sociological science

Supplement to:

Herman, Andrew C., Jens Peter Andersen, and Mathias Wullum Nielsen. 2026. “Developing Countries Face Falling Circulation Rates and Rising Migration Losses in Science” Sociological Science 13: 1132-1158.

Supplementary Materials

Developing countries face falling circulation rates and rising migration losses in science

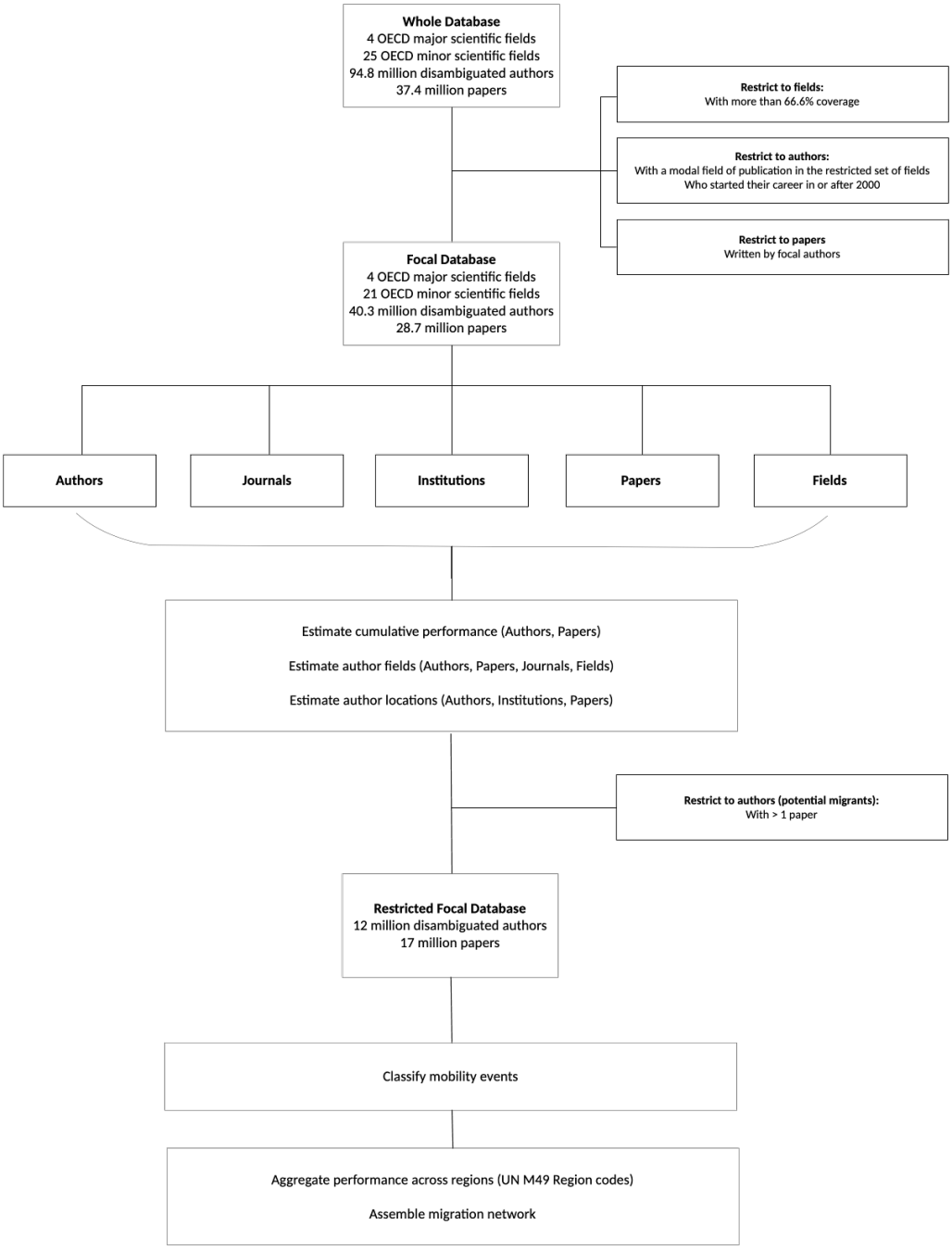

Figure S1. *Flowchart of data inclusion and exclusion.*

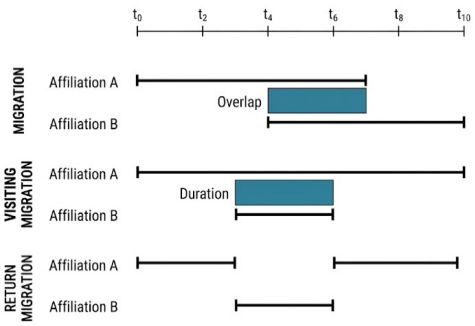

Figure S2. *Types of migration. Migration involves relocating to a new country (Country B) while breaking one's connection to their original country (Country A). This type may involve overlapping periods where the individual starts at Country B before ending their affiliation at Country A. Visiting migration refers to temporary relocations where the individual maintains their original affiliation (Country A), while temporarily joining a new one (Country B). This