimes, terrorism, one-sided violence, and inter-group disputes.

Hence, our focus is on specific, directly observable measures of the broad concept of security and, importantly, does not include the question of how migrants and refugees themselves are discursively constructed as security issues (on this, see, e.g. Huysmans 2000, 2006; Bigo 2002, Ceyhan and Tsoukala 2002; Guild 2009; Bourbeau 2011; Chebel d'Appollonia 2012; Bello 2017; Léonard and Kaunert 2019, 2021). The securitization (Buzan et al. 1998; Kaunert and Léonard 2019) of these often-vulnerable populations lies outside the scope of the present research. Instead, we seek to collect and provide a general result for studies which, by empirically testing the effect of migrant and refugee populations on observable measures of security, provide scientific evidence supporting or countering the speech acts and policies that construct transnational population movements as security issues.

Finally, we initially do not consider (parts of) two studies (Dreher, Gassebner and Schaudt 2017; Bartusevičius and Gleditsch 2019) with large effects that are potential outliers (although we include these for analyses in the Supplementary data) to minimize bias and maximize comparability across studies. This selection process leads to 18 studies (20 analyses) that were ultimately chosen for the main analysis. The meta-analysis complies with Preferred Reporting Items for Systematic Reviews and Meta-Analyses (Moher et al. 2009) standards (see Fig. 1 and the checklist in the Supplementary data). Table 1 and Fig. 2 provide a comprehensive overview of the spatio-temporal resolution and unit-dependent variable coverage. In essence, we achieve a broad geographical scope across different units of analysis for five different, yet interrelated, dependent variables between 1951 and 2016.

For all works selected, we obtained the replication materials and then focused on each study's main model. The main model usually constitutes the estimation with all controls and final (most conservative) specifications, potentially seeking to establish a causal effect between foreign-born population stocks and security implications. We thus opted for the most comprehensive setup that comprises, if available, fixed effects for spatial and temporal units, which account for unobservable confounding factors that are correlated with foreign-born populations and insecurity and/or temporal controls. The outcome variable in each setup refers to security implications of foreign-born populations generally defined, that is, state-based conflict (interstate disputes and civil conflict), terrorism, one-sided violence, etc. Foreign-born populations pertain to the variable of interest, that is, refugee and/or migration stocks, which we define generally as the number of foreign-born individuals. If necessary, we reformulated the main model to make it consistent across studies by, for example, employing linear probability models or removing interaction effects. We also standardized the main explanatory variable in each individual analysis to capture the logged number of foreign-born individuals living in a given spatial unit at a specific temporal unit. Following this setup, for each of the 20 models entering our analysis, we then
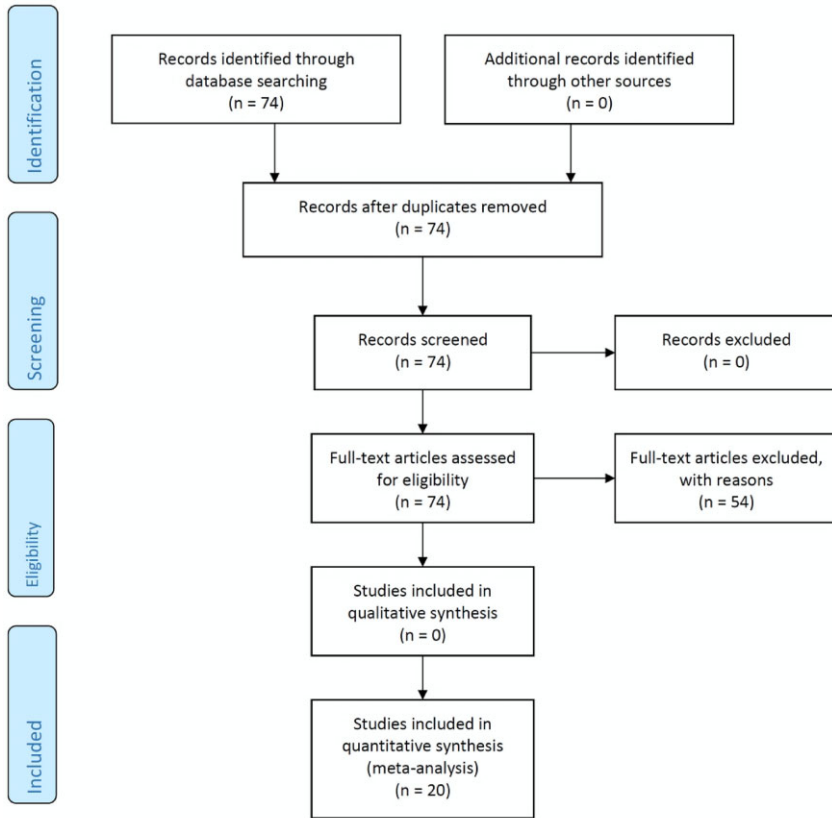
Figure 1. PRISMA flow diagram.

