Quantifying Global International Migration Flows.

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Motivation

- Last few years focused mainly on quantifying bilateral international migration flows.
  - Developed an accounting system to link UN bilateral migrant stock and demographic data (births, deaths and population size)
  - Bilateral flows estimates match the changes in bilateral stocks and demographic changes.
  - The sum of the bilateral flows in each country matches the UN net migration estimate.
- More recent work, most of which is half complete:
  - Projections based on estimated rates in base year.
  - Investigating alternative assumptions for net migration.
  - Disaggregation of estimated flows to smaller geographic units.

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     - The numbers of migrants, defined by their birthplace, living in a country at a point in time.
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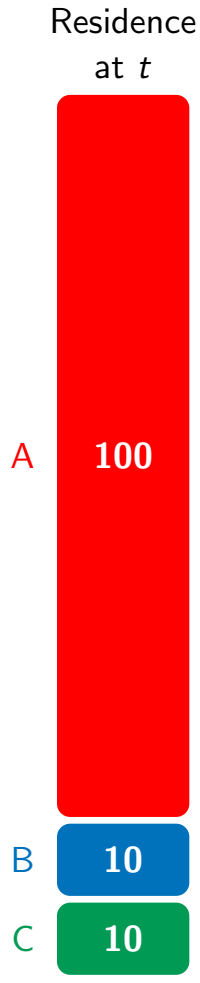
     - Is also called lifetime migration. Difficult to distinguish when the migrants moved.
  2. Flows:
     - Movements between countries of origin and destination during a defined period.
     - Dynamic, difficult to define and compare across countries.
     - UN and Eurostat provide collections.
     - Available only for some Western countries.

Distribution of a Population Born in a Country A



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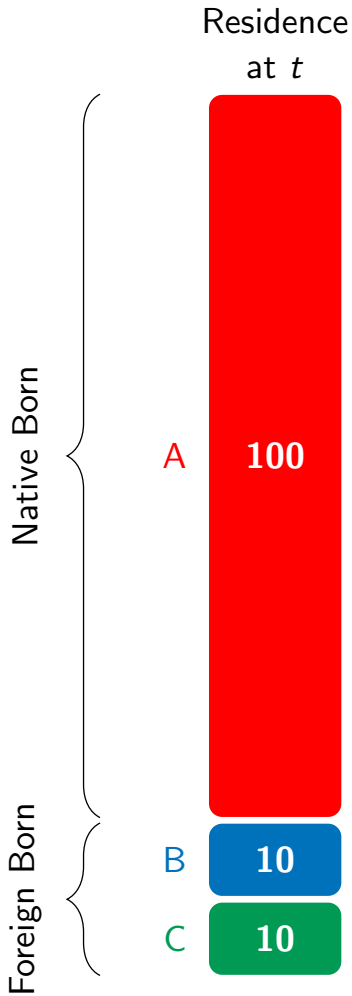

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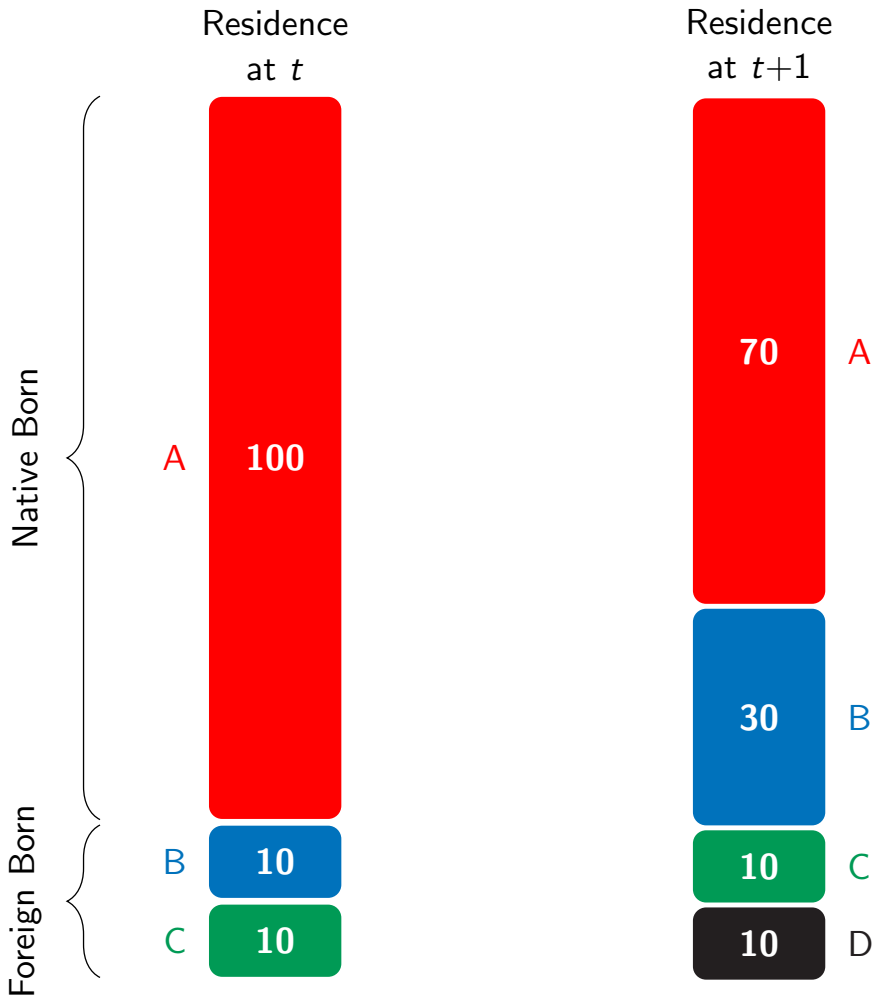

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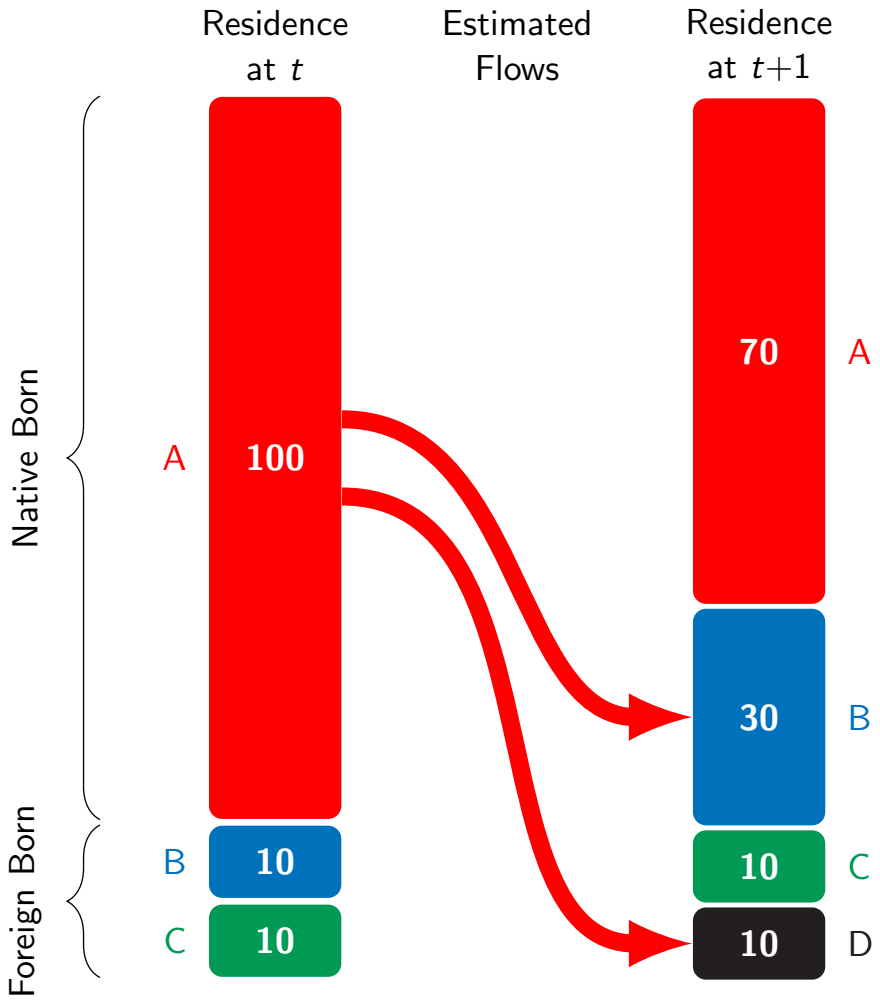

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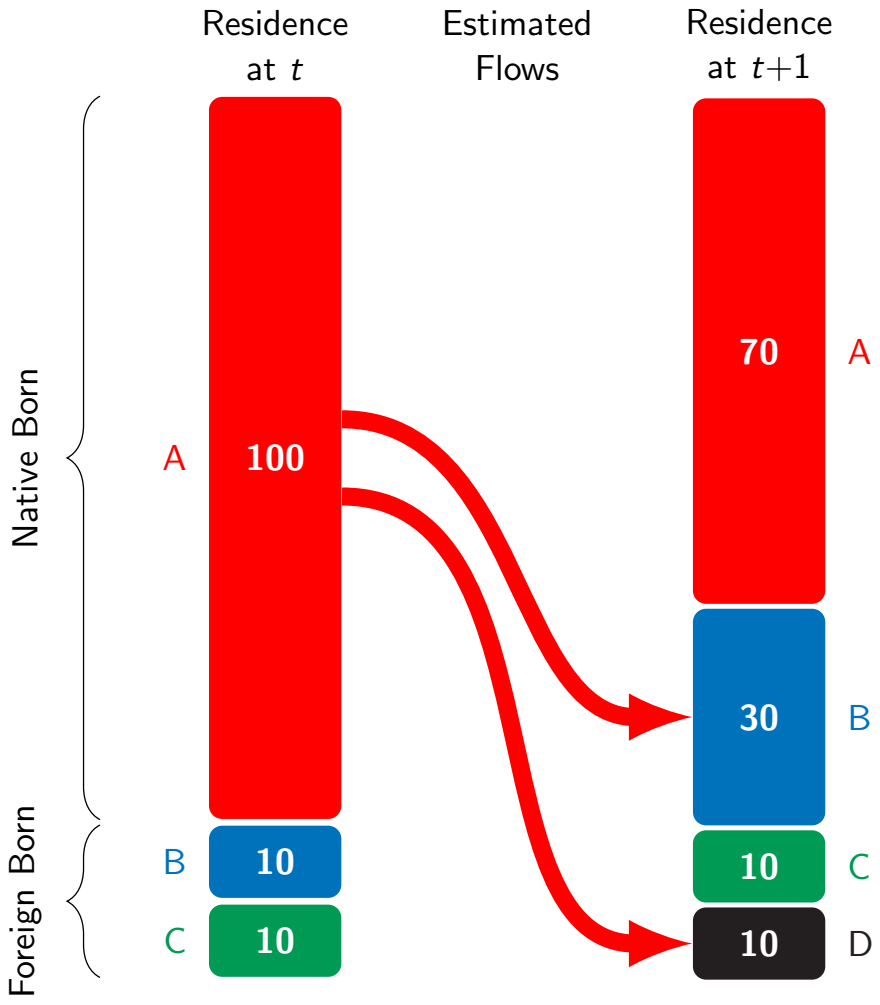