type involves overlapping periods, where the individual is affiliated with both countries simultaneously for a specific duration, but starts and ends in Country A. Finally, return migration captures moves where the individual initially relocates to a new country (Country B) but eventually returns to their original one (Country A). Unlike visiting mobility, this type requires a period (at least one year) during the stay at Country B, where the individual has no simultaneous affiliation in Country A, before returning to Country A.*

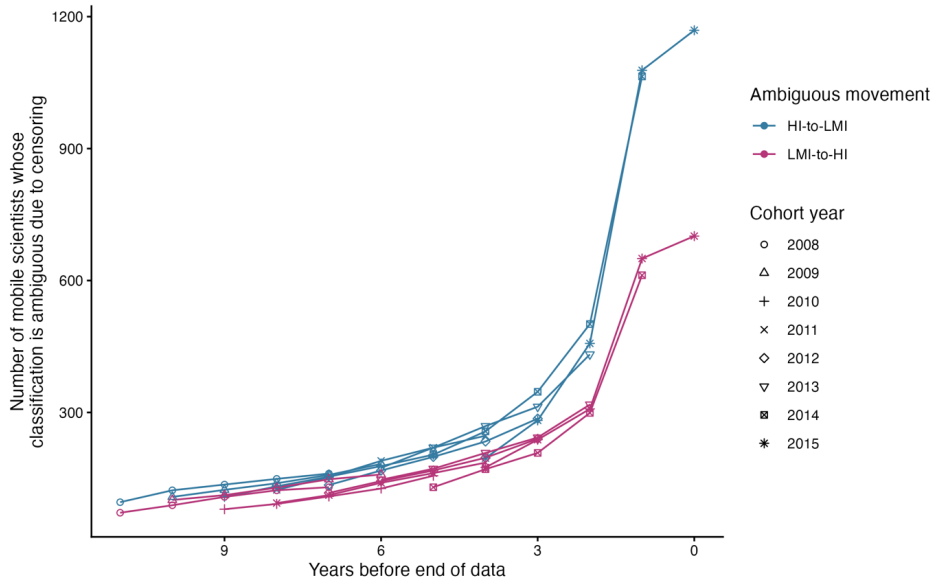

Figure S3: *Censored mobility in relation to the last observations in the data. On the y-axis is the number of mobile scientists who are ambiguous in our classification scheme due to censoring, broken down by their cohort year (shape) and the apparent direction of their mobility (color). The x-axis shows timing according to the number of years before the end of the database in 2022.*