obtained one main quantity of interest, namely the marginal effect for a 1σ increase in foreign-born populations (logged) and the corresponding standard error.

With these quantities of interest at hand, we then implemented the meta-analysis. Each of the 18 studies (20 analyses) reports an effect estimate of the impact of foreign-born populations on insecurity and an estimate of its standard error. The goal of our analysis is to combine these estimates in a single result to obtain valid inference about the population parameter. We use random-effects (RE) meta-analysis where the weights are inversely related to the total variance, employing the empirical Bayes method (Berkey et al. 1995) to estimate the between-study variability. Hence, the individual weight of studies is down-weighted if they are more imprecise. The RE model (Hedges 1983; DerSimonian and Laird 1986) assumes that the effect sizes of the individual analyses are, in fact, different, while the studies entering the model represent a random sample from a larger population. To make inferences about the overall effect size in the total population, RE meta-analysis estimates the mean of the distribution of effect sizes with the weights being

Table 1. Primary quantitative studies testing for a relationship between conflict and foreign populations (all in stock and log-transformed)

References	Sample period	Sample region	Time unit	Spatial Unit	Independent variable	Dependent variable
Böhmelt, Bove and Gleditsch (2019)	1989–2015	Global	Year	Country	Refugees	Civil Conflict
Gineste and Savun (2019)	1996–2015	Global	Year	Country	Refugees	Civil Conflict
Marbach (2018)	1989–2000	Global, politically relevant dyads	Year	Country-dyad	Refugees	Interstate Conflict
Rüegger (2019)	1975–2013	Global	Year	Country (in appendix)	Refugees	Civil Conflict
Salehyan (2007)	1951–99	Global	Year	Country	Refugees	Civil Conflict
Salehyan (2008)	1955–2000	Global	Year	Country-dyad	Refugees	Interstate Conflict
Salehyan and Gleditsch (2006)	1951–2001	Global, politically relevant dyads	Year	Country	Refugees	Civil Conflict
Bartusevičius and Gleditsch (2019)	1951–2001	Global	Year	Country	Refugees	Contested Incompatibility
Böhmelt, Bove and Gleditsch (2019)	1989–2015	Global	Year	Country	Refugees	Intergroup Conflict
Bohnet and Rüegger (2019)	2000–10	Sub-Saharan Africa	Year	Municipality	Refugees	Refugee-related Intergroup Conflict
Bohnet and Rüegger (2019)	2000–10	Sub-Saharan Africa	Year	Municipality	Refugees	One-sided Violence

