The Asylum Hump: Why Country Income Level Predicts New Asylum Seekers, But Not New Refugees

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Refugee response has become an important topic in economic-development policy, but the majority of macro-level analyses do not find an association between country income level and refugee numbers. We argue that the apparent lack of association stems from using the United Nations High Commission for Refugees' count of refugees as the dependent variable in these analyses. Refugee counts reflect processes that take place in countries of arrival. In contrast, the decision to seek asylum may be more closely linked to conditions, including income, in countries of origin. Drawing on the ‘migration-hump’ concept from economic migration, we model counts of refugees and asylum seekers from conflict-affected countries for the same time period and find that differences in the level of gross domestic product (GDP) predict new asylum applications but not new refugee numbers. We outline reasons for this statistical finding, and discuss theoretical and practical consequences for our understanding of the relationship between country income and asylum-seeking.

Keywords: asylum seekers, refugees, statistics, national income, conflict

Introduction

Cross-country quantitative studies and empirical analyses show that economic factors play only a secondary role in forced displacement. Economic factors such as poverty, inequality, and low institutional development increase the odds of conflict, but among conflict-affected countries, there is no clear and strong correlation between forced displacement and economic development, as measured by GDP (World Bank 2017: 46).
As the quote above indicates, while forced displacement has become a central issue in current economic-development policy, the details of how development tools can be used to prevent displacement remain elusive. A fundamental question facing governments, and confounding researchers is how economic aid can be used to address and manage forced-displacement flows. (Throughout this article, we will use ‘forced displacement’ as a general term that includes internal displacement as well as cross-border refugee flows unless otherwise stated.) However, although states and international organizations have stepped up their efforts to develop policies that could ease the need for people to flee (e.g. United Nations 2018), the World Bank quote above highlights the key problem of these policy responses: the existing literature on forced displacement suggests no clear link between global displacement flows and country income level as measured by GDP. While we stress that there is more to development than GDP, the quote reiterates that it remains one of the central indicators of economic development, in both scientific and policy circles. This is more than a question of aid; in an era in which asylum-seeking and asylum provision are so politically charged, a better understanding of refugee and asylum statistics can give political discussions of financial aid to conflict-affected origin countries a stronger empirical basis.

To address this puzzle empirically, we start by reviewing earlier research on the relationship between refugee outflows and economic development to evaluate the variables previous researchers used. Since this literature has shown an inconclusive relationship between displacement flows and economic development, we propose a specific reason why this may be: what the United Nations High Commission for Refugees (UNHCR) measures in their refugee count data is not exactly what researchers assume the data represents. We outline theoretically and empirically that the definition of refugee and asylum-seeking categories in many earlier studies leads to built-in biases, which manifest as an underestimation of the relationship between displacement and national income. By highlighting the resulting analytic problems, we aim to clarify the relevance of economic development and improve future research on forced displacement by highlighting the challenges that arise when specifying models using refugee and asylum-seeker data.

Although the terms ‘refugee’ and ‘asylum seeker’ get used interchangeably in much of the literature, these terms actually describe different populations of people. ‘Refugee’ in the UNHCR’s usage is a legal category, which denotes people who have crossed a border, and sought and been granted protection in a host country. It does not, however, capture all people who feel forced to flee across a border. Due to the scarcity of data on displacement on a global scale, many studies nevertheless use data on refugees, often augmented by counts of internally displaced people, to describe and model global macro-level displacement processes (Schmeidl 1997; Davenport et al. 2003; Melander and Öberg, 2007). However, this practice has important drawbacks. Refugee status is given based on an evaluation of whether an individual meets the 1951 Convention, the 1967 Protocol or the 1967 OAU protocol’s criteria for seeking protection. Consequently, the statistical study of forced displacement therefore risks becoming conceptually circular and
methodologically biased by selecting observations on the dependent variable (FitzGerald and Arar 2018).

