

The Changing Structure of International Migration, 1960–2020

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Introduction

Understanding the structure of international migration, that is, how movements are distributed across origins and destinations, is central to debates on the globalisation of migration. Beyond considering the absolute number of international migrants, which has increased sharply since the 1960s, a key question is whether international migration has become more diversified across origins and destinations, or instead remains concentrated within a few major corridors and historical pathways.

This paper examines how the structure of international migration changed between 1960 and 2020. Drawing on newly harmonised bilateral flow estimates, we investigate whether the diversification of migration flows represents a genuine broadening of opportunities or merely reflects size effects stemming from uneven country populations and migrant stocks. We introduce a general framework to compare and interpret different measures of migration diversity and extend it with a population-informed reference that reflects countries' capacities to send and receive migrants. Further, we introduced population-adjusted measures that better reflect migration theory and demographic intuition. By focusing on the distributional structure of migration rather than on volume alone, we clarify how international migration evolved and what this implies for the broader dynamics of global migration systems.

Background and motivation

Empirical research on the structure of international migration is usually framed as a test of the globalisation hypothesis, according to which international migration has in recent years become more *intense* (greater number of migrants), more *diverse* (greater number of origins, destination, and migration corridors involved, as well as evenness of their distribution), and spanning larger geographical *distances* (Czaika & de Haas, 2014). Among these three defining features (migration intensity, diversity, and distance), migration diversity is the most challenging to evaluate. Most studies measure diversity with single indices of *richness* (ie, the number of origin/destination countries and/or of migration corridors) or *evenness*, such as the Herfindahl/Simpson index (Czaika & de Haas, 2014; Czaika & Orazbayev, 2018; Fitter et al., 2024; Fransen & De Haas, 2022; Zhao et al., 2023).

However, single indices can yield contradictory conclusions, especially over time, as they weight smaller vs larger migration corridors differently. A migration system may appear more diverse by richness (which treats all corridors equally), yet less diverse by Herfindahl/Simpson (which upweights large corridors). This makes comparative and longitudinal assessments sensitive to index choice and thus analytically fragile.

To overcome this limitation, we draw on the ecology literature and **develop a unified framework that groups existing diversity indices within the same analytical family.** This allows us to vary the sensitivity of the measure to dominant (ie, larger/more popular) *vs* marginal corridors on a common scale and robustly compare periods and countries.

We also revisit a key assumption behind conventional diversity indices: that maximum diversity occurs when flows are uniformly distributed across elements of the system, such as country pairs in the case of

migration. This assumption is inconsistent with both migration theory and demographic intuition, where larger countries naturally have greater capacity to send and receive migrants. To address this, we build on the rich literature on mobility and contingency tables in sociology (Breen, 1994; Hout, 1983). In this tradition, structural, non-random patterns are identified by comparing observed and expected mobility flows under statistical independence (also known as ‘perfect mobility’ or mixing: see Hout, 1983). Deviations from statistical independence or perfect mixing indicate that movement between positions or location is structured beyond what would be predicted by relative size alone.

Adapting this logic to migration systems, **we define a population-adjusted reference distribution** in which expected flows arise under demographic mixing—allocation proportional to the size of migrant populations in sending and receiving countries. By comparing observed and population-proportional expected flows, we can isolate structural patterns of diversity beyond country sizes.

Data and methods

We construct **a new set of country-to-country migration flow estimates for the period 1960–2020 from migration stock data recently released by the World Bank (2023)**. The flows cover 195 world countries over six ten-year periods and distinguish outward, transit, and return moves. Following previous work (Abel, 2018; Abel & Cohen, 2019, 2022; Azose & Raftery, 2019), we implement six estimation strategies: two stock-differencing methods, one migration-rate method, and three demographic accounting approaches (minimisation–open, minimisation–closed, and pseudo-Bayesian). We use the pseudo-Bayesian variant, which best reconciles stock differences with demographic consistency (Abel & Cohen, 2019), as our main specification, and cross-validate results across all strategies for robustness.

For replication and temporal precision, we complement these data with another dataset of bilateral migration flows developed by Standaert and Rayp (2022), which provides yearly bilateral flow estimates for a smaller number of countries. This allows us to assess whether the long-term patterns identified in our decadal data also hold at annual frequency.

We treat each decade (and year) as a directed, weighted network of country pairs. Diversity measures are computed on (i) observed distributions and (ii) population-adjusted distributions under demographic mixing. We summarise results at global (ie, system-wide), regional, and country levels, tracking richness, evenness, and differentiation net of demographic scale.

Preliminary results

Preliminary results indicate distinct phases in the evolution of global migration diversity. From 1960 to 1980, the global migration system appears highly uneven, dominated by a small set of major corridors alongside many small, regional flows. After 1990, however, the structure appears to flatten: large corridors are less dominant, and the overall distribution moves closer to what would be expected under demographic mixing.

This shift marks a clear structural break. Earlier decades show diversity driven mainly by small, idiosyncratic routes, while later decades display greater proportionality between countries’ population sizes and their migration exchanges. By 2010-2019, migration appears substantially more balanced across medium and large corridors, while very small corridors remain sparse.

These findings appear consistent across flow estimation methods and in the replication with Standaert and Rayp’s (2022) data, which shows short-term oscillations along the same long-run convergence. Overall, the evidence points to a progressive alignment of global migration flows towards demographic proportionality.

Importantly, our preliminary results also show why relying on single indices might be misleading. Migration systems that appear ‘more diverse’ by richness can simultaneously look ‘less diverse’ by evenness, when large corridors are appropriately weighted. Crucially, we find that the ranking of diversity across periods flips across different single-measure indices. By placing these competing indices within a unified family and evaluating them against a population-adjusted baseline, we recover structure that single indices may obscure and sharpen prior assessments of the diversity and globalisation of international migration.

As a next step, we will decompose the observed global changes by world regions to assess whether any alignment patterns have been brought about by rising within-region or between-region diversity. Further, we will map country-level emigration and immigration composition to identify which specific migration corridors may be responsible for the observed aggregate trends.

Discussion and contribution

This study makes three main contributions. First, we provide a comprehensive dataset of bilateral migration flows from 1960 to 2020, using multiple estimation techniques and distinguishing between outward, transit, and return moves. Second, we introduce a unified comparative framework for diversity assessment that situates commonly used diversity indices within one family, allowing for scale-invariant temporal comparisons. Third, we develop a population-adjusted benchmark, grounded in mobility-table modelling and demographic theory, that separates structural change from demographic scale.

Together, these innovations provide a clearer empirical and methodological foundation for understanding how the structure of international migration has evolved over the past six decades. Our preliminary results suggest that migration has become increasingly even and demographically proportional, indicating a gradual structural alignment of flows within the constraints of country size.

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