Continued

Table 1. Continued

References	Sample period	Sample region	Time unit	Spatial Unit	Independent variable	Dependent variable
Braun (2011)	2001–03	Netherlands	Day	Municipality	Migration	Hate Crime
Braun and Koopmans (2010)	1990–5	Germany	Day	District	Migration	Hate Crime
Choi (2018)	1990–2007	Australia, Canada, France, Germany, Netherlands, New Zealand, Spain, Switzerland, UK, and USA	Year	Country	Migration	Terrorism
Choi and Salehyan (2013)	1970–2007	Global	Year	Country	Refugees	Terrorism
Fisk (2018)	2000–10	Sub-Saharan Africa	Year	Municipality	Refugees	One-sided Violence
Fisk (2019)	2000–10	Sub-Saharan Africa	Year	Municipality	Refugees	Intergroup Conflict
Jäckle and König (2017)	2015	Germany	Day	District	Migration	Hate Crime
Jäckle and König (2018)	2015–16	Germany	Day	District	Migration	Hate Crime
Milton, Spencer and Findley (2013)	1969–2001	Global, politically relevant dyads	Year	Country-dyad	Refugees	Terrorism

All analyses use formal statistical methods to quantify the influence of the foreign-population variable and use hypothesis testing procedures.
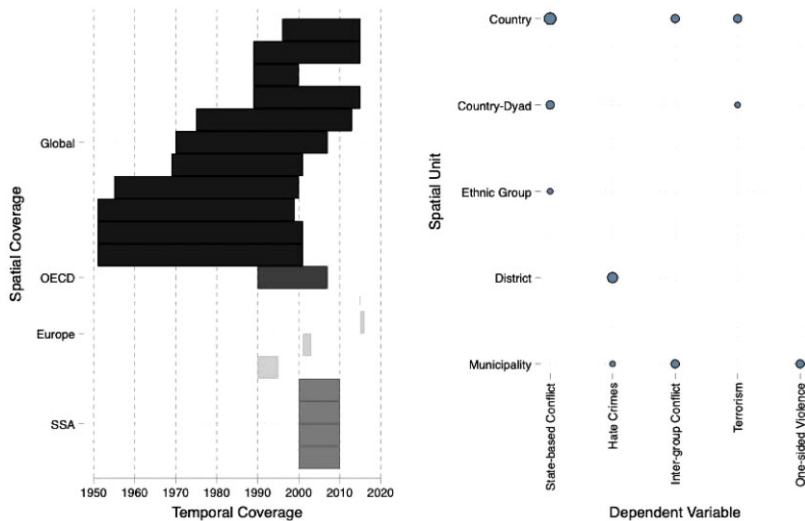
Figure 2. Spatio-temporal resolution and unit-dependent variable coverage of the 18 studies examining the relationship between conflict and foreign populations (all in stock and log-transformed). The left panel indicates the regional location and temporal coverage (in years) of each study. The right panel illustrates the level of spatial aggregation of each conflict outcome in our analysis (horizontal axis), with marker size indicating the number of studies at each location. SSA, Sub-Saharan Africa.

inversely related to the total variance. The empirical Bayes estimator tends to be less biased than other RE methods, but it is also less efficient (Paule and Mandel 1982; Knapp and Hartung 2003). Finally, following Buhaug et al. (2014), we also present the 95 per cent density interval of the distribution of the effect sizes based on a Bayesian hierarchical model.

Three aspects are further worth discussing (Buhaug et al. 2014). First, we assume that the studies considered in the analysis are independent from each other. Second, the underlying mechanism linking transnational populations to insecurity should be similar across the outcome variables analyzed and the explanatory variables considered (causal homogeneity). Third, the sample should be representative of the larger population. Due to our selection strategy for choosing analyses that eventually are considered for our research, it is plausible to assume that the latter applies. However, the second requirement of causal homogeneity is likely violated. While terrorism and civil conflict pertain to outcomes of insecurity and organized political violence, they are still different concepts based on partly differing theoretical explanations and empirical factors. To address this issue, we only focus on a rather narrowly defined set of explanatory variables (i.e. logged stocks of foreign-born populations) and also provide disaggregated analyses by conflict type to ensure homogeneity of the outcome variables considered for estimating the total population's effect. Regarding the first requirement of our analysis, we sought to address this by only considering one specific model and key-dependent variable per study. Buhaug et al.