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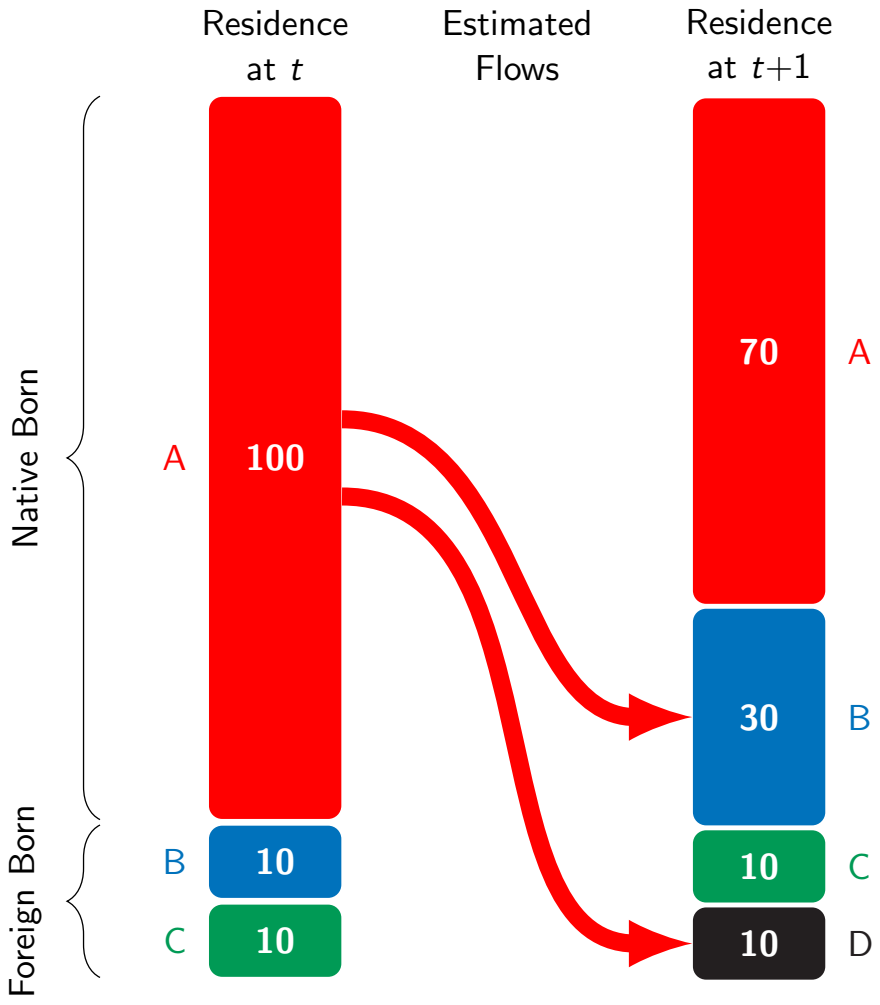

- **Stocks** as margins in flow tables.

		Destination				
		A	B	C	D	Sum
Origin	A					**100**
	B					**0**
	C					**10**
	D					**0**
	Sum	**70**	**30**	**10**	**10**	**120**

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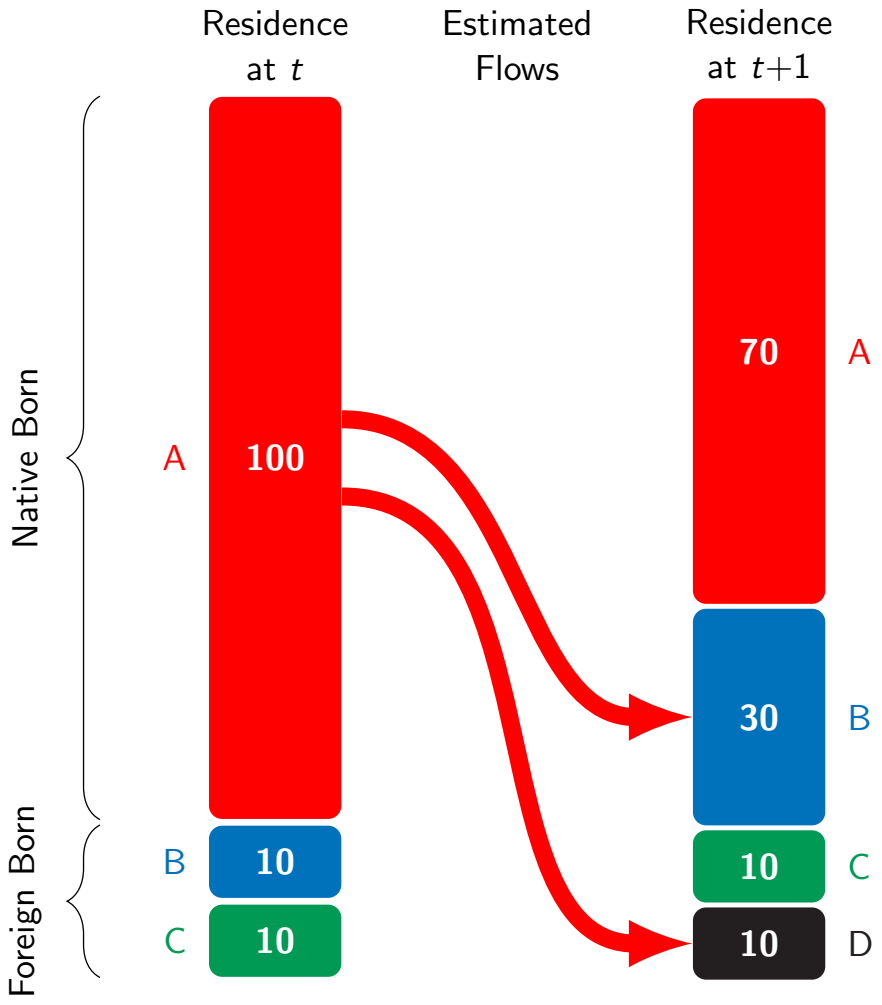

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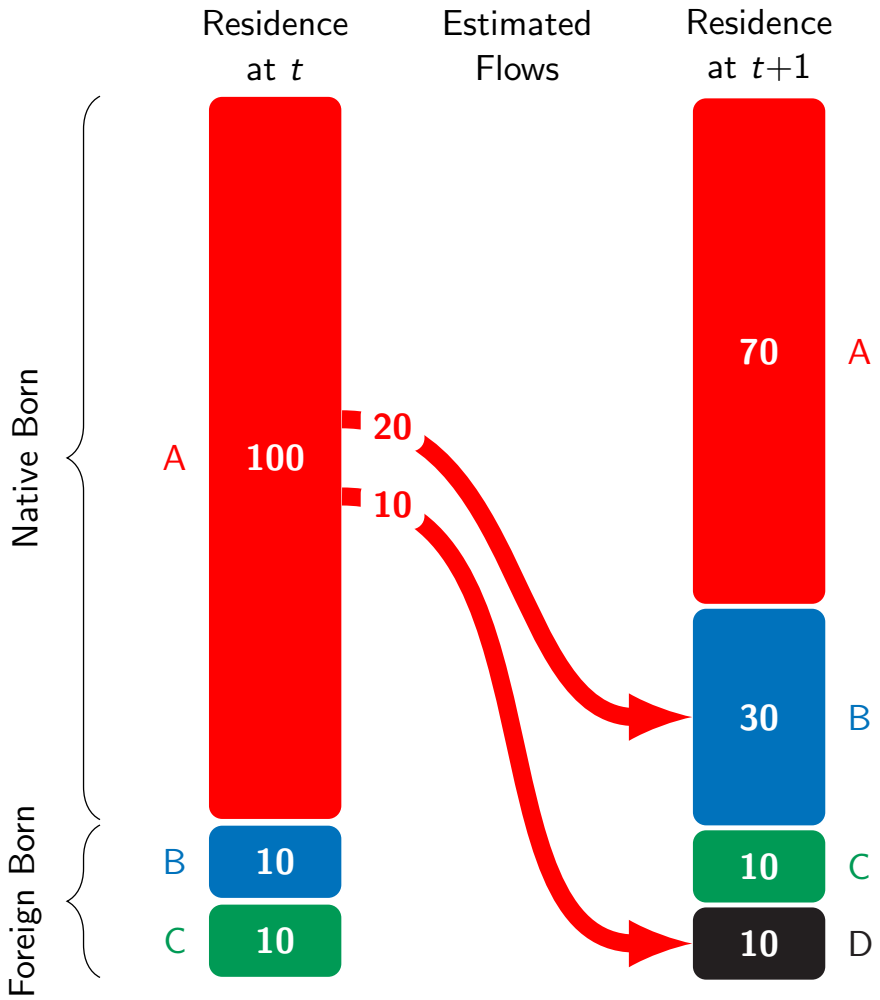

- **Stocks** as margins in flow tables.
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- Flows estimated using an iterative proportional fitting algorithm.

		Destination				
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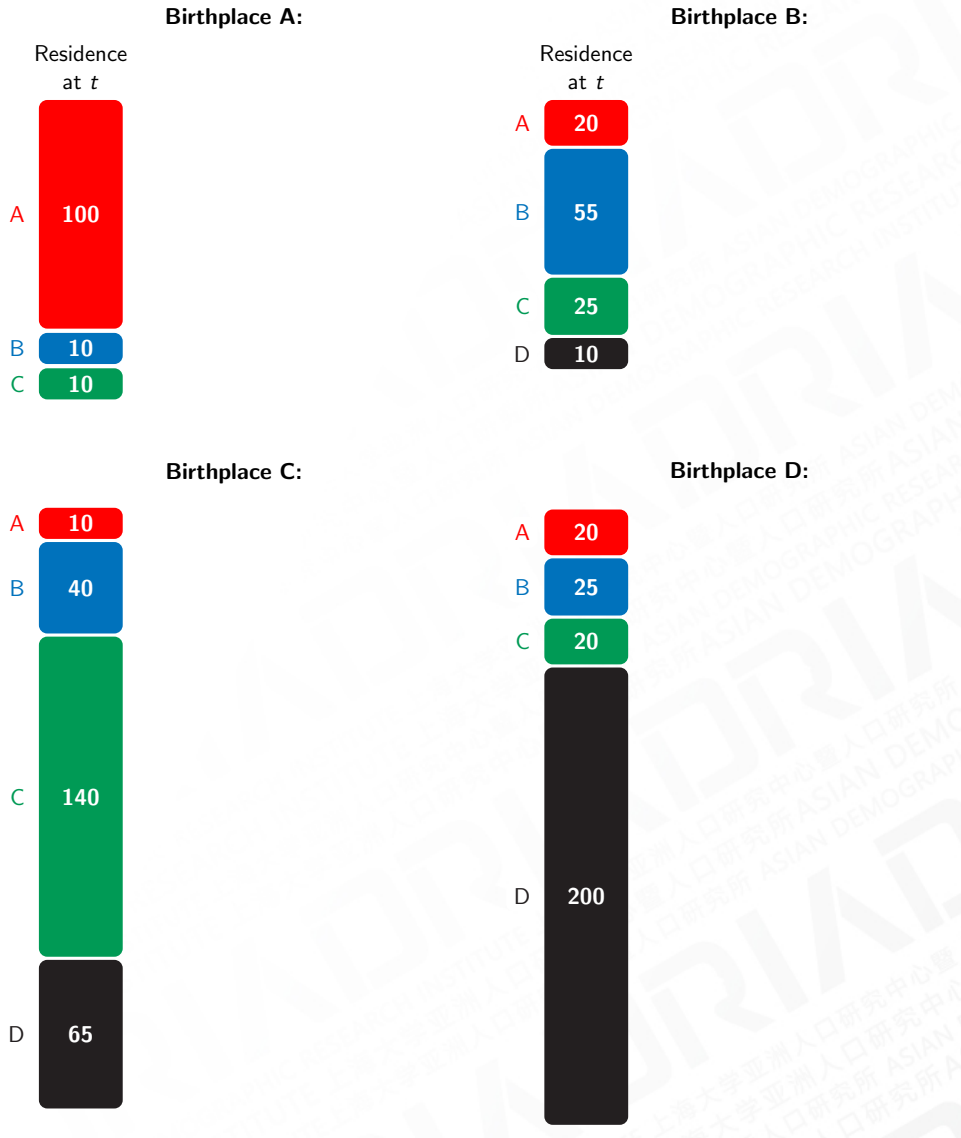
Distribution of all Populations