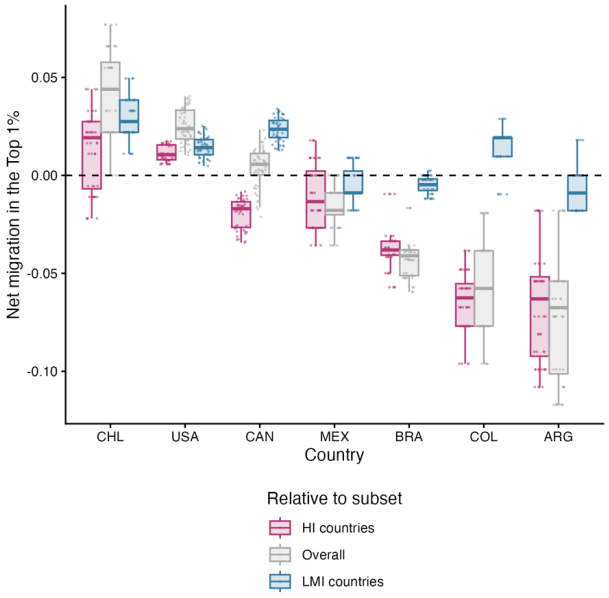

Figure S4. *Expanded results from Figure 4 in the main text, for all countries in the Americas with at least 20 scholars in the global Top 1% in the 2014-2015 cohorts.*

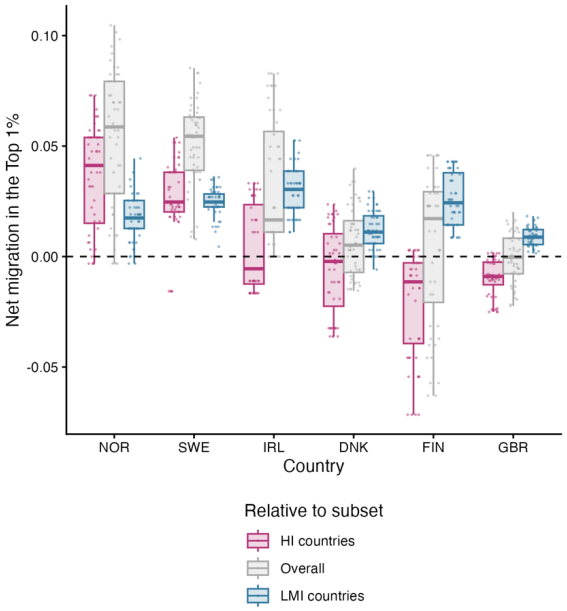

Figure S5. *Expanded results from Figure 4 in the main text, for all countries in the UN M49 subregion of Northern Europe with at least 20 scholars in the global Top 1% in the 2014-2015 cohorts.*

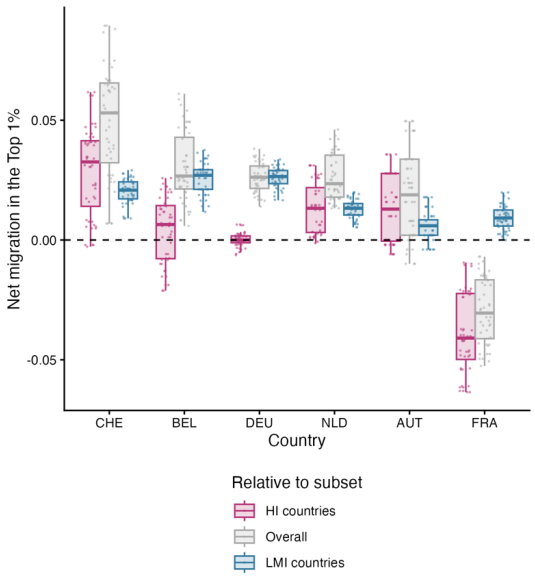

Figure S6. *Expanded results from Figure 4 in the main text, for all countries in the UN M49 subregion of Western Europe with at least 20 scholars in the global Top 1% in the 2014-2015 cohorts.*