(2014), moreover, recommend calculating the 95 per cent density interval of the distribution of effect sizes. Still, spatio-temporal overlap in most works' data coverage persists. We return to this issue in the Supplementary data, where we also address that the RE model assigns relatively larger weights to smaller studies and we examine publication bias.

3. Results

We begin the discussion of our results with the main meta-analysis, that is, when considering all studies across the sample. Afterward, we provide sub-sample analyses as we group individual effects and total estimates according to their outcome–variable types to ensure a maximum level of homogeneity. Figure 3 presents the main meta-analysis findings. Each individual study's effect, confidence interval (CI), and weight are displayed, while the weighted mean value (overall effect, θ) is presented at the bottom. First, most individual effects are rather small in substance. Second, note the weights for each study, which are linked to the precision of each estimate. To this end, more imprecise studies do not influence the overall pattern in substantive ways.

Most importantly, for our research interest, consider the overall effect estimate at the bottom: for a 1σ change in logged foreign populations, insecurity risk increases by 8.7 per cent. This estimate is statistically significant at the 5 per cent level. In other words, the meta-analysis suggests that foreign population stocks can be linked to a higher degree of insecurity in systematic and substantive ways. This is the first study of its kind presenting this important finding. However, Buhaug et al. (2014) rightfully contend that the variance-weighted approach underlying Fig. 3 may produce imprecise estimates, thus underestimating the true uncertainty of the total effect across studies. Hence, consider Fig. 4 that displays the mean effect θ as obtained in Fig. 3 as a gray solid vertical line, but also plots the 95 per cent density interval of the distribution of effect sizes as well as the corresponding median based on a Bayesian hierarchical model. Interestingly, this approach does lead to a smaller total-effect estimate (6.55 per cent increase for a 1σ change in logged foreign populations), but it remains statistically significant at the 5 per cent level (with an interval of 0.0041–0.1269).

Nevertheless, the heterogeneity in studies, most likely driven by different outcome variables entering the meta-analysis or measurement error, is non-negligible. The I2 measure, which estimates the amount of heterogeneity across studies, suggests the presence of large heterogeneity as we obtain a value of 93.43 per cent for the sample underlying Figs 2 and 3. As discussed in Hsiang, Burke and Miguel (2013), parts of this heterogeneity could be meaningful if, for example, different population types influence the outcomes in different ways or since underlying contextual conditions do have the potential to moderate their impact. Still, we assume a more disaggregated view and re-run the meta-analysis in the RE empirical Bayes specification for each dependent-variable type individually. The substantive conclusions from the median effect with 95 per cent density intervals do not differ crucially, though. The results of the disaggregated analyses are presented in Fig. 5.