We revisit the existing macro-level literature on forced displacement, with a specific emphasis on the contradictory findings regarding the role of economic development in displacement processes. We argue that the diverging results can be explained in significant part by the lack of precision in the use of the terms ‘refugee’ versus ‘asylum seeker’ or ‘asylum applicant’, which in turn has led to the use of imperfect data that is restricted to refugees. Studies that operationalize their forced-migration variable using UNHCR data on refugees tend to find no association with national income as measured by GDP (e.g. Schmeidl 1997; Davenport et al. 2003; Melander and Öberg 2006). (For the remainder of this article, we will use GDP per capita as our measure of income.) On the other hand, analyses that used asylum-seeker data as well as micro-level analyses that draw on survey data of displaced people reliably describe economic factors as relevant predictors of displacement flows or individual flight decisions (e.g. Neumayer 2005b; Bohra-Mishra and Massey 2011; Adhikari 2013; Hatton 2017).

Our article theoretically outlines how refugee-status-determination (RSD) procedures build biases into common refugee data and how using data on asylum requests leads to different results vis-à-vis income levels in countries of origin. To evaluate the relationship between income as measured by GDP and displacement measured using refugee counts and asylum applications, we draw on the economic-migration literature. Economic-migration research has shown that outward migration does not have a linear relationship with country income level; instead, as income levels increase from poor to middle income, migration outflows also increase. People do not stop migrating until GDP per capita surpasses around USD8,000 (Clemens 2014); above that threshold, outward migration decreases. This phenomenon is referred to as the ‘migration hump’—a reference to the hump-shaped GDP curve that predicts outward migration. We empirically compare how well GDP predicts refugee count and new asylum applications, with the expectation that the relationship is not linear, but curved. Contrary to some previous studies on forced migration, we find that differences in GDP predict a substantive change in asylum-application numbers from conflict-affected countries compared to models using counts of new refugees. We close the article with discussion of why this is expected, and what it means for understanding the relationship between economic development and displacement in both research and practice.

**Causes of Cross-Border Displacement**

Studies of forced displacement generally agree that violent conflict is the major determinant of forced displacement and refugee flows (Clark 1983; Zolberg et al. 1989; Edmonston and Lee 1992; Gibney et al. 1996; Weiner 1996; Schmeidl 1997; Apodaca 1998; Davenport et al. 2003; Turkoglu and Chadeaux 2019). There is furthermore agreement that human rights violations represent an important cause of forced-migration flows (Schmeidl 1997; Davenport et al. 2003; Moore and Shellman 2004; Hatton 2016, 2017).
There is less agreement in the literature on how economic development shapes patterns and flows of displacement. Macro-level studies that use refugees as their outcome variable find either no effect of the level of economic development on migration patterns (Schmeidl 1997; Melander and Öberg 2007), only insignificant effects (Davenport et al. 2003) or, like Moore and Shellman (2004), significant, but substantively very small, effect sizes. To the contrary, studies that use asylum-seeker data consistently find an association between higher GDP and lower displacement flows (Hatton et al. 2004; Neumayer, 2005b; Hatton 2016, 2017).

So, what do we make of these diverging findings on the role of economic development in forced migration? Micro- and meso-level studies mostly document that there is a relevant economic component to an individual’s decision to flee. Survey work on displacement and decision-making in forced displacement shows that individuals tend to stay in their homes if the cost of fleeing—often measured in lost economic opportunity or attachment to a home—outweighs perceived physical threats (Adhikari 2013: 83). Even if people are affected by violent conflict in a given area, not everyone takes the decision to flee. Consistently with macro-level accounts, researchers find that tangible threats to physical safety are a main cause for a decision to flee, particularly if people experienced actual violence (Engel and Ibáñez 2007; Alvarado and Massey 2010; Adhikari 2013: 83–86). Yet, economic considerations are also important: people who are under physical threat are more likely to flee when they have fewer economic opportunities (Adhikari 2013: 86). Moreover, owning economic assets is an important opportunity cost decreasing the willingness to flee (Engel and Ibáñez 2007: 356; Bohra-Mishra and Massey 2011; Pivovarova and Swee 2015). When conflict destroys the economic opportunities of these individuals, it forces them to flee (Gates et al. 2012; Vignal 2014). The decision to flee is thus a combination of exposure to violence and alternative considerations.