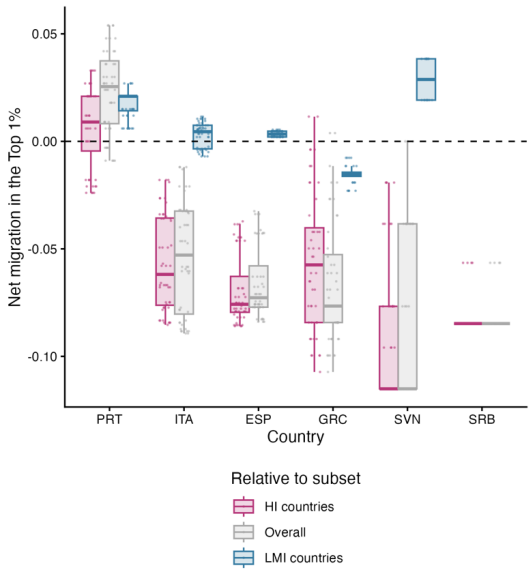

Figure S7. *Expanded results from Figure 4 in the main text, for all countries in the UN M49 subregion of Southern Europe with at least 20 scholars in the global Top 1% in the 2014-2015 cohorts.*

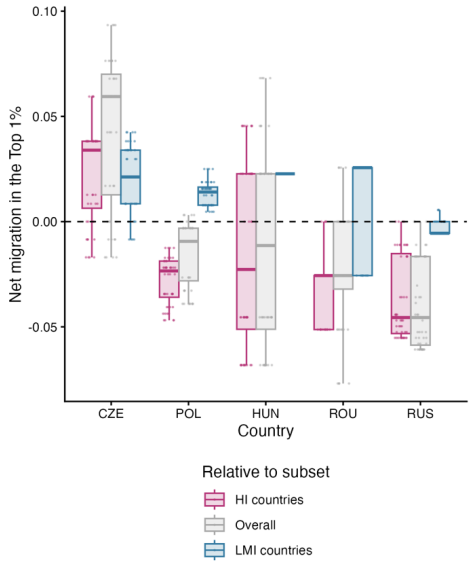

Figure S8. *Expanded results from Figure 4 in the main text, for all countries in the UN M49 subregion of Eastern Europe with at least 20 scholars in the global Top 1% in the 2014-2015 cohorts.*

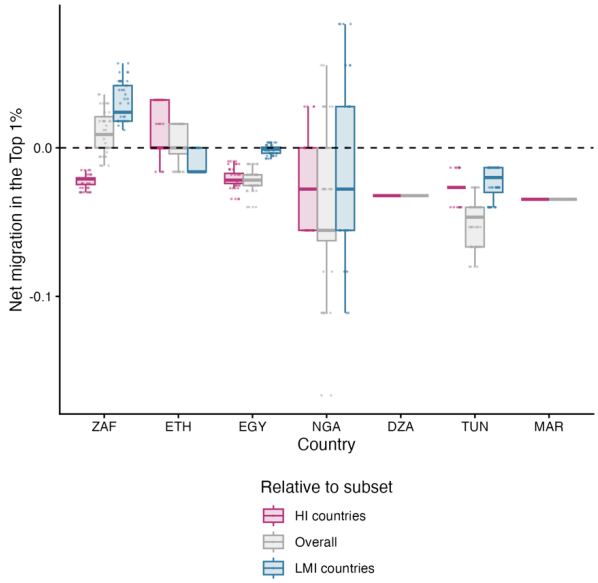

Figure S9. *Expanded results from Figure 4 in the main text, for all countries in Africa with at least 20 scholars in the global Top 1% in the 2014-2015 cohorts.*

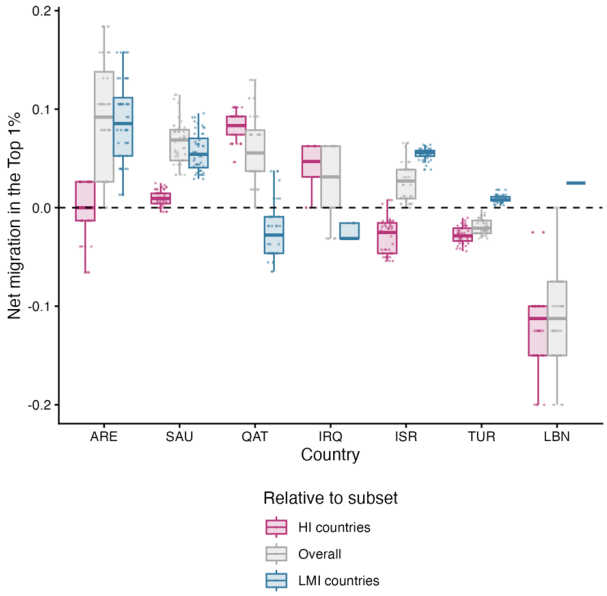

Figure S10. *Expanded results from Figure 4 in the main text, for all countries in the UN M49 subregion of Western Asia with at least 20 scholars in the global Top 1% in the 2014-2015 cohorts.*