- Stocks in each place of residence at (t)



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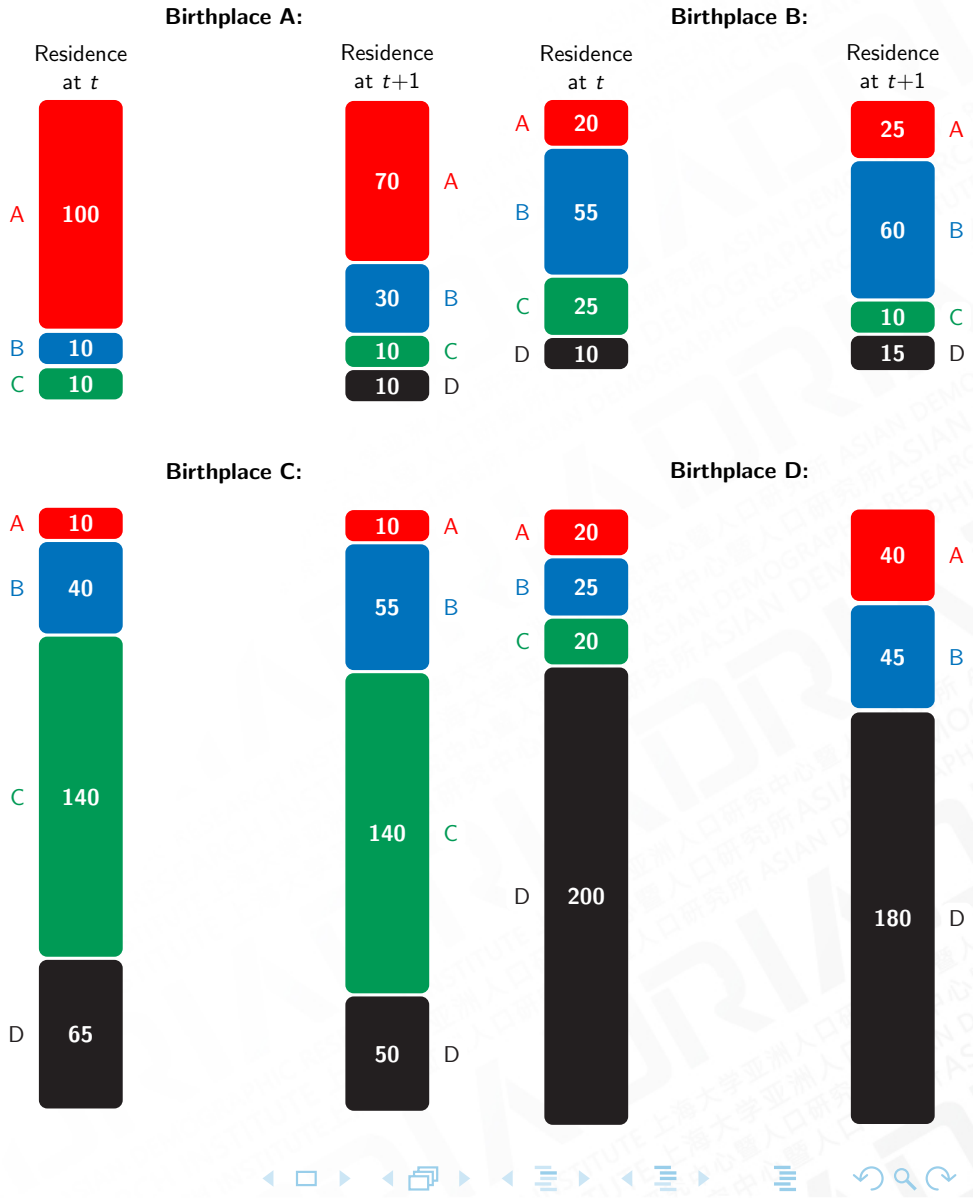

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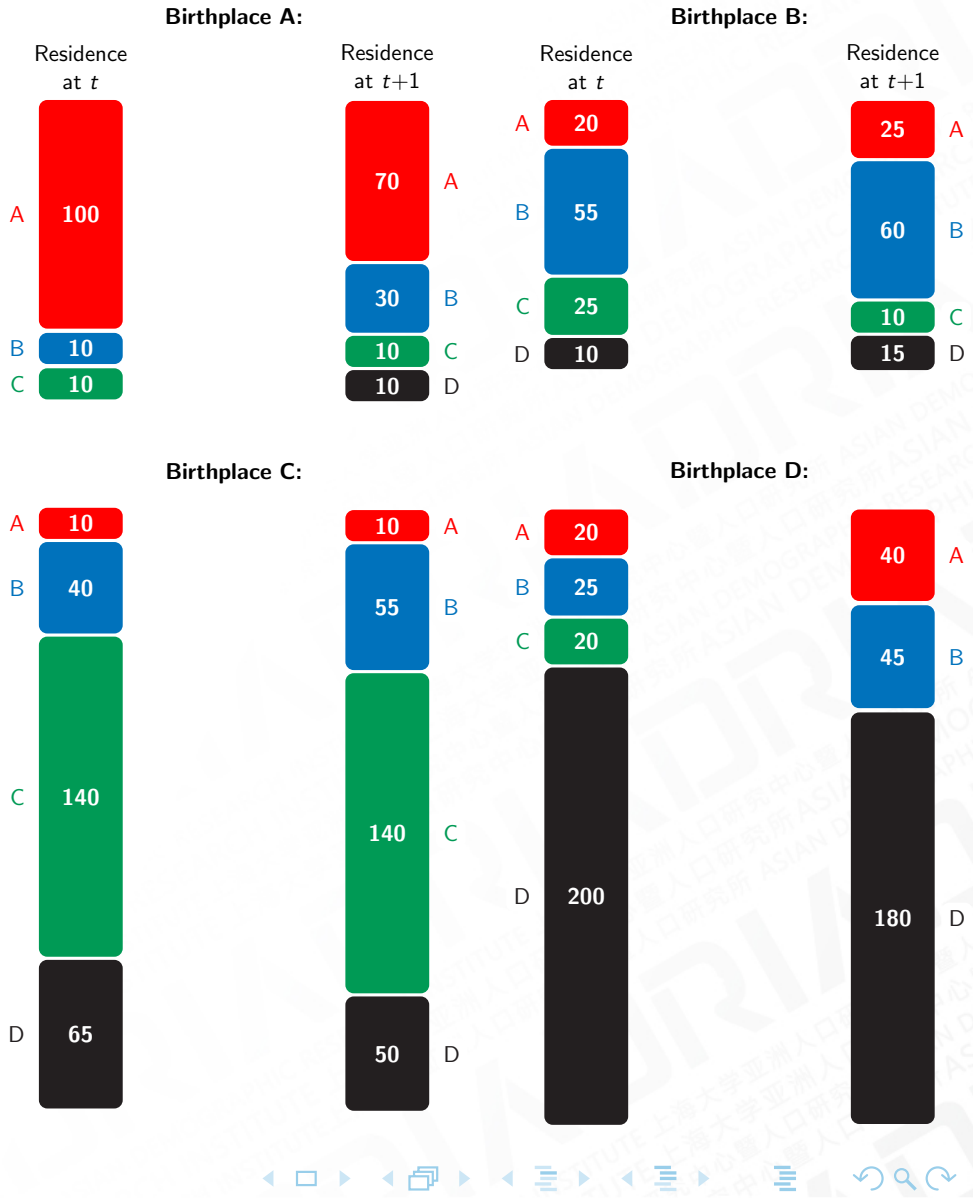

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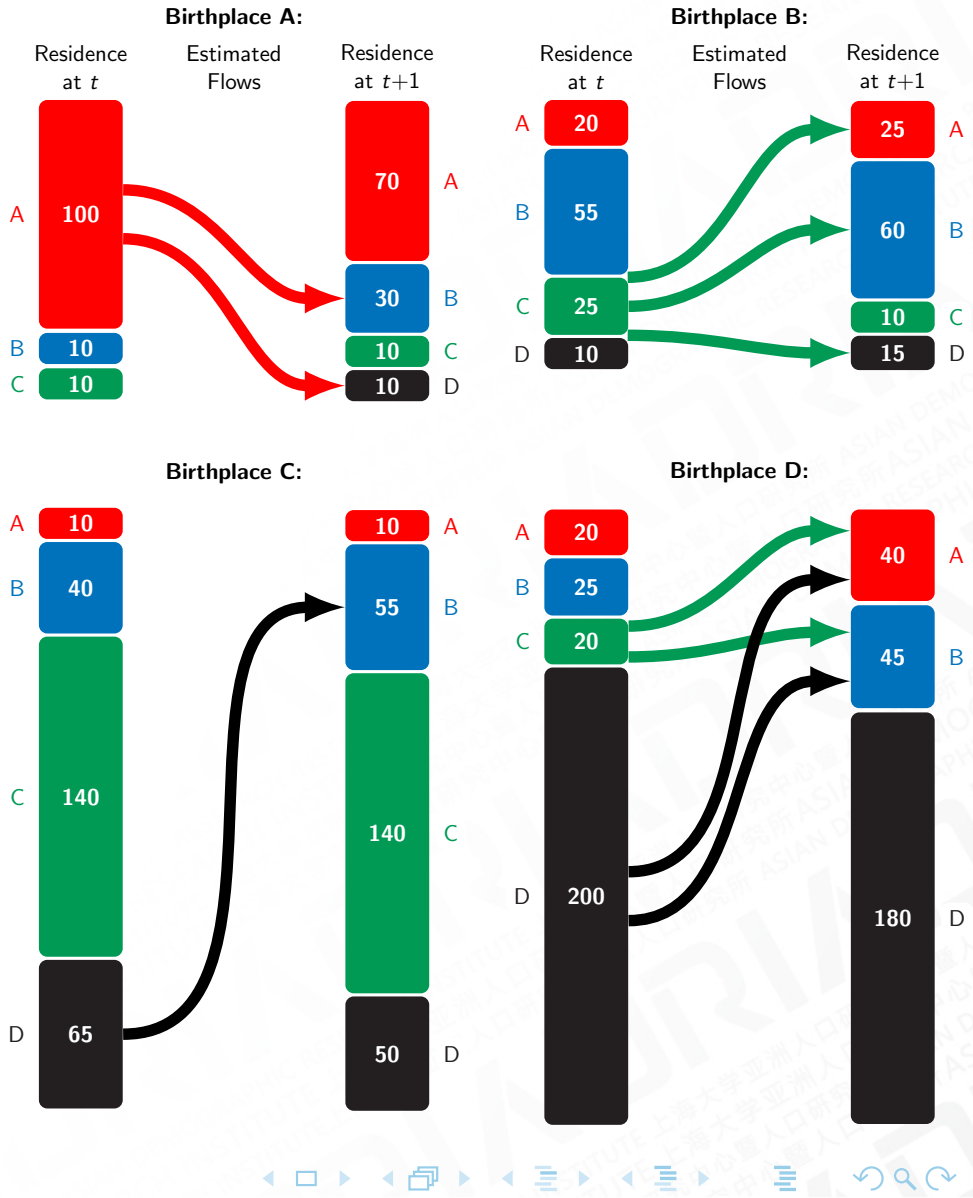

