

# Homeward Bound: How Migrants Seek Out Familiar Climates

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**EXECUTIVE SUMMARY**

**CHARLES A. TAYLOR AND MARCO TABELLINI INTRODUCE THE CONCEPT OF “CLIMATE MATCHING” AS A DRIVER OF MIGRATION AND ESTABLISH SEVERAL NEW RESULTS. THEY SHOW THAT CLIMATE STRONGLY PREDICTS THE SPATIAL DISTRIBUTION OF IMMIGRANTS IN THE US, AS MOVERS SELECT DESTINATIONS WITH CLIMATES SIMILAR TO THEIR PLACE OF ORIGIN.**

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This is a brief based on the E-Axes Young Scholar’s Webinar Series on Climate Finance and Economics, organized on December 12, 2023

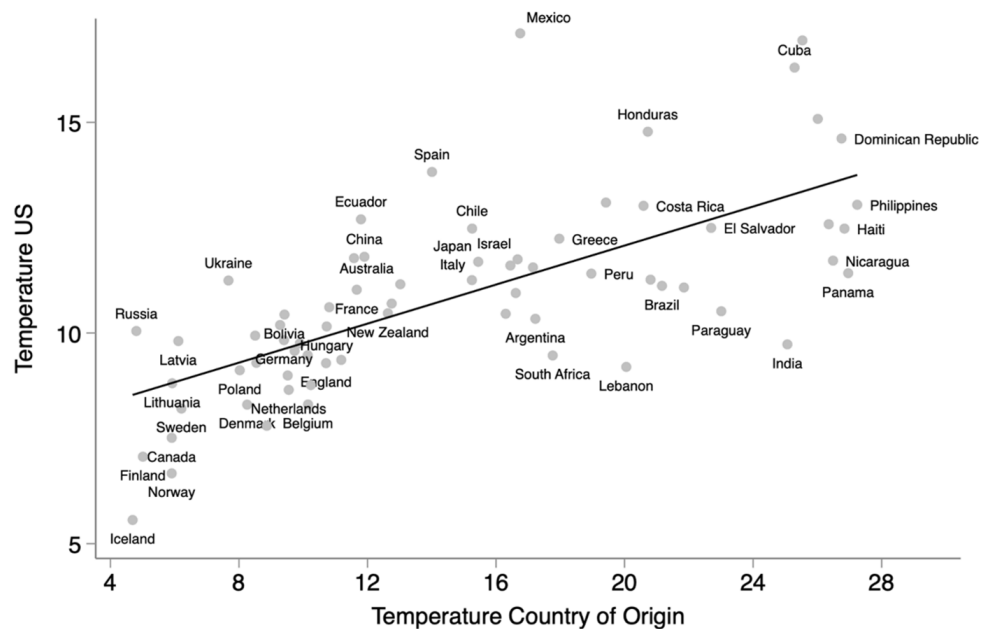
The title of the webinar was "Homeward Bound: How Migrants Seek Out Familiar Climates", presented by Charles A. Taylor (Harvard University) and moderated by Diego Känzig (Northwestern University)

# 1 Policy Brief

Do migrants seek out familiar climates? Historical anecdotes have long hinted at “climate matching” – the idea that people tend to move to places with climates similar to their homelands. In the 1600s, the Englishman Sir Ferdinando Gorges argued that New England was “more suitable to the nature of our people, who neither finde content in the colder Climates, nor health in the hotter” (Kupperman, 1984). Three centuries later, U.S. President Calvin Coolidge observed that “the newcomers from Europe commonly sought climatic conditions here like those in which they had been raised. So the Scandinavians are found chiefly in the northern parts of this country” (Coolidge, 1926).

The paper provides the first systematic piece of evidence for climate matching, among both international migrants to the U.S. and domestic migrants within the U.S., over different periods, including historical and modern times. We combine different data sources, including U.S. censuses from 1880 and mortality records from 1959-1961, to demonstrate that migrants from warmer or colder countries tended to settle in U.S. areas with similar climates. This finding holds even after accounting for various factors like geographic distance, economic conditions, and migration history. In other words, relative climate change—not just absolute climate—matters to people.

**Figure 1: Temperature matching of immigrants in the U.S., 1880**



*Notes:* The figure displays the relationship between average temperature in degrees Celsius across U.S. counties where immigrants from each origin were living in 1880 (y-axis) and the average temperature in the capital city of their country of origin (x-axis). The regression coefficient and the corresponding robust standard errors are, respectively, 0.231 and 0.033.

We also examine whether the climate-migration relationship holds within countries. First, we focus on German immigrants at the turn of the 20th century, when this group accounted for

30% of the U.S. foreign-born population. We develop a novel measure of climate similarity based on the spatial distribution of surnames in Germany and in the U.S. Second, we consider Norwegian immigrants between 1865 and 1880, when more than 250,000 individuals (15% of the 1865 Norwegian population) embarked for the U.S. Third, we follow migrants moving across counties within the U.S. from 1850 to 1940. In all cases, we find that people from colder origins (within Norway, Germany, and the U.S.) tended to settle in colder U.S. destinations.

To address the concern that some omitted variables might be driving our results, we focus on U.S. domestic migration, and leverage shifts in average climate across counties throughout the 20th century, which are influenced by multi-decadal oceanic oscillations (e.g., North Atlantic Oscillation) as well as anthropogenic climate change. We find that changes in climate distance from 1900 to 2019 predict changes in migration between county pairs over the same period.

Beyond demonstrating the existence of climate matching, the paper explores the reasons behind it. One explanation is the transferability of climate-specific skills, particularly in agriculture. Another one is the appeal of climate as an amenity. The paper finds evidence for both these mechanisms.

The economic implications of climate matching are potentially large. The study estimates the value of climate similarity for migrants, using historical data like the 1862 Homestead Act and mortality records. We find that climate similarity has a quantifiable economic and health value for migrants in the range of \$4,500 to \$14,300 (in today's dollars) for each additional Celsius degree in climate similarity.

Finally, the paper links climate matching to population growth patterns in the U.S. after World War II. To this end calculate each county's "climate connectivity" by estimating the elasticity of migration with respect to climate distance with the change in average temperature distance between each county-pair during the 20th century. Areas with increased climate connectivity due to climate change with have experienced faster population growth between 1960 and 2010. This trend is expected to continue, with the U.S. South likely to see faster growth due to its increasing climate connectivity. We expect the link between climate matching and population growth to be even more relevant in the context of international migration and future climate change.

Our findings are also relevant to climate refugee policy. Over 20 million people annually, on average, have been forcibly displaced by weather-related events since 2008 – a number that is estimated to increase with further global warming (UNHCR, 2016). Given the potential welfare and productivity implications, climate similarity should be taken into account when resettling existing climate refugees and when designing 'managed retreat' policies in anticipation of climate change.

## References

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