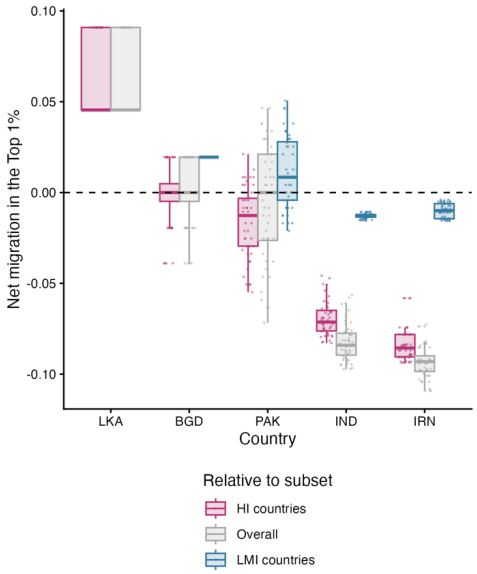

Figure S11. *Expanded results from Figure 4 in the main text, for all countries in the UN M49 subregion of Southern Asia with at least 20 scholars in the global Top 1% in the 2014-2015 cohorts.*

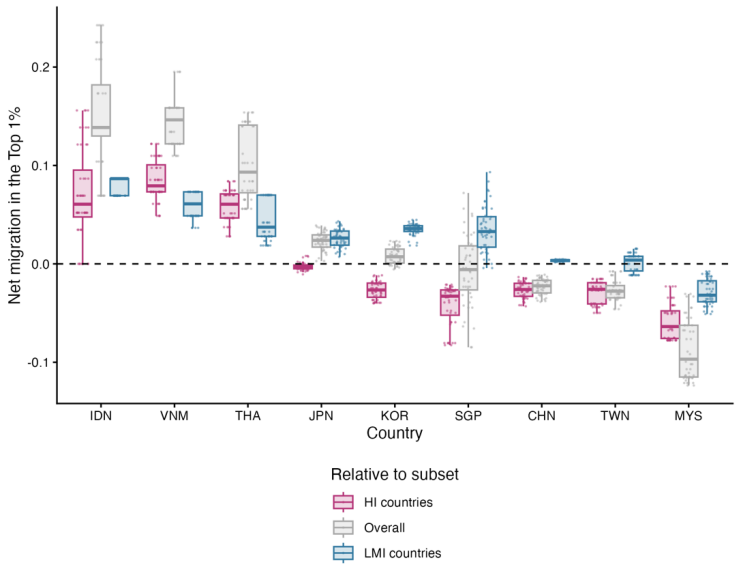

Figure S12. *Expanded results from Figure 4 in the main text, for all countries in the UN M49 subregions of Eastern Asia and Southeastern Asia with at least 20 scholars in the global Top 1% in the 2014-2015 cohorts.*

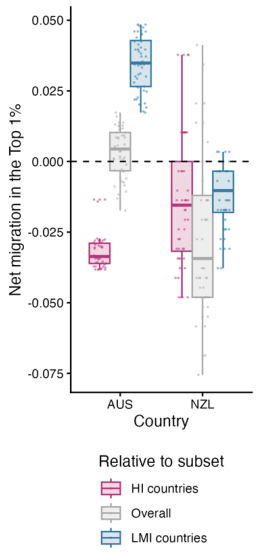

Figure S13. *Expanded results from Figure 4 in the main text, for all countries in the UN M49 subregion of Australia and New Zealand with at least 20 scholars in the global Top 1% in the 2014-2015 cohorts.*