

Analyzing the Relationship Between Country Development and Forced Migration

The Human Development Index (HDI) is an index from 0-1 that measures three factors of human development in any given country: life expectancy, access to and amount of education, and standard of living.¹ Those scores are measured against a rubric of low (.507), medium (.634), high (.75), and very high (.892) human development categories, with the developing countries measurement set at .686 and a world median value of 0.728 (Figure 1). Based on the 2018 HDI and Refugee data set,² there are 88 developed countries and 101 developing countries.

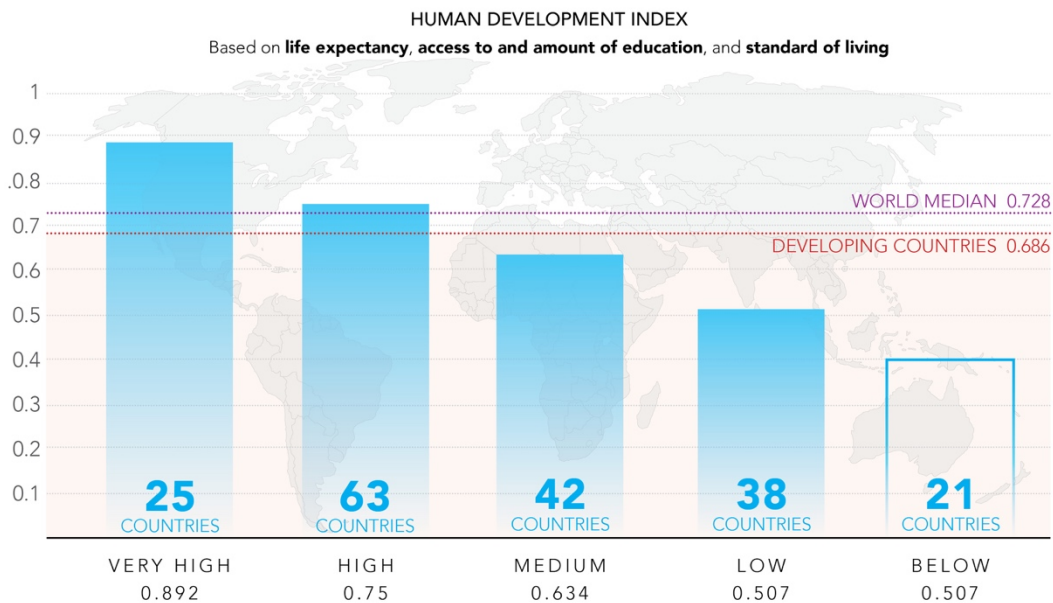


Figure 1: Country distribution based on Human Development Index (HDI) scores

¹ Max Roser (2014). Human Development Index (HDI). Published online at OurWorldInData.org. Accessed from: <https://ourworldindata.org/human-development-index>

² Ibid

Quick Glance and *A Priori* Assumptions

Out of 189 countries listed in that data set, the top 20 countries that score well above the “very high human development” marker of .892, range between .914 and .954 (Figure 2).

Because of that, my *a priori* assumption was that those countries would then be more willing and able to help people desperate enough to flee because of conflict and food insecurity.³

Thus, I created the following hypothesis statements with an alpha level set at .05:

H_0 : there is no relationship between HDI score and number of refugees hosted

H_A : there is a relationship between HDI score and number of refugees hosted

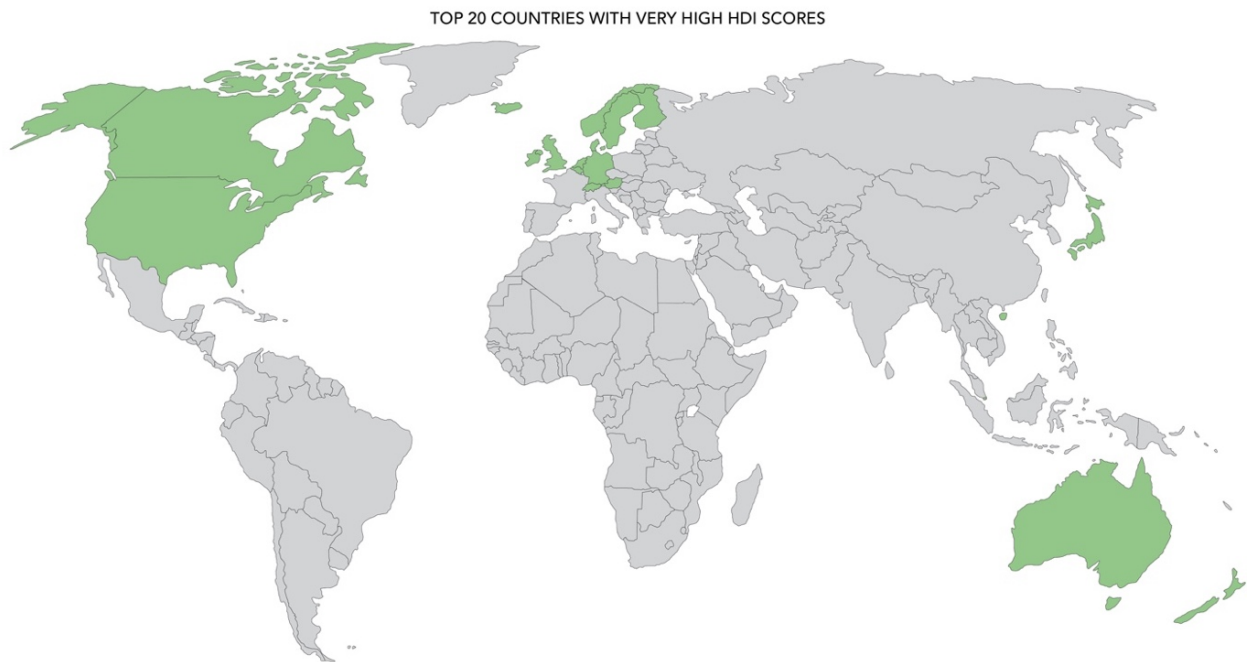


Figure 2: Top 20 countries with the highest HDI scores between .914 and .954.

³ <https://www.unhcr.org/en-us/figures-at-a-glance.html>

By sorting the data in various ways, I quickly determined that there did not seem to be a relationship. Out of the 20 countries with the highest HDI scores, only two have hosted large amounts of refugees, and 12 are at or below the .686 threshold for developing countries. Germany and the United States, ranked number 4 and 15 on the HDI scale, hosted about 2.4 million refugees collectively. By contrast, Columbia, Syria, and the Congo (ranked 79, 154, and 179 with HDI scores of .761, .549, and .459 respectively) hosted more than 19 million refugees collectively (Figure 3).