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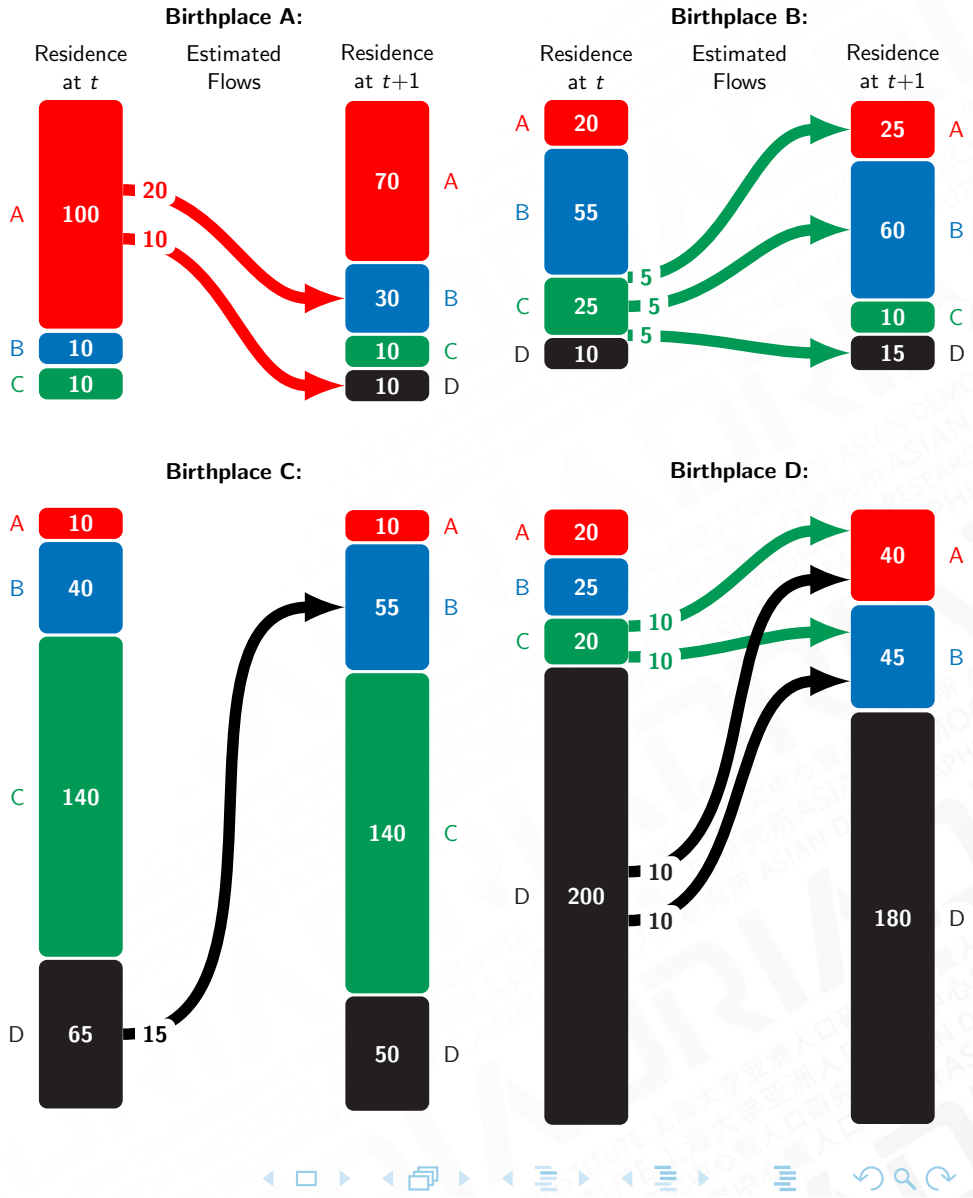

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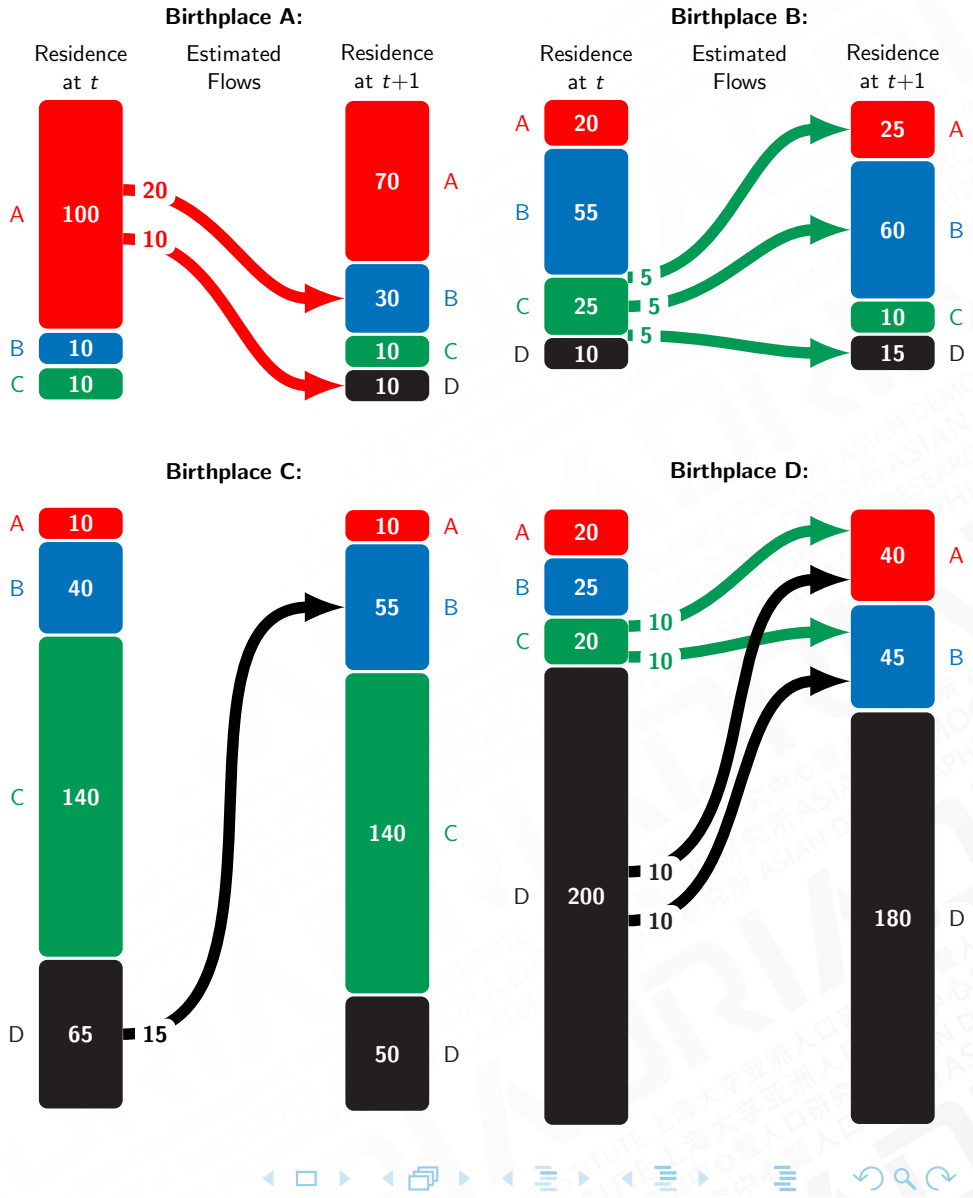
- Aggregate over birthplace

Origin	*Destination* A	B	C	D	Sum
A		20	0	10	30
B	0		0	0	0
C	15	15		5	35
D	10	25	0		35
Sum	25	60	0	15	100