When we take into account the clear evidence for the relevance of economic variables in the micro-level literature, it is surprising that a sizeable proportion of macro-level analyses find no such association on an aggregated level. Why do we have such mixed macro-level evidence? As described above in our literature review, whether a study finds no substantively important correlation between development and displacement numbers appears highly correlated with the use of refugee data as a dependent variable. Consequently, this lack of a clear statistical relationship may be explained by idiosyncrasies in the UNHCR data, and how the variable ‘refugee’ is defined. It is plausible that, when researchers analyse the relationship between refugee flows and income level in origin countries, what they might incidentally be comparing are actually the country(ies) of arrival’s asylum-approval processes as opposed to the number of people who have fled an event. For this reason, it is useful to unpack how ‘refugee’ is defined by the UNHCR, how this affects the empirical patterns that researchers are able to detect with this data, as well as why it could be valuable to compare this variable with UNHCR data on new asylum applications.
RSD and Implications for Different Data Sources

One of the key issues that arises when working with publicly available displacement data is the fact that one is not automatically coded as a refugee upon fleeing abroad from a country where there is threat to life and safety. What the UNHCR category of ‘refugee’ more accurately describes is a person who has successfully passed through different stages in a potentially long administrative process of RSD. Understanding the process of how an asylum claim becomes a UNHCR data point is an important step in improving our analysis of how different variables, especially economic factors, relate to actual displacement from a country.

The accepted definitions of ‘refugee’ are both legal and practical (e.g. Arboleda 1991; Cherem 2016; Hathaway 2017). UNHCR data on refugees and asylum-seeking, though, reflects a specific legal status that a person has been granted by a host country. This status is based on international standards laid out in the 1951 Refugee Convention, the 1967 Protocol to the convention and the 1967 OAU Protocol, which signatory countries use as a guide to developing their own systems for determining the status of an asylum seeker. Until a person fleeing their home country due to a ‘well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion’ (UNHCR 2010: 14) has successfully applied for and officially received asylum in a host country, they are not a refugee in the eyes of the UNHCR’s database. Not all processes are long—many countries in Africa and Asia, such as Kenya and Malaysia, that host large refugee populations offer *prima facie* refugee status to all asylum seekers based on the country they come from. (For example, this is the current practice in Kenya regarding asylum claims made by people from South Sudan and southern Somalia, for example (Library of Congress 2016).) Thus, the statistical definition of a ‘refugee’ can be influenced more by processes in receiving states, as opposed to the conditions in the country that a person has fled.

For empirical researchers who study drivers of displacement, an awareness of how differences in national asylum processes affect the UNHCR numbers on the total number of refugees is key. So how do states determine status? As noted, governments can offer *prima facie* refugee status to people who have come from conflict-affected countries. In cases where status is not automatically granted, assessment is often done using autobiographical interviews with asylum seekers, who must convince a migration officer or UNHCR protection office of the reliability of their claim. However, there is ample evidence that this is not the best way to adjudicate claims; traumatized people will have trouble remembering details over multiple interviews (Herlihy et al. 2002), leading adjudicators to be potentially overcritical of claims (Kagan 2003), to asylum seekers not being able to overcome a systematic bias towards scepticism (Byrne 2007) and to biased assessments by immigration officers when assessing credibility (Millbank 2009; Herlihy et al. 2010). These individual-level factors influence who receives refugee status, and thus the UNHCR’s reported refugee numbers.

Beyond the idiosyncrasies of individual determination processes, the domestic politics of individual states play a central role in RSD processes. The 1951
Convention and the 1967 Protocol are not laws per se—they lay out standards and sovereign states determine how to implement them. Joppke (1997) demonstrated, in a comparison of US, British and German asylum policies, that domestic politics have a significant role in shaping a state’s willingness to grant asylum. In Western Europe, variation in the stringency of domestic asylum policy has an impact on the volume of applications (Vink and Meijerink 2003); later findings showed that it was increases in applications that led to increased policy-level stringency, while conditions in sending states had little effect on asylum processes in receiving states (Neumayer 2005a; Toshkov 2014).

In many developing countries that host large refugee populations, the processes for recognition are different. Prima facie refugee recognition can be given when a host-country government decides that conditions in the country of origin automatically merit protection status (UNHCR 2015). For example, Kenya currently has a prima facie status rule for South Sudanese and some Somali asylum seekers; this rule does not extend to the other refugee populations in Kenya, and the process for citizens from Eritrea, Ethiopia and Great Lakes countries can take a long time (Library of Congress 2016). In Malaysia, which hosts a refugee population of approximately 177690 (UNHCR 2019), the UNHCR is mandated by the government to manage all aspects of claim adjudication, registration and resettlement. (The Malaysian government is not signatory to the 1951 Convention or 1967 Protocol and has no asylum processes in place.) Malaysian politics influence these processes though—by granting protection more likely to Muslim asylum seekers (Munir-Asen 2018). This means that, even in countries where the UNHCR is mandated to manage the adjudication processes, the pathways to being counted as a refugee in the UNHCR’s database can be influenced by a wide range of factors including domestic political preferences.

To understand statistically how GDP and income relate to displacement flows, we have to look harder and acknowledge how the UNHCR defines how they count refugees. UNHCR refugee data is based on numbers of approved asylum requests, which reflect conditions in the country of arrival. Consequently, attributes of sending countries such as GDP may wash out in statistical analyses that rely on refugee counts as the dependent variable. An alternative variable in the UNHCR database that tracks the number of people prior to a lengthy administrative asylum decision is ‘asylum seekers’. This variable indicates the number of people who have made a claim for asylum that has not yet been adjudicated. Since making an asylum claim is the first step in seeking refugee status, new asylum numbers are a variable that is less likely to be influenced by host-country processes and more likely to be related to conditions in the country of origin, including GDP. While there is evidence that people select where to seek asylum based on adjudication process, the decision to seek asylum in the first place is based on conditions in the country of origin (see e.g. Davenport et al. 2008).
Hypotheses

Based on the description of how people are eventually counted in refugee data, we argue that refugee data introduces a selection bias into the analysis of the causes of forced displacement in countries of origin. This accounts for the pattern in the literature that studies based on refugee data tend to find no substantive correlation between development and refugee numbers. There is an added layer of complexity when evaluating economic factors, such as income, and displacement. We know that the main reason people flee is violence, and that this is generally a linear relationship—the higher the intensity of violence or risk of violence, the more likely that people leave. But we also know that economic factors like income do not affect mobility decisions in a linear way (Clemens 2014). Therefore, we propose the following hypotheses: first, individuals will flee adverse economic conditions that occur simultaneously with, or which have even been caused by, violence and repression. Thereby, flight patterns mirror the well-known migration hump from regular migration (Martin and Taylor 1996; de Haas 2007; Clemens 2014). The people from the poorest countries will often lack the means to flee and therefore cross-border displacement from the poorest countries is lower than for middle-income countries. Overall, the number of cross-border displacements will increase as the income level of a country increases, before tailing off after a country reaches and goes beyond a certain income level.

Second, this pattern should not carry through to RSD. Receiving states will use opportunities to deny asylum if they can argue that economic motives were central elements of the flight decision. Therefore, receiving states exclude many individuals whose journey could be thought to have economic motives and thereby bias counts of refugees to people who fall under receiving states’ interpretation of the 1951 Refugee Convention and the 1967 Protocol to the convention. Consequently, studies that use refugees as part of their dependent variable will tend to underestimate the effect of any root cause of forced displacement that is not covered by the convention.

\( H1a: \text{The global number of asylum applications from the richest countries is lower than that of middle-income and poor countries.} \)

\( H1b: \text{The global number of asylum applications from the poorest countries is lower than that of middle-income countries.} \)

\( H2: \text{Compared to asylum applications, GDP of a country of origin predicts much smaller changes in the global number of refugees from this country.} \)

In contrast to income level, violence and human rights should predict increases in both asylum applications as well as refugee numbers, since receiving states are more likely to grant legal refugee status the more severe these conditions are.

Research Design

To test our hypotheses, we use three different data sources to measure these outcomes. Our unit of analysis is the country of origin-year. For the number of
refugees, we first use official UNHCR data, which is the data source typically used in most macro-level analyses of forced displacement in political science. We also use an improved version of UNHCR data: the World Refugee Dataset (Marbach 2018). Asylum-application data is available from the UNHCR starting in 2000 (http://popstats.unhcr.org/en/asylum_seekers). We restrict our analysis to new first-instance applications filed during a given calendar year to avoid counting pending cases or instances of judicial review. To allow a systematic comparison of results, we therefore restrict our analysis for all dependent variables to the time since 2000. In line with the World Bank quote at the start of the article, we only include origin countries in conflict listed in the Uppsala Conflict Data Program (UCDP) database. Since both the UNHCR and the World Refugee Dataset report refugee stock, we follow the general practice in the literature and code only new refugees by calculating the yearly change in refugee stock and recoding any negative values as zero (Melander and Öberg 2007).

We model overall economic development in the home country using GDP per capita, corrected for the respective purchasing power (World Bank 2018). The literature on labour migration has found that economic development has an inverted u-shaped statistical association with international migration—the so-called migration hump (Martin and Taylor 1996; de Haas 2007; Clemens 2014). In line with Clemens (2014), our unit of analysis is the country of asylum seeker and refugee origin, since our core question is how origin countries’ income levels affect asylum-seeking and refugee status. While using Clemens to meet the migration-hump empirical approach, we do not deviate from forced-displacement models, since Melander and Öberg (2006, 2007) and Moore and Shellman (2004) use country of origin as their unit of analysis. Since the migration-hump argument has recently been associated in public discourse with irregular migration and therefore possibly displacement (Martin-Shields et al. 2017), we include GDP per capita in its raw form and as a squared variable, to allow for the possibility of a curvilinear relationship.

Recent advances in the research on disaggregate intrastate conflict dynamics allow us to model conflict-induced displacement using much more fine-grained data than previous studies. First, we use UCDP data on battle-related fatalities to model overall conflict intensity. In line with Melander and Öberg (2007), we further include a measure of the size of the geographic area affected by conflict. However, newer event data allows us to code a more detailed indicator than the ordinal indicator used in previous work and we code the number of Peace Research Institute of Oslo grid cells who were affected by conflict in a country in a given year. Additionally, we code the number of people living in these conflict-affected areas. To account for the fact that countries with a generally larger population more easily produce large numbers of forcibly displaced people, we control for the size of the total population.

Human rights violations, whether the result of ongoing conflict or due to repressive regimes, should be a major predictor of increased refugee flows. We model this process using the latent human rights scores calculated by Fariss (2014). We cross-check our results by including the individual input variables
from, among others, the Cingranelli-Richards (CIRI) Human Rights Data Project (Cingranelli et al. 2014) instead of the latent scores.

We combine these central predictor variables in a statistical model of forced displacement. We follow the literature on migration, which has long argued that different push factors affect migration decisions multiplicatively (Beine et al. 2016). This should also be the case for forced migration. For example, very intense conflict should cause large displacement numbers. However, if fighting is concentrated in a very small, possibly almost uninhabited, area, this should moderate the number of people who will need to flee. If, additionally, the country is economically well developed, the state should be able to care for these displaced people and there is little reason to move abroad. Hence, high-income countries should only have a moderate number of displaced people. This implies that these variables predict the number of forcibly displaced people multiplicatively:

\[
\text{Number displaced} = \frac{\text{fatalities}}{C_2} \times \frac{\text{conflict area}}{C_2} \times \frac{\text{affected people}}{C_2} \times \text{GDP p.c.} \ldots
\]

We can rewrite this equation in logarithmic form, which will yield an equation that can easily be estimated using linear models:

\[
\ln(\text{number displaced}) = \ln(\text{fatalities}) + \ln(\text{conflict area}) + \ln(\text{affected people}) + \ln(\text{GDP p.c.}) \ldots
\]

The logarithmic form is not only convenient to model a multiplicative equation. Additionally, this functional form nicely captures the often-expected association with the independent variables: for example, improving economic development by one unit in very poor countries should be associated with a larger reduction in displacement figures than the same improvement in very developed nations where the marginal economic improvement due to economic growth is substantively smaller. To capture the migration-hump pattern, we include GDP, as well as a GDP squared.

Beyond the core variables included in the model, a large number of additional variables determine why some countries produce larger counts of displaced people in otherwise similar circumstances. For example, countries that share historical ties with other countries, such as a common colonial history or linguistic and cultural proximity, often also have historically higher emigration rates (cf. Hooghe et al. 2008). Other countries are members of regional organizations that shape policies on free movement and labour migration (Lavenex 2018). Similarly, geographic remoteness or connectedness influences the number of migrants (Beine et al. 2016). Fortunately, since all of these variables are essentially time-invariant, we can account for these influences using country fixed effects, which effectively eliminates any confounding influence by these variables in our estimation (Wooldridge 2010). We additionally include year fixed effects, which account for varying degrees of global displacement over time.
Results

Table 1 presents the results for our analysis of refugee- as well as asylum-application numbers. Our model estimates confirm our hypotheses in terms of both sign and statistical significance of the estimated coefficients. We find a strongly statistically significant, inverted u-shaped effect of GDP per capita on the number of asylum applications, but no significant effects for refugee numbers, regardless of the type of refugee data used in the analysis. Since interpreting coefficients in non-linear models is not straightforward, we estimate the expected number of refugees/asylum seekers for all observed levels of income level in our sample, while holding all other variables constant at their mean. We assume an average country fixed effect—that is, the country of origin tends to produce refugees/asylum seekers at a similar rate to the global average. The year fixed effect is held at the value for 2014, the most recent year in our sample.

Figure 1 plots our results for each dependent variable. Using either the original UNHCR refugee data or the World Refugee Dataset, the point estimate of the predicted number of refugees does not vary substantively, regardless of the overall level of development in the country of origin. We merely observe a moderate decline in the number of refugees with increasing levels of GDP per capita for the World Refugee Dataset. It is noteworthy that the estimation uncertainty for the poorest countries is enormous; in our graph, we truncated the upper values of

| Table 1 |
|---|
| **Model estimates of the number of new refugee and asylum-seeker numbers per country of origin. All dependent variables are included as the natural logarithm** |

| (1) UNHCR | (2) WRD | (3) Asylum applications |
|-----------|---------|------------------------|
| Battle-related fatalities (ln) | 0.32** | 0.33** | 0.07** |
| Conflict affected population (ln) | -0.13 | -0.19** | -0.02 |
| Conflict affected area (ln) | 0.19 | 0.14 | 0.04 |
| Respect for human rights | -1.71*** | -1.74*** | -0.29* |
| GDP p.c. (ln) | 2.18 | 1.69 | 7.12*** |
| GDP p.c. (ln) squared | -0.21 | -0.20 | -0.46*** |
| Population (ln) | 3.72 | 1.98 | -1.88 |
| Constant | -64.41 | -30.19 | 12.61 |
| Observations | 668 | 668 | 665 |

All models are linear models and include country and year fixed effects. Standard errors in parentheses. *p < 0.1; **p < 0.05; ***p < 0.01.
Figure 1.
Economic development and expected number of refugees and asylum seekers based on estimates in Table 1. All other variables held at their mean. The x-axis is displayed on a logarithmic scale.
the confidence intervals for these cases in order to generate a easily interpretable plot with identical y-axis scales for all three outcome variables. Nevertheless, despite the enormous estimation uncertainty, the point estimates suggest a low number of new refugees per year even in the poorest countries. In contrast to the poorest countries, we find low estimation uncertainty for the richest countries, indicating that the number of refugees from these countries is reliably small.

Very poor countries may potentially produce very large or extremely low numbers of refugees, as indicated by the large variance, although the expected level based on the point estimation is comparatively low. Moreover, the predicted decline in actual refugee numbers due to increasing GDP is substantively negligible and statistically insignificant. The finding thus reflects the mixed results uncovered in previous macro-level studies, which employed UNHCR refugee data as their dependent variable. One way to interpret this is that receiving countries are screening to filter out anyone who may allegedly be an economic migrant and/or implementing expedited or prima facie processes for people from origin countries experiencing large-scale violent conflict.

The results for new asylum applications are substantively different. We find a clear indication that the number of asylum applications climbs as we move from poor to middle-income countries affected by conflict, then decrease as we approach USD5,000 GDP per capita. Again, we find large estimation uncertainty for the poorest countries, which does not allow us to draw strong conclusions for hypothesis 1b, that these countries have lower cross-border displacement rates than middle-income countries. For the least-developed countries, the point estimates are lower than the confidence interval for middle-income countries, but the confidence interval of the expected number of new asylum seekers ranges from a few dozens to about 30000 per year.

The estimated pattern is in line with our hypotheses for middle- to high-income countries. Middle-income countries in conflict are predicted to produce on average around 7000 to 20000 asylum seekers per year, holding all other variables constant. This level decreases to a few hundred asylum applicants from the wealthiest countries in conflict. Overall, the point estimation suggests an inverted U-shaped relationship that mirrors closely the migration hump reported in studies of regular migration (e.g. Martin and Taylor 1996; de Haas 2007; Clemens 2014), but this result needs to be interpreted cautiously, due to the large uncertainty for poor countries. In the Supplementary Appendix, we demonstrate that a curvilinear effect of income describes the asylum-seeker data better than a simple linear effect. Furthermore, for both UNHCR variables, modelling a linear-development effect produces the same substantive result as in Table 1.

The remaining estimates are consistent with existing research on human rights violations and armed conflict. As expected, they are also substantively identical across all models: the better the human rights situation in a country of origin, the lower the predicted number of refugees as well as asylum applications. Increases in conflict intensity predict both more refugees and more asylum seekers. Geographic dispersion of a conflict is a positive, but at best only marginally significant, predictor of the three outcome variables.
Discussion and Conclusions

On its face, the idea that economic factors like income would influence asylum-seeking and refugee numbers makes sense. After all, conflicts not only pose a threat to the lives of individuals, but are often detrimental to the economic situation in affected countries as well (Gates et al. 2012). The problem has been consistently demonstrating how a basic variable like GDP relates to refugee outflows. This is not just an issue for researchers. With policy makers and development agencies becoming increasingly involved in refugee and forced-displacement response while also having to manage the political tensions evoked by migration generally, understanding how the UNHCR’s data aligns with wider development indicators will be key to creating effective cooperation between development, humanitarian and political actors. From both scientific and policy perspectives, our analysis highlights two key issues.

The first key issue is that the UNHCR refugee data and the definitions of variables are influenced by institutional and national policies. The UNHCR follows a proscribed set of policies and Member-State laws when evaluating who is counted in each category of flight. The problem from a counting perspective is that the national-level rules and procedures can vary widely, since the 1951 Convention and 1967 Protocol are not themselves legal processes, but are instead frameworks that guide Member States’ legal processes. Even *prima facie* recognition processes require an asylum seeker to register, and then the local authority or the UNHCR to verify their country of origin and citizenship. In Kenya, for example, the process of having an asylum request adjudicated is often unclear and can exclude specific individuals based on conditions in their country of origin. On the other hand, new asylum seekers are counted prior to the adjudication process. For this reason, the count of asylum seekers is more likely to reflect an influence of economic conditions in the country of origin on displacement.

Researchers should be aware that refugee data is therefore heavily affected by the legal processes in the receiving country. In the worst case, these processes may act as filters that eliminate or at least blur the statistical associations between initial country-of-origin characteristics and cross-border-displacement numbers. Displacement flows might be better mirrored by UNHCR asylum-seeker data than by refugee data when analysing the effect of origin-country conditions on displacement.

For policy makers and development organizations aiming to prevent cross-border displacement by supporting economic development in countries of origin, these counting issues are crucial to understand. The data that development-aid professionals are used to working with is often quite standardized. For example, GDP, despite well-founded critiques (e.g. Kubiszewski et al. 2013), is a very standard variable in its construction. For this reason, when experts on refugee issues work with experts on development, it is critical that the political and legal issues that exist from case to case in the background of UNHCR data be addressed.
The second key issue—that income levels relate to asylum-seeking in a hump-shaped pattern—shows that income and economic factors are indeed associated with refugee flows at the asylum-seeking stage. This underscores that conditions in the country of origin other than violence and repression have an effect on the decision to cross a border and seek asylum. We highlight two things that development-policy makers should focus on when thinking about how aid affects refugee flows.

The first is why people in middle-income countries are more likely to cross a border and make an asylum claim than individuals from poor countries. If we follow the logic of the migration hump, people in lower-middle- and middle-income countries have more ability to pay for travel to a border, but are unlikely to be wealthy enough to have assets worth staying to protect. We can reasonably speculate that, as countries move into the wealthier income range, people may be less likely to flee if they have assets such as businesses or property to stay and protect. Furthermore, if individuals decide to flee in wealthy countries, these countries often have the means to deal with internally displaced people from conflict-affected provinces or regions, mitigating the need for cross-border displacement. It is important that development agencies recognize that people will stay in their country of origin if they have a good reason to do so and that investments in conflict management and good governance can prevent spiralling violence and protect assets so that people are not forced to leave.

On a larger note, our analysis shows that the existing research on the link between economic development and forced displacement has been hampered by a problematic conflation of the generally accepted definitions of ‘refugee’ and ‘asylum seeker’ versus how these terms are defined in the UNHCR’s official statistics. This is not just an academic issue, but has a real effect on how economic-development agencies frame their role in preventing displacement and supporting refugees. Understanding the background effects that influence refugee counting is a critical step in understanding why the relationship between displacement and income levels in countries of origin is often statistically unclear. We argue that a better data source is the number of new asylum applications, since it ostensibly measures a response to origin-country conditions that drove the decision to flee.

Future work on displacement and economic conditions, especially quantitative research, can have a positive impact on both scientific understandings of flight patterns and development-policy options for preventing displacement and supporting refugees. Further research could go beyond top-line economic indicators and look at the economic effects of infrastructure loss (e.g. Vignal 2014, 2018); for those who cannot leave in the early wave of displacement, the means for earning money may literally be destroyed as a result of conflict. One variable that would be interesting to include is the stringency of receiving countries’ RSD processes. Coding changes in migration process stringency has been done (DEMIG 2015), but RSD processes tend to change rapidly and, within a single country, different rules for different nationalities can be in place simultaneously. For this reason, a ‘stringency’ variable is not practical in this article, but could be an interesting
future research topic. To take this kind of interdisciplinary work to the next level, it will be critical that researchers from different fields work together to better understand the real-world assumptions behind their data and account for these differences when doing statistical and empirical analysis.

Supplementary Data

Supplementary data are available at JRS online.

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