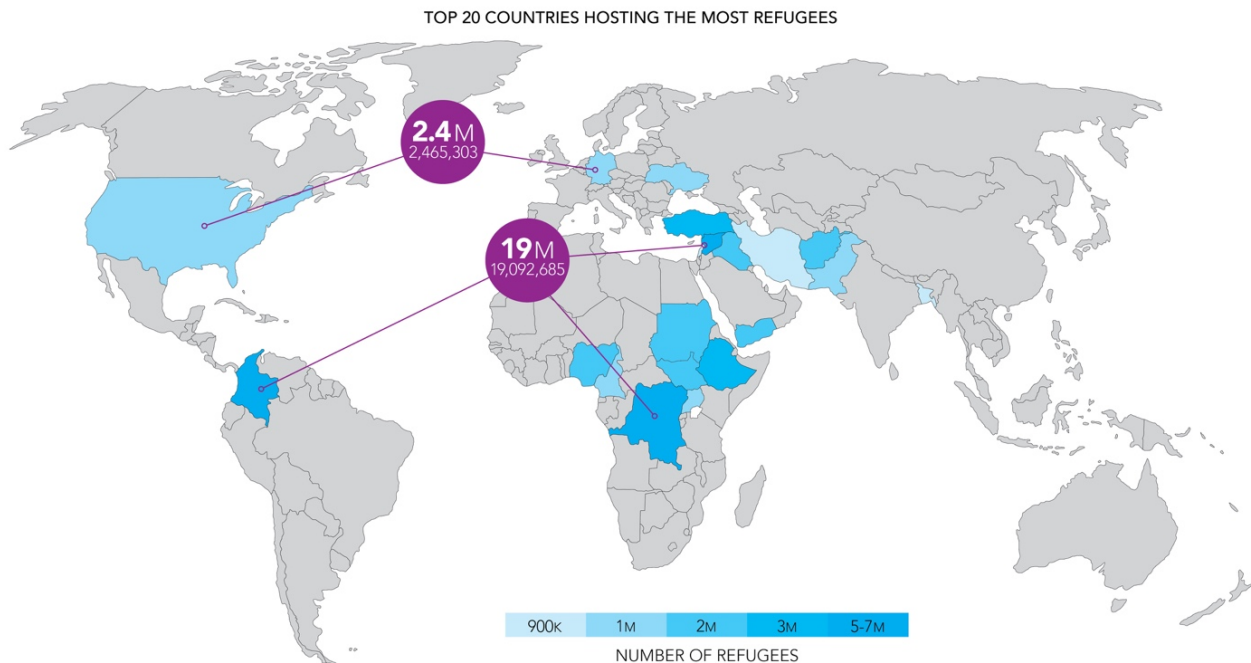


Figure 3: Top 20 countries hosting the most refugees.

Proving Statistical Relationships

To test my hypothesis statements, I performed a few calculations. I totaled the three refugee population numbers, isolated the two categories (HDI score and overall refugee number), rendered the variables as dichotomous based on the median value, used the cross-tabulation method to determine the frequency totals of values above and below the respective medians, determined the expected frequency values, and applied a chi-squared test on all of the

frequencies to determine the probability-value of .42. Because the p-value is well above the .05 alpha level, the null hypothesis cannot be rejected, verifying the fact that there is no statistical relationship between a country's high HDI score and the number of refugees it hosts (See *Needed* and *HDI-Overall* worksheets, HDI and Refugees(2)_JO Excel document).

Since the overall refugee population is comprised of three subsets — refugees in a host country, asylum seekers in a host country, and internally displaced persons (IDPs) within their own country — I performed the same steps on each of those populations to determine if any had a relationship to country HDI score. Both IDPs and asylum seekers have a relationship to HDI scores, the first is tied to low HDI scores, the second to high HDI scores (See *HDI-IDP*, *HDI-Refugee* and *HDI-Asylum* worksheets, HDI and Refugees(2)_JO Excel document).

Further analysis reveals that out of the 30 countries that host IDPs, 76% of those rank below the median, yet hold 73% of the entire IDP population worldwide. Columbia, Syria, and the Congo hosted the most IDPs and their IDP population comprised 99.96%, 99.69%, and 89.41% respectively of their overall refugee population. IDPs, like refugees, are forced to leave their homes but are unable to cross borders for a variety of reasons.⁴ Because the HDI index measures life expectancy, access to and amount of education, and standard of living, it makes sense then that countries with conflict and/or persecution leading to large IDP populations would rank lower on the HDI index.

Conversely, countries without conflict are more stable and consequently health, education, production, and living standards rise, generally linking asylum-seekers to high HDI scores. Of the 20 countries hosting the most asylum seekers, all but two measure as “high” or

⁴ <https://www.unhcr.org/en-us/internally-displaced-people.html>

“very high human development” and seven rank within the top 20 countries in the world for HDI score. Additionally, those same 20 countries host 82% of all asylum seekers worldwide indicating that these are places that people want to go for a better life.

Conclusion

Analyzing relationships between HDI score and forced migration has provided interesting information but sparked additional questions. For instance, why would 184,190 people seek asylum in South Africa, ranked 113 of 189 with an HDI score of .705? Or why would 50,456 people seek asylum in Kenya, ranked 147 of 189 with an index score of .579? Neither country is considered a high or very high human development country, but both are within the top 20 for hosting asylum seekers. Additional relationships between these populations and form of government, number and severity of conflicts, and/or location proximity to country of origin is needed to provide a full analysis on forced migration.