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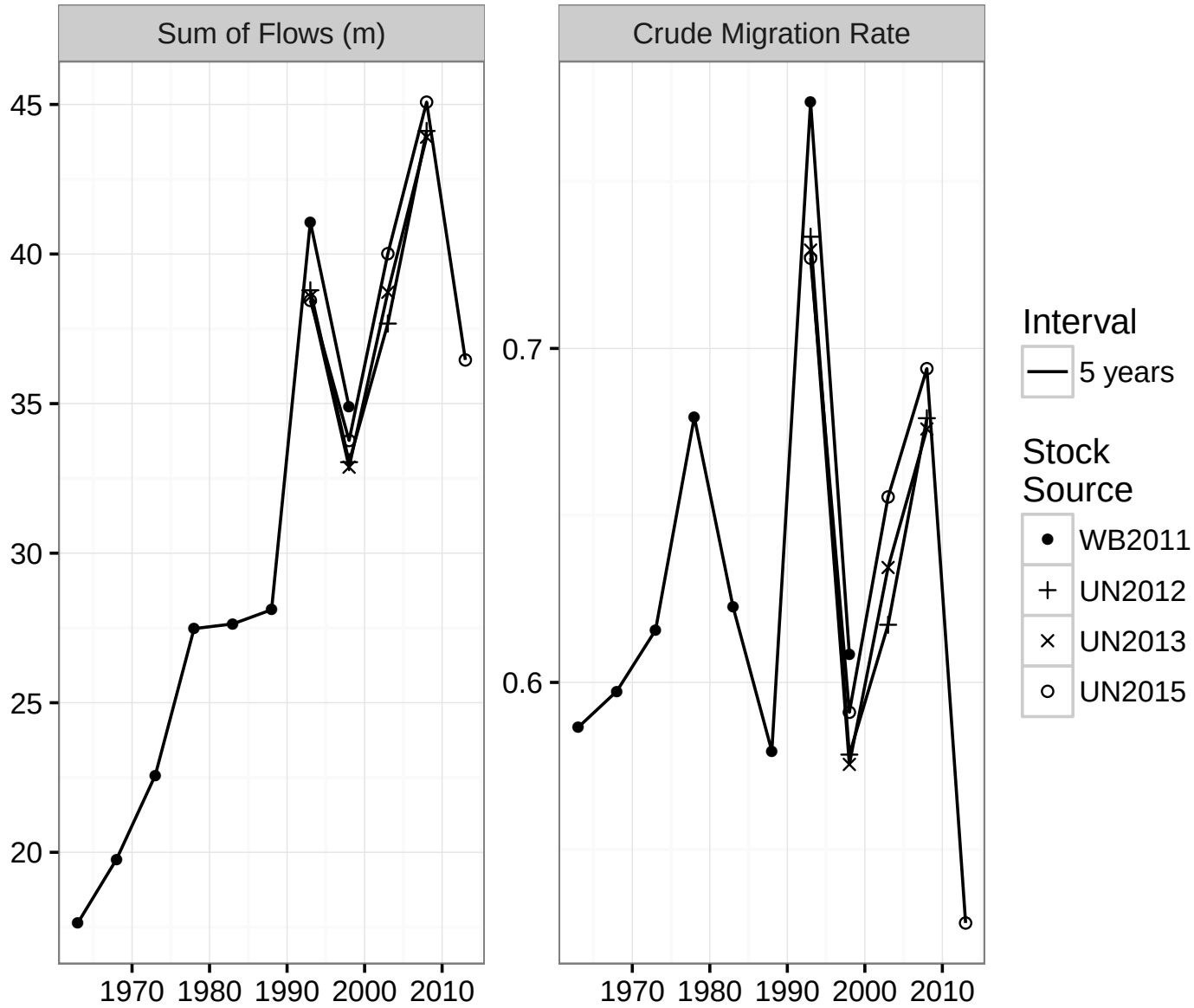
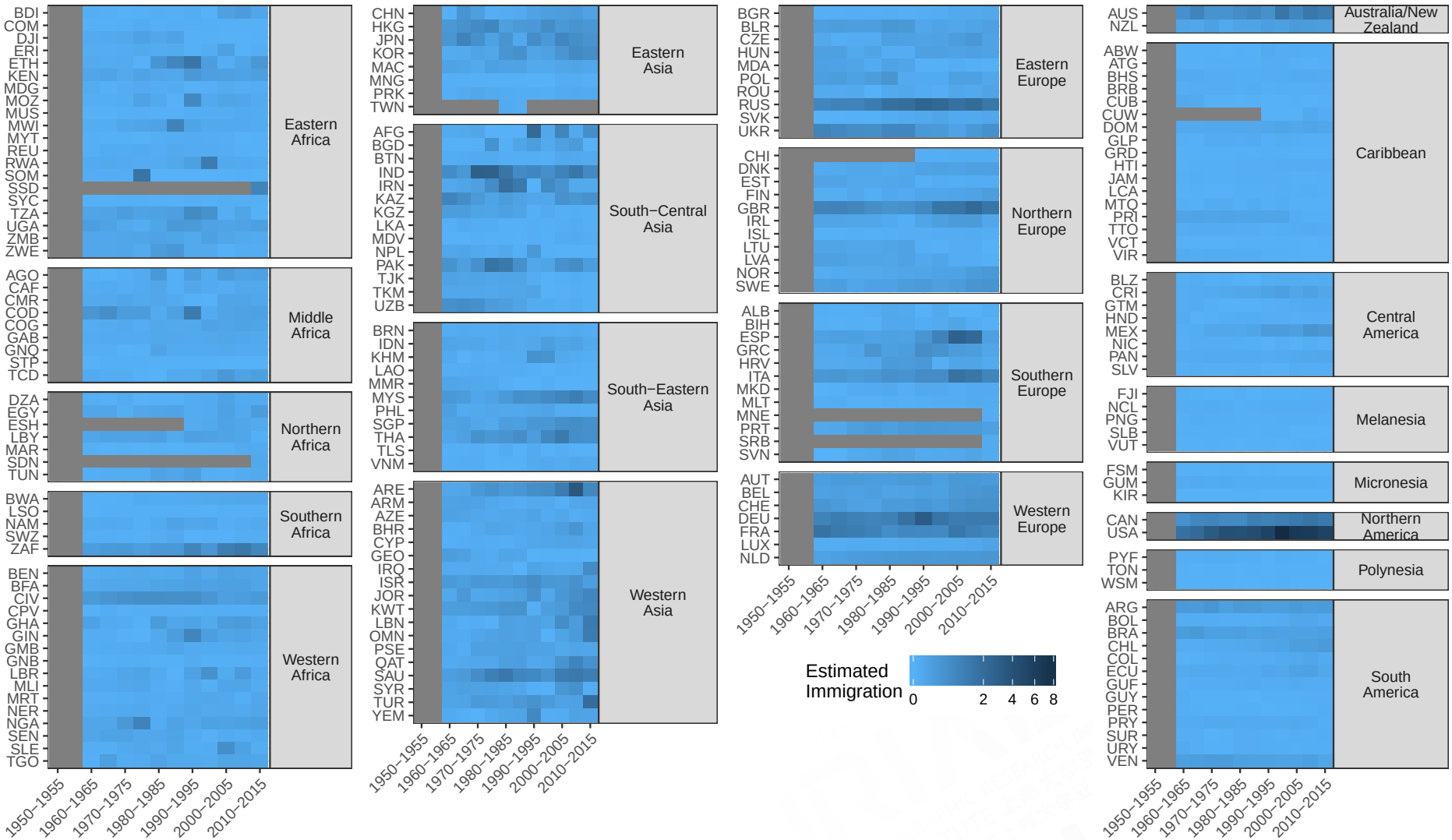
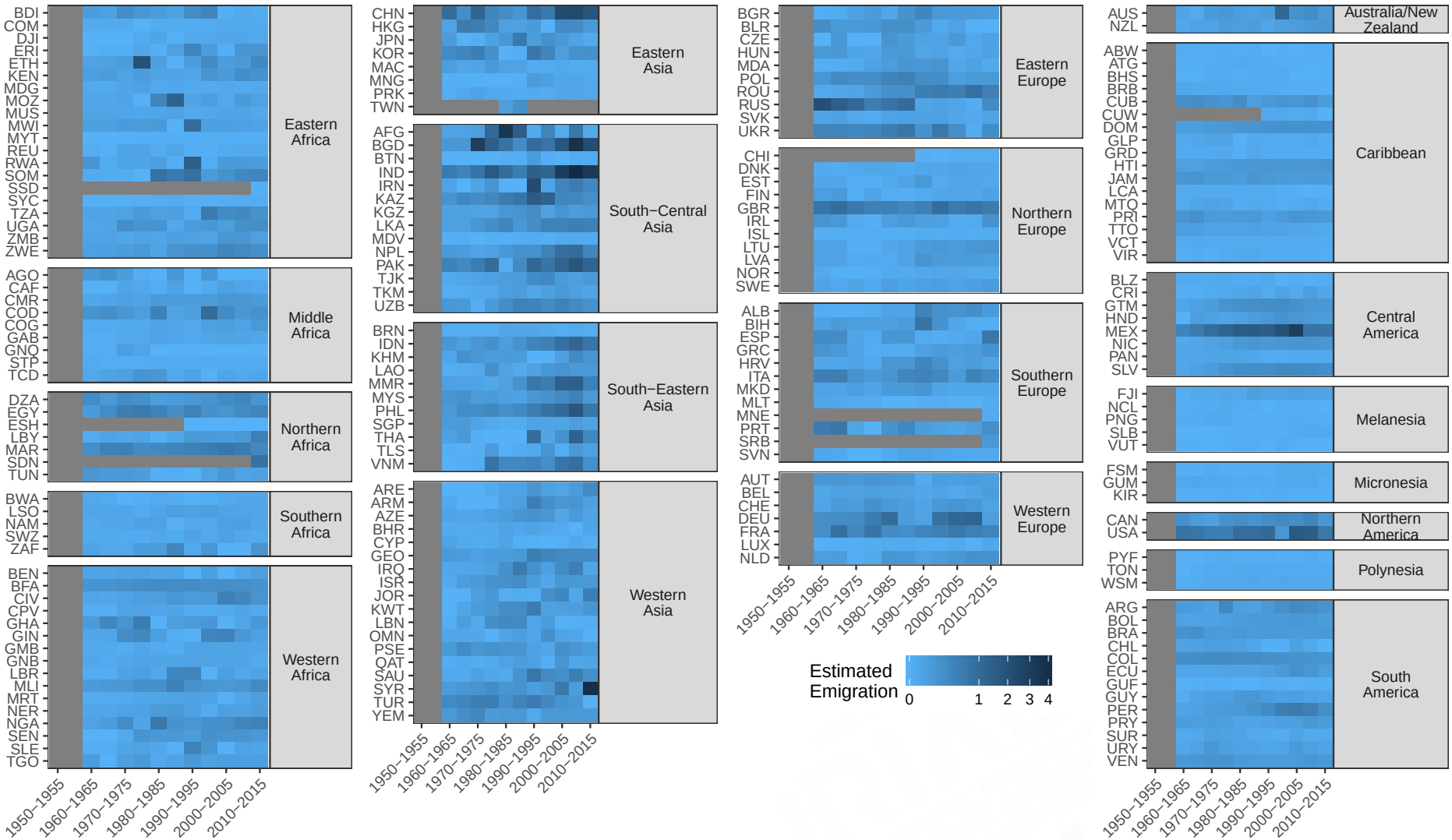
Estimated Five Year Global Flows