As expected, the overall level of heterogeneity in sample studies significantly decreases with this disaggregation approach along outcome categories, going as low as
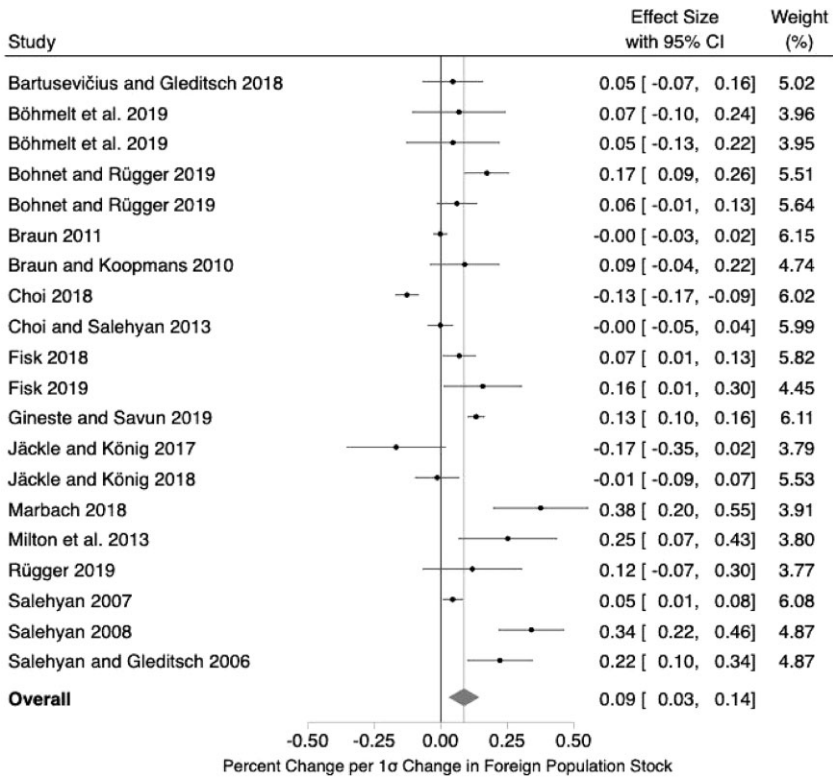
Figure 3. Empirical estimates for the effect of foreign populations (all in stock and log-transformed) on the risk of conflict. Studies are listed in alphabetical order. Each marker represents the estimated effect of a 1σ increase in a foreign-population variable, expressed as a percentage change in the outcome variable relative to its mean. Horizontal bars signify 95% CI on each point estimate. A coefficient is positive if conflict risk increases with a higher stock of foreign-born individuals (logged). Gray vertical line and diamond marker indicate the precision-weighted mean estimate (θ); black vertical line marks an average effect of 0 (weighted). See the Supplementary data for details on the individual studies and the calculation of mean effects.

0.03 per cent (one-sided violence). Yet, despite the lower level of study heterogeneity, we still obtain significant total effects: for state-based conflicts, a 1σ change in logged foreign populations increases the risk of conflict by about 18 per cent. For inter-group conflict, a 1σ change in logged foreign populations induces a higher dispute risk of about 12 per cent. And the likelihood of one-sided violence goes up by 7 per cent for a 1σ change in logged foreign populations. The overall effect estimates for hate crimes and terrorism are different: for both outcomes, the total impact we calculated is not statistically significant at conventional levels, suggesting that migrant and refugee populations are unlikely to be systematically, significantly, or causally related to these types of political violence.
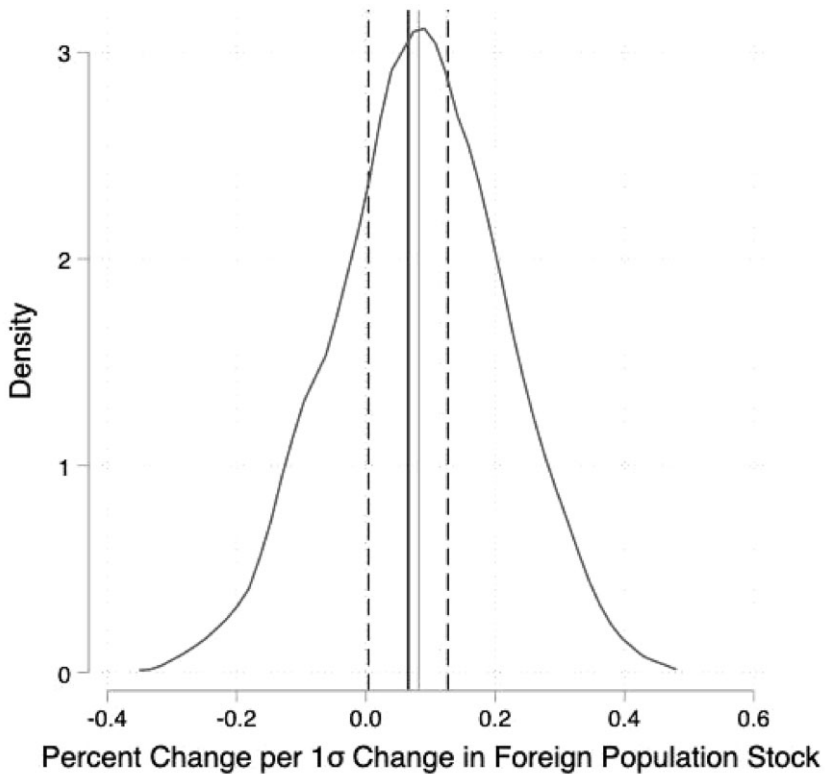
Figure 4. Distribution of study results. Graph shows the distribution of the weighted overall effect (θ). Thin gray vertical solid line signifies precision-weighted mean effect. Thick black vertical solid line pertains to median effect with 95% highest density interval (black vertical dashed lines) based on a Bayesian hierarchical model.

4. Discussion

The results presented point to three main conclusions. First, refugee and migrant populations can lead to insecurity under some circumstances, although there is no default substantively meaningful effect across all dependent variables considered. In fact, second, when disaggregating outcomes with a view toward producing more homogeneous subsamples, we do not obtain consistent evidence for a causal effect of foreign-born populations on insecurity in some of the most salient policy areas: terrorism is arguably the most prominent case here. While policymakers, public institutions, and the public discourse seem to link foreign-born populations and terrorism, thereby constructing migrants and refugees as security threats (e.g., Huysmans 2000; Bigo 2002; Ceyhan and Tsoukala 2002; Bourbeau 2011; Léonard and Kaunert 2019), there simply is no objective evidence for a strong, generalizable relationship between the two factors (Finseraas, Jakobsson and
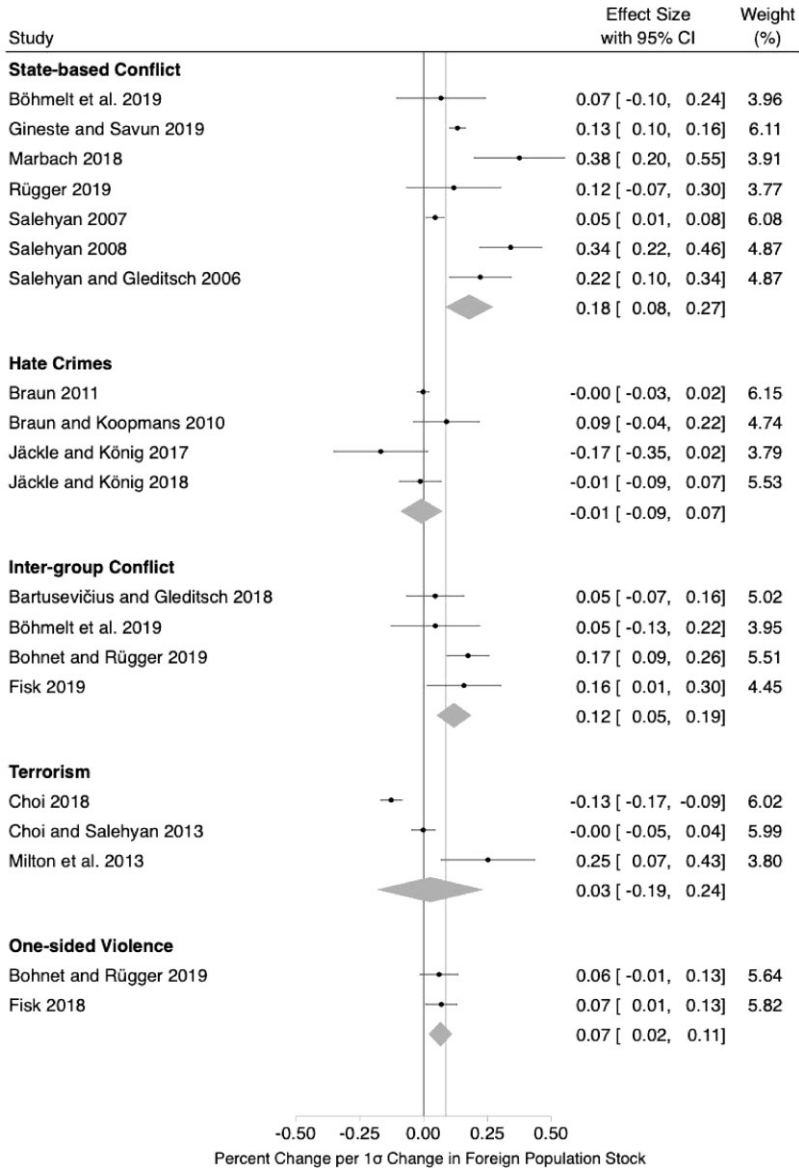
Figure 5. Empirical estimates for the effect of foreign populations (all in stock and log-trans-formed) on the risk of conflict by type of conflict. Each marker represents the estimated effect of a 1σ increase in a foreign-population variable, expressed as a percentage change in the outcome variable relative to its mean. Horizontal bars signify 95% CI on each point estimate. A coefficient is positive if conflict risk increases with a higher stock of foreign-born individuals (logged). Gray vertical line indicates the precision-weighted mean estimate across all types of conflict; diamond markers stand for the precision-weighted mean estimate per type of conflict; black vertical line marks an average effect of 0 (weighted). See the Supplementary data for details on the individual studies and the calculation of mean effects.

Kotsadam 2011; Legewie 2013; Bove and Böhmelt 2016; Dreher, Gassebner and Schaudt 2017; Böhmelt and Bove 2020a,b). Third, even when subscribing to the effect we identify in the analysis based on the heterogeneous sample of studies, the substantive impact stemming from migrants and refugees is less strongly pronounced than for the 'traditional' predictors in the political-violence literature, most importantly income and poverty (Ward, Greenhill and Bakke 2010). Thus, transnational migrants and refugees are not the only, and certainly not the most influential, factor shaping states' (in-) security. These results are based on a meta-analysis of a large number of different studies, conducted using different units of observation and model specifications, which cover different types of political violence across the world and almost the entire period after the Second World War. The finding that transnational migrants and refugees are, if anything, only a minor source of states' (in-) security should be generalizable in terms of its geographical and temporal scope as well as different types of political violence.

However, ignoring the security implications of refugees and migrants is not helpful for scholarly research or policy recommendations either (Böhmelt, Bove and Gleditsch 2019). And while our research sheds light on the 'actual' effect of foreign-born populations on insecurity and we do find evidence that migrants and refugees can be associated with this, there are several important caveats to our work that merit further discussion. First, as indicated, the disaggregated analysis shows that not all types of political violence are shaped by transnational migration and refuge in systematic ways. Second, the evidence should not be interpreted as migrants and refugees being responsible as perpetrators of violence for a higher risk of insecurity. We typically do not have information on victims and perpetrators (but see Gineste and Savun 2019) and, if anything, qualitative narratives suggest that blaming migrants or refugees for insecurity by default or in the first place is not helpful either, but rather quite misleading. Third, there are multiple pathways linking transnational population movements to insecurity, and policy replies dealing with the challenges emerging from such movements will look differently depending on what underlying pathway is at work. Yet, while we contribute to disclosing the overall effect of the security implications of international migrants and refugees, this analysis cannot address the specific mechanisms at work. Shedding light on these, and therefore gaining a better understanding of the persistent heterogeneity in studies we identified, should be a key priority for future research. Similarly, individual studies show that the unconditional effect we focus on here can be overcome by modeling intervening factors such as state capacity (Böhmelt, Bove and Gleditsch 2019), integration laws (Ersanilli and Koopmans 2011; Helbling 2013), or migration policies (Böhmelt and Bove 2020b). It seems an effort worth making to conduct an additional meta-analysis on these moderating influences' effectiveness.

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Supplementary data

Supplementary data is available at *Migration Studies* online.

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