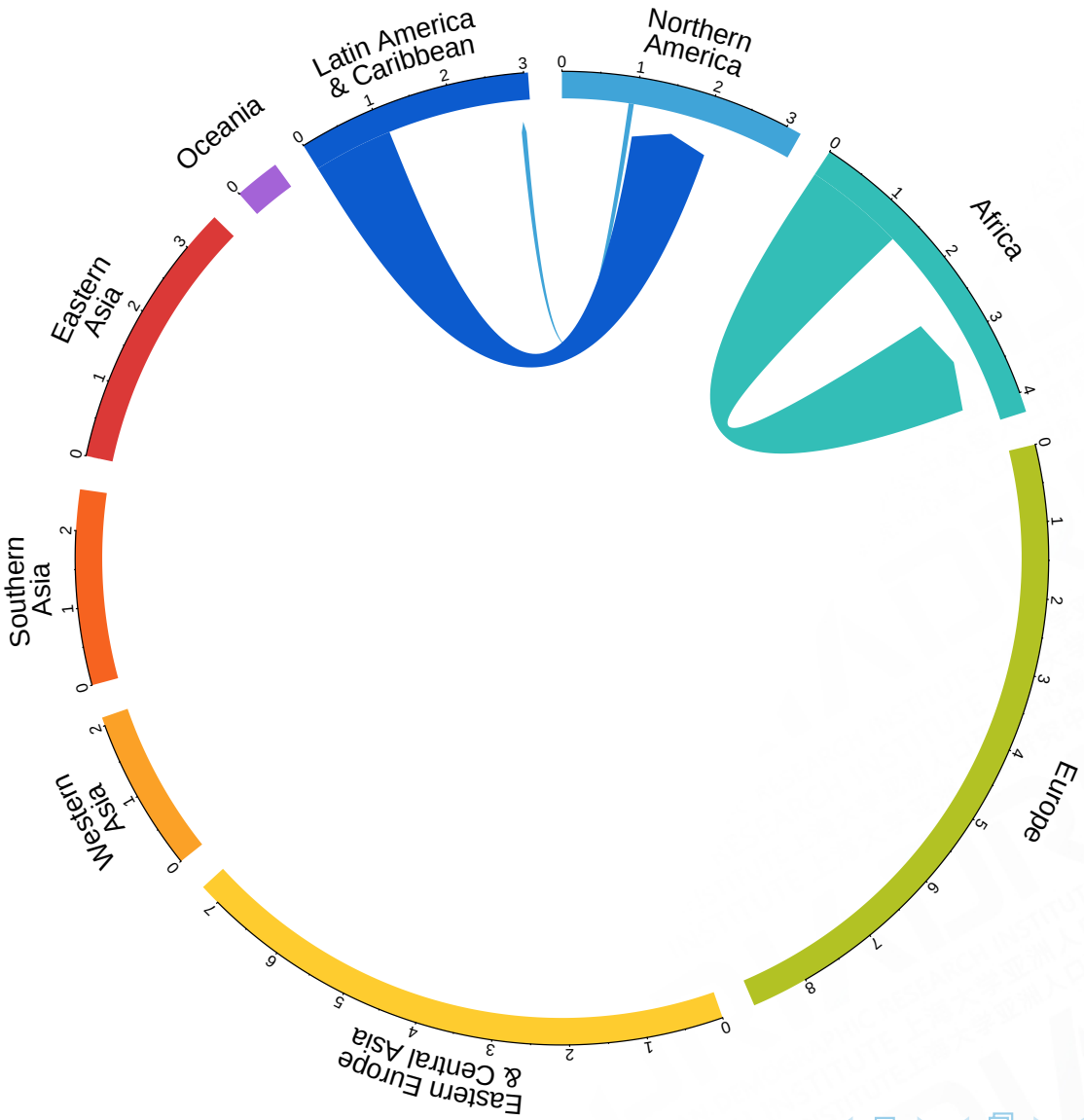
Estimated Immigration



Estimated Emigration



Bilateral Patterns 1960-65



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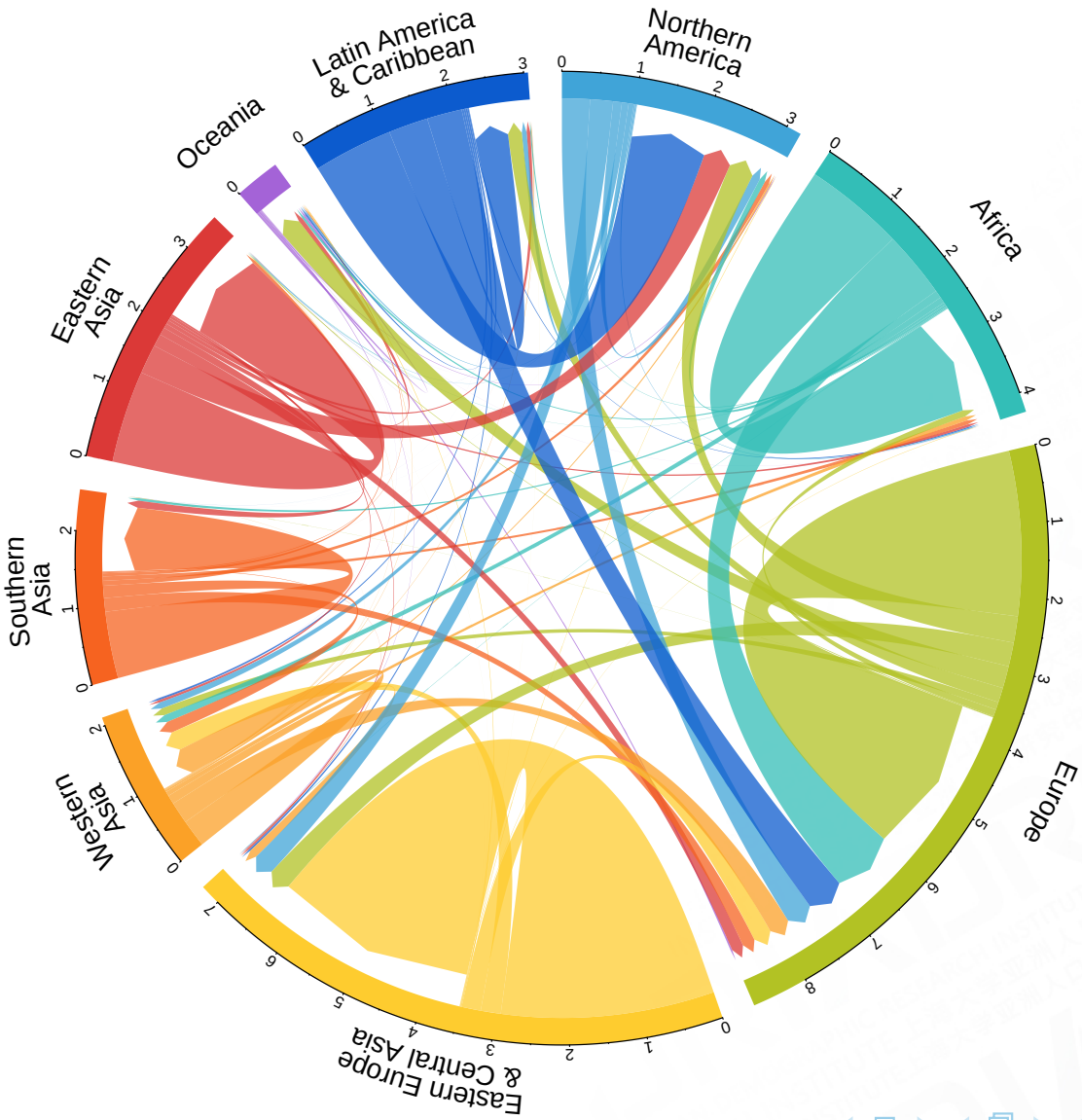

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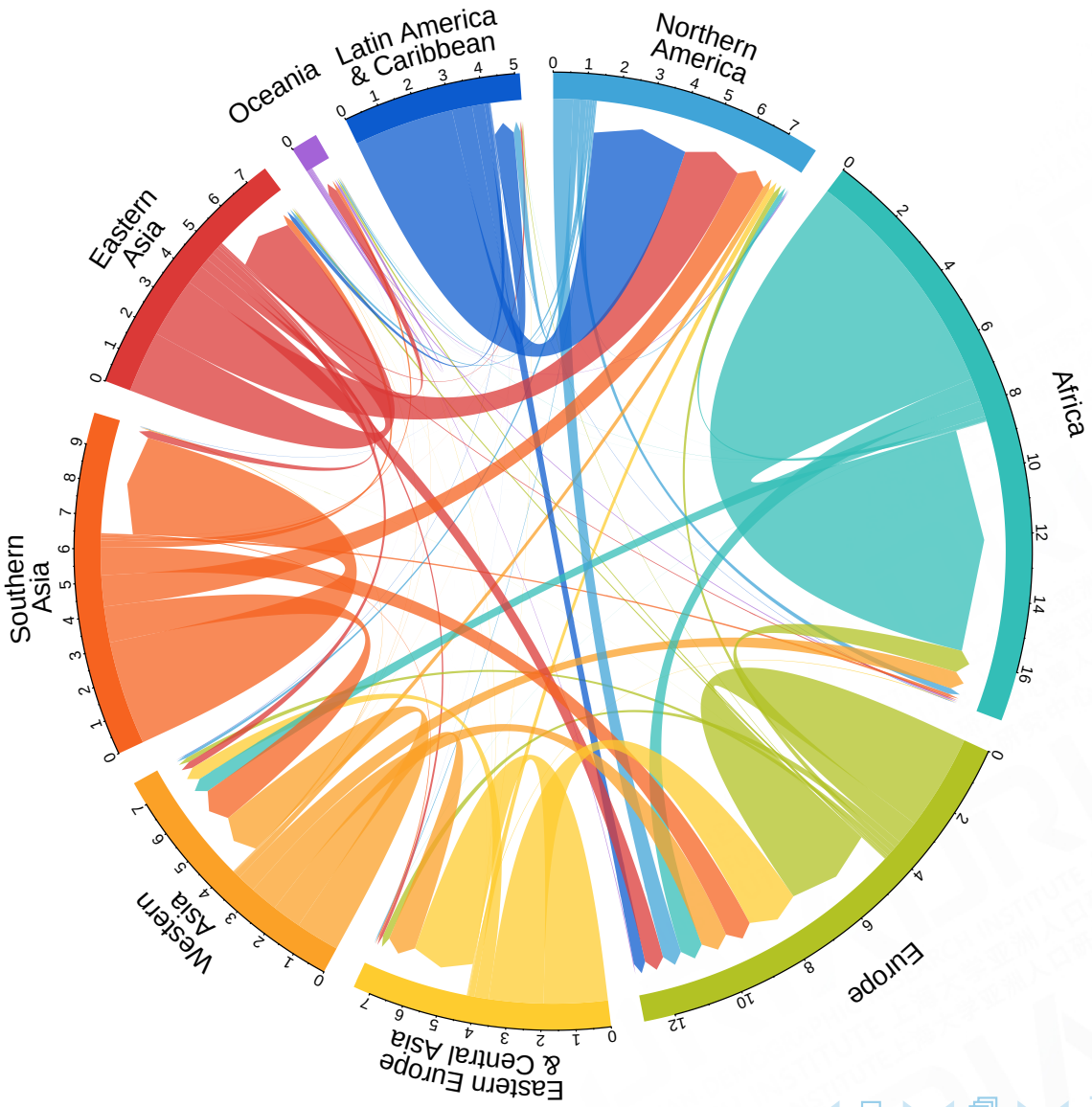

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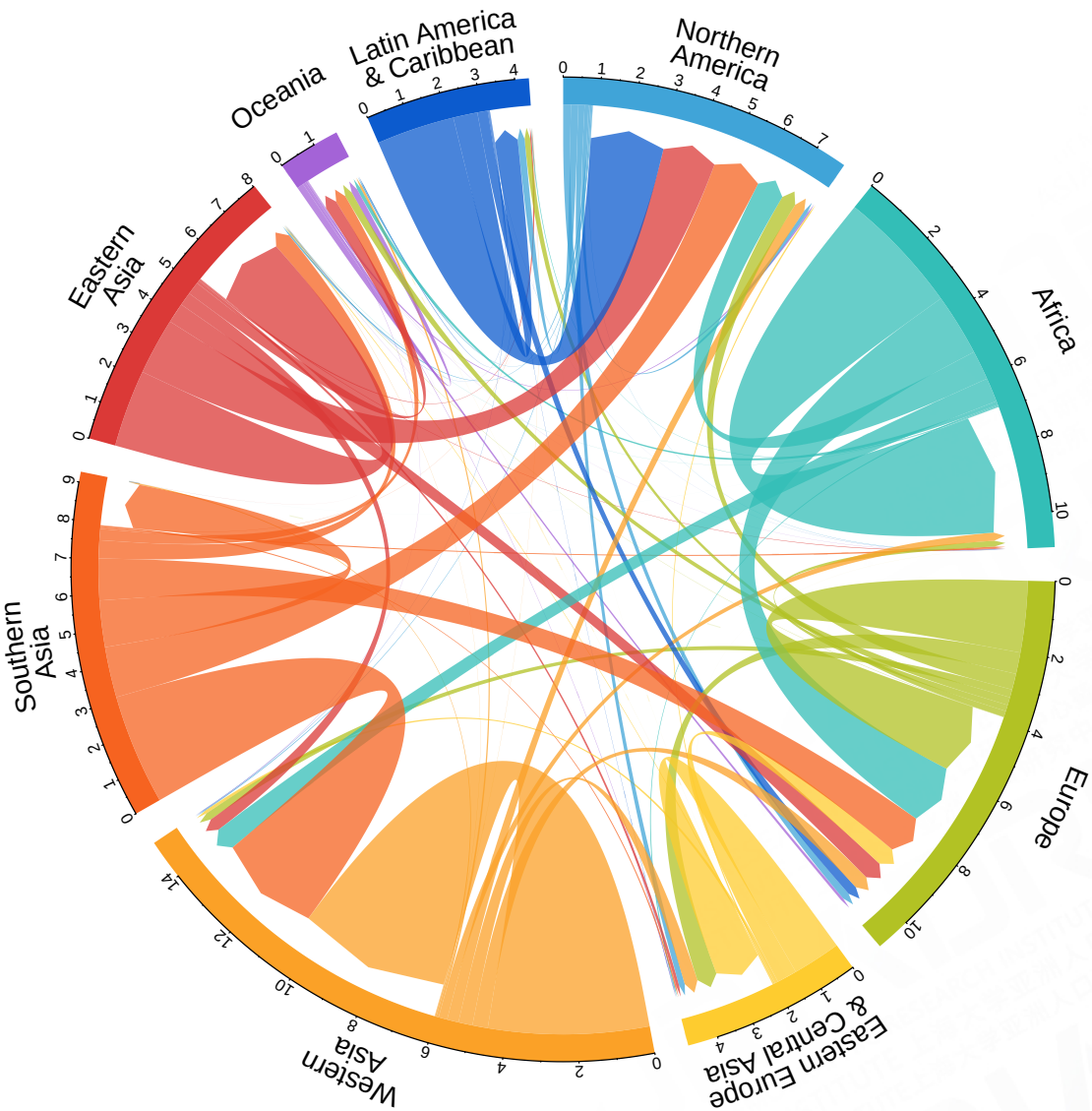
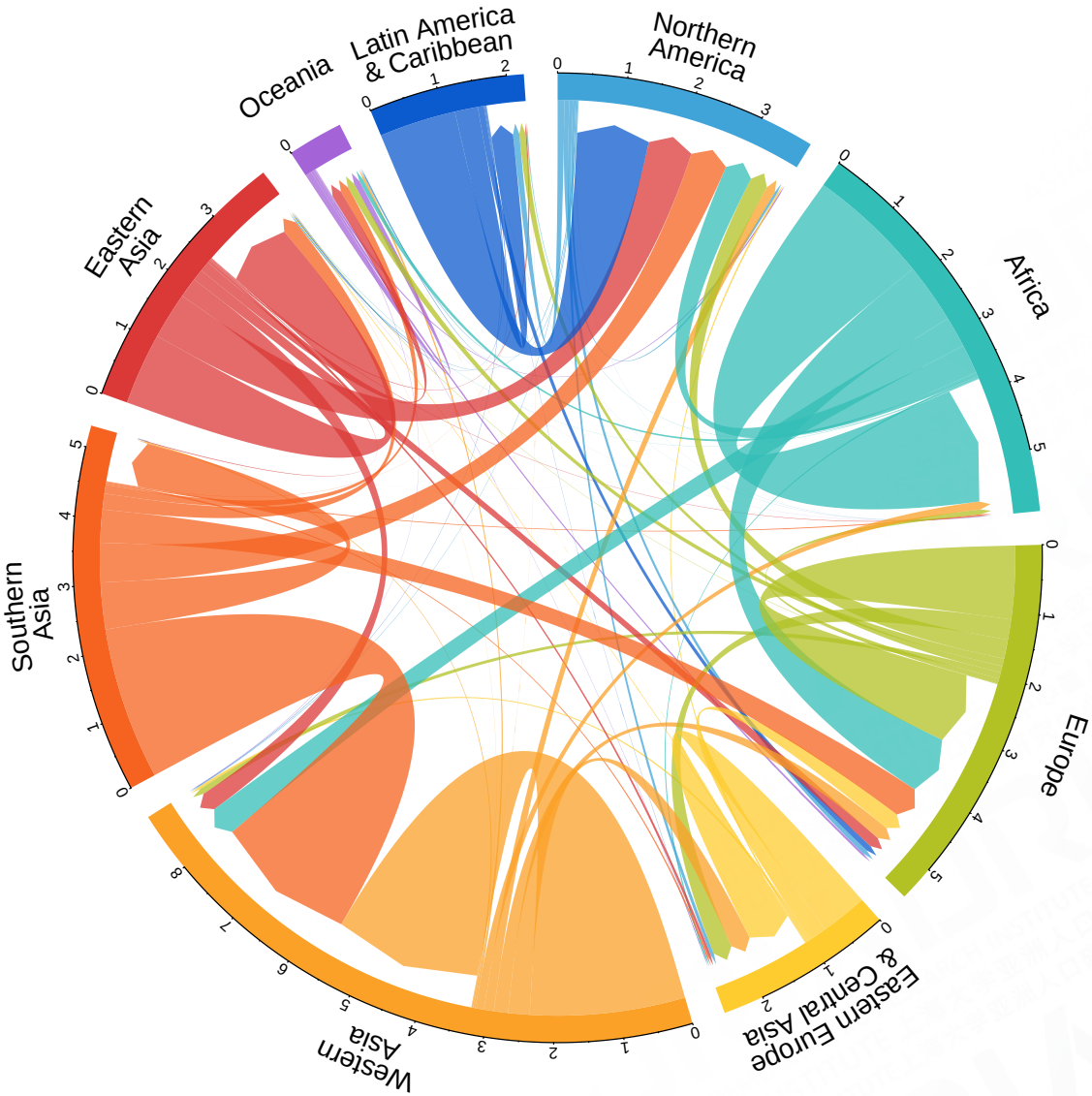
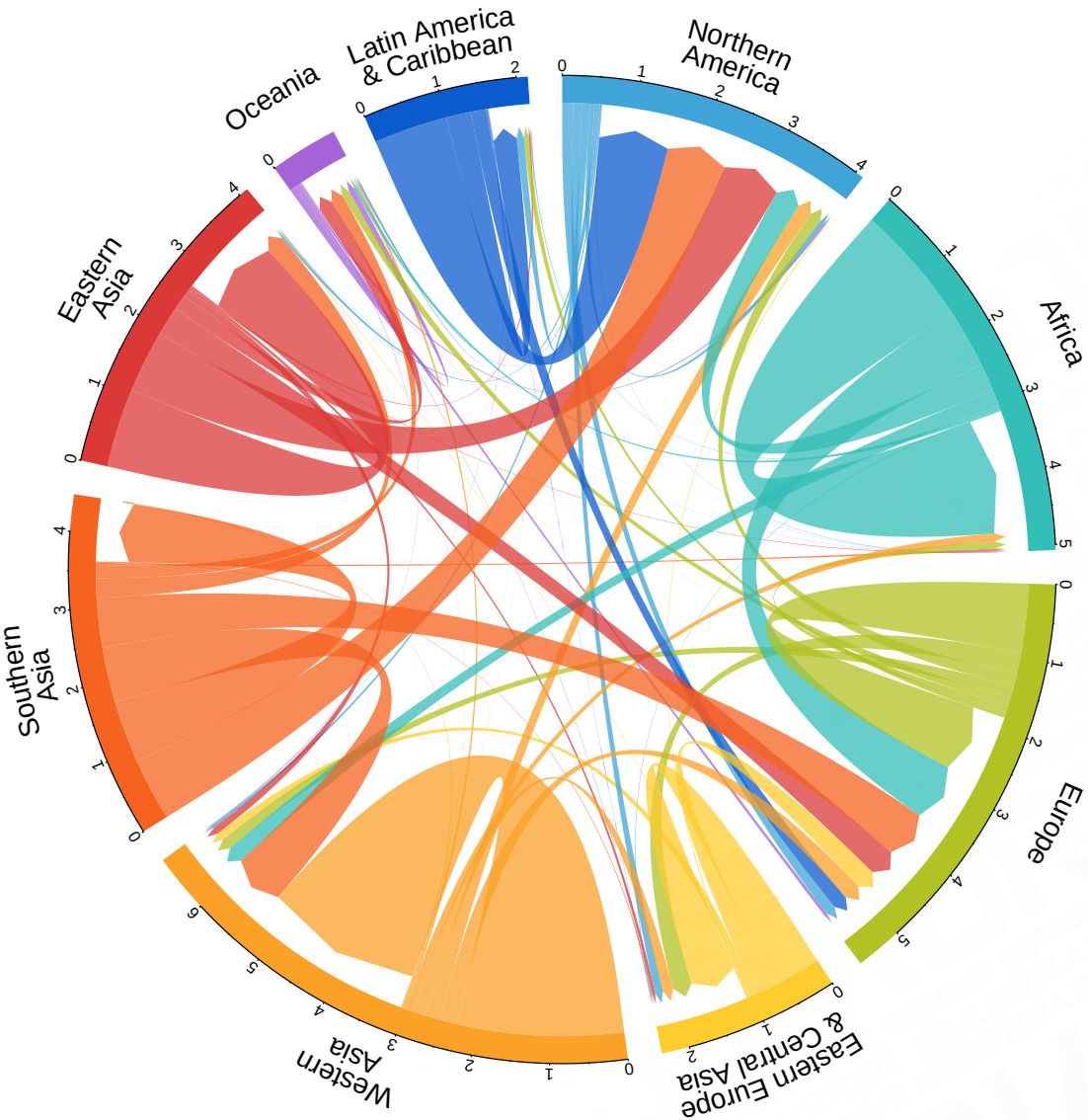


Bilateral Patterns 2010-15 - Male



Bilateral Patterns 2010-15 - Female



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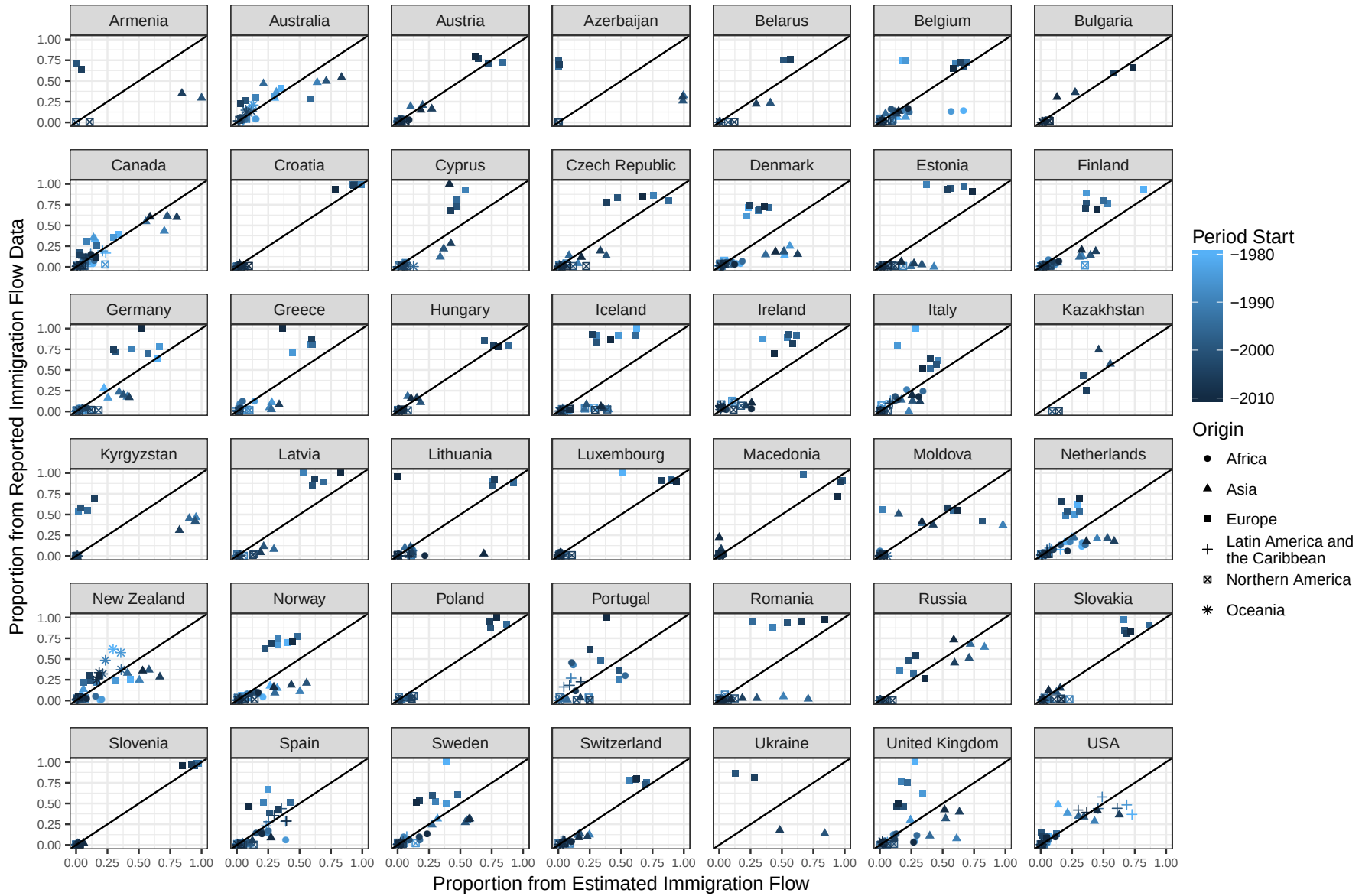

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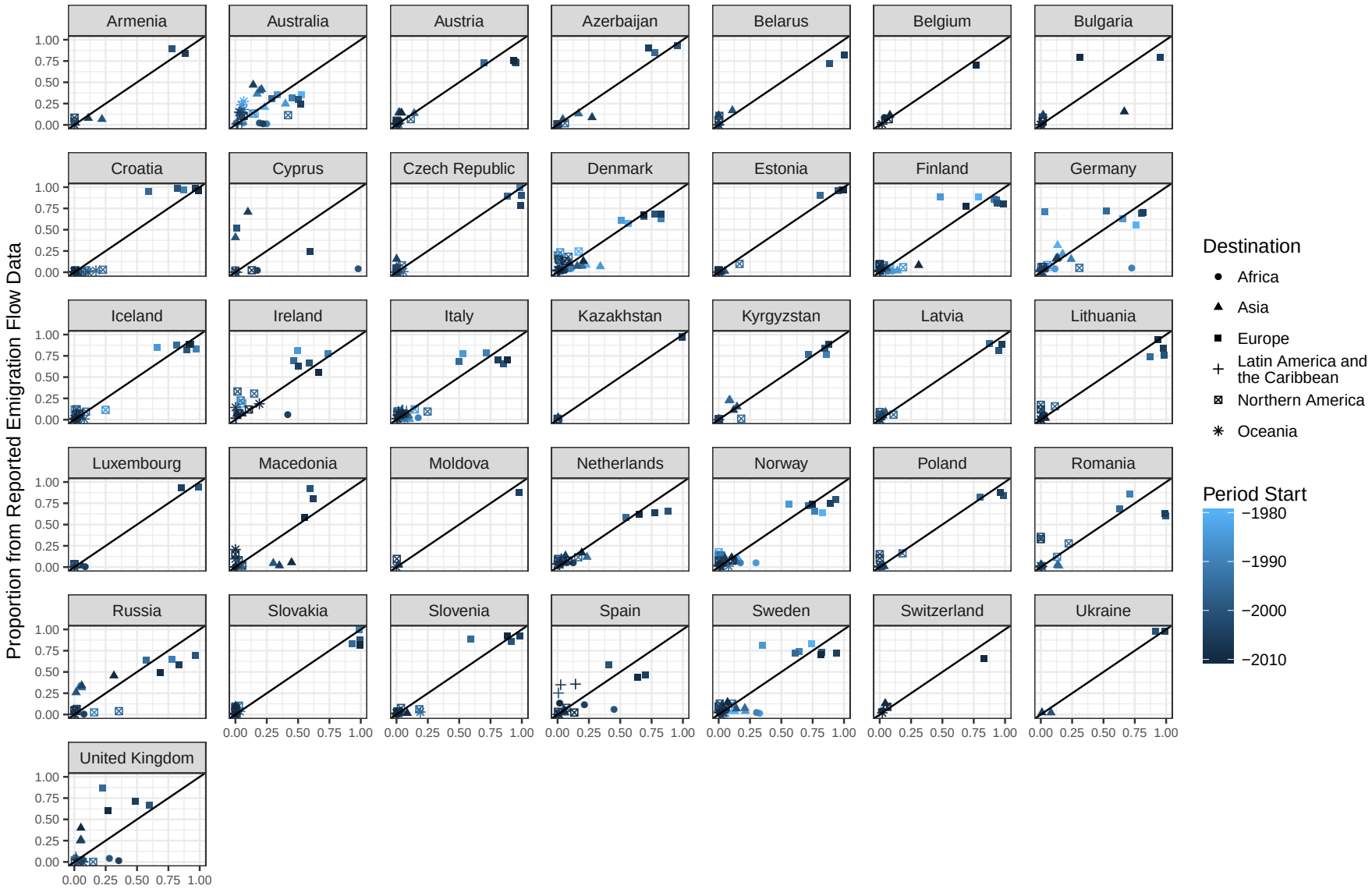

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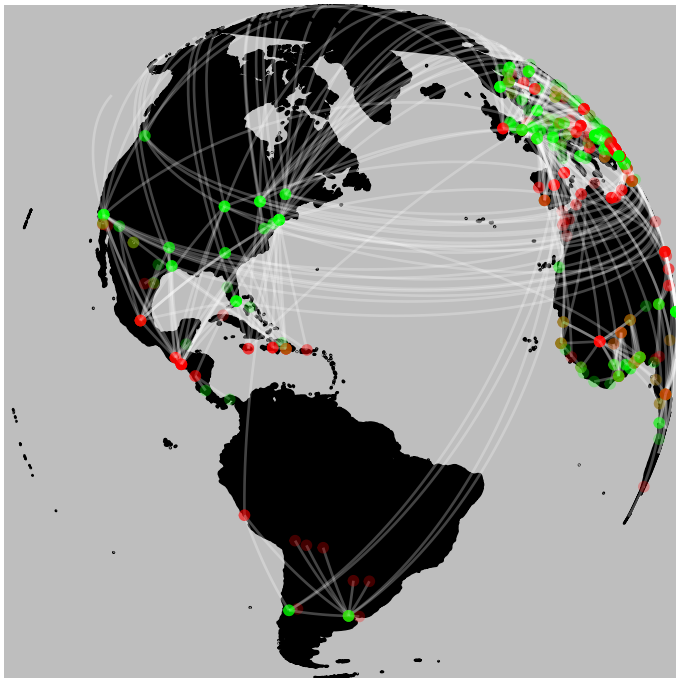
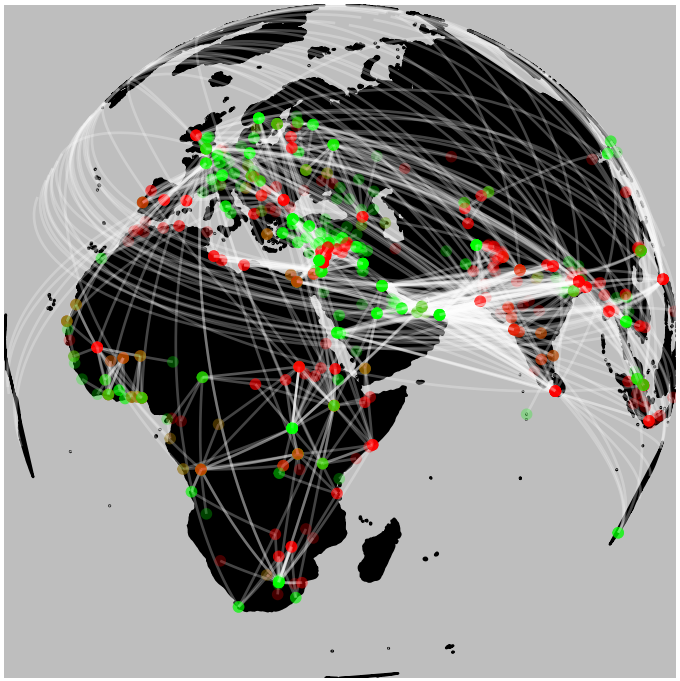
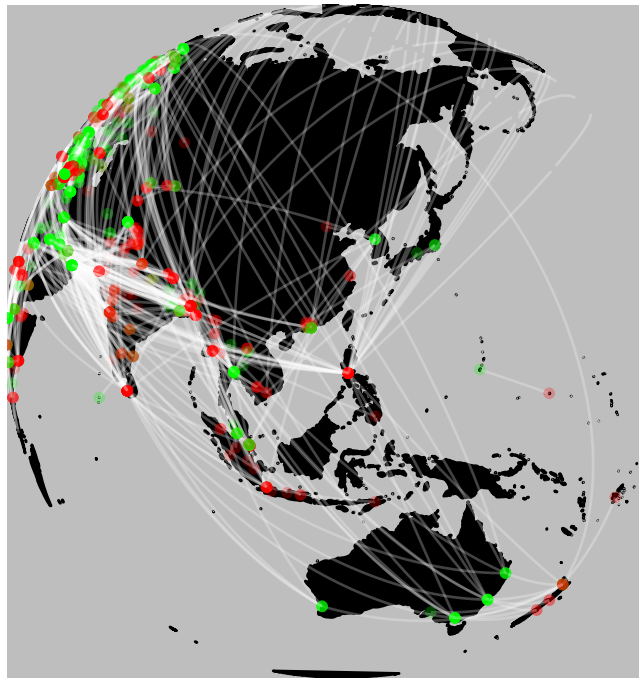
- Moves from 200×200 country to country flow tables to 1762×1762 urban area to urban area.

Top 1000 Estimated Flows 2010-15

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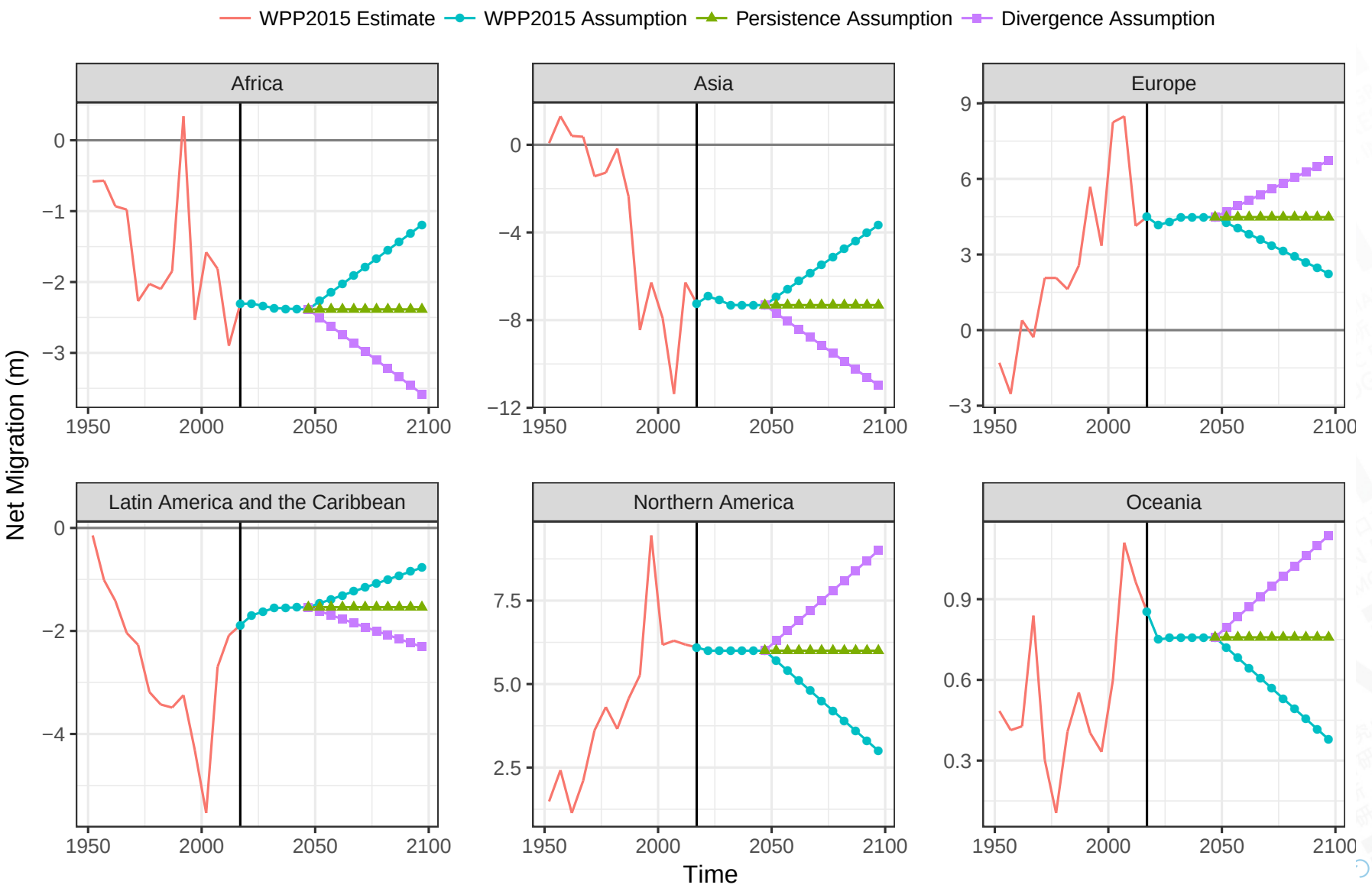
- Developed potential alternatives for net migration counts to match SSPs

Net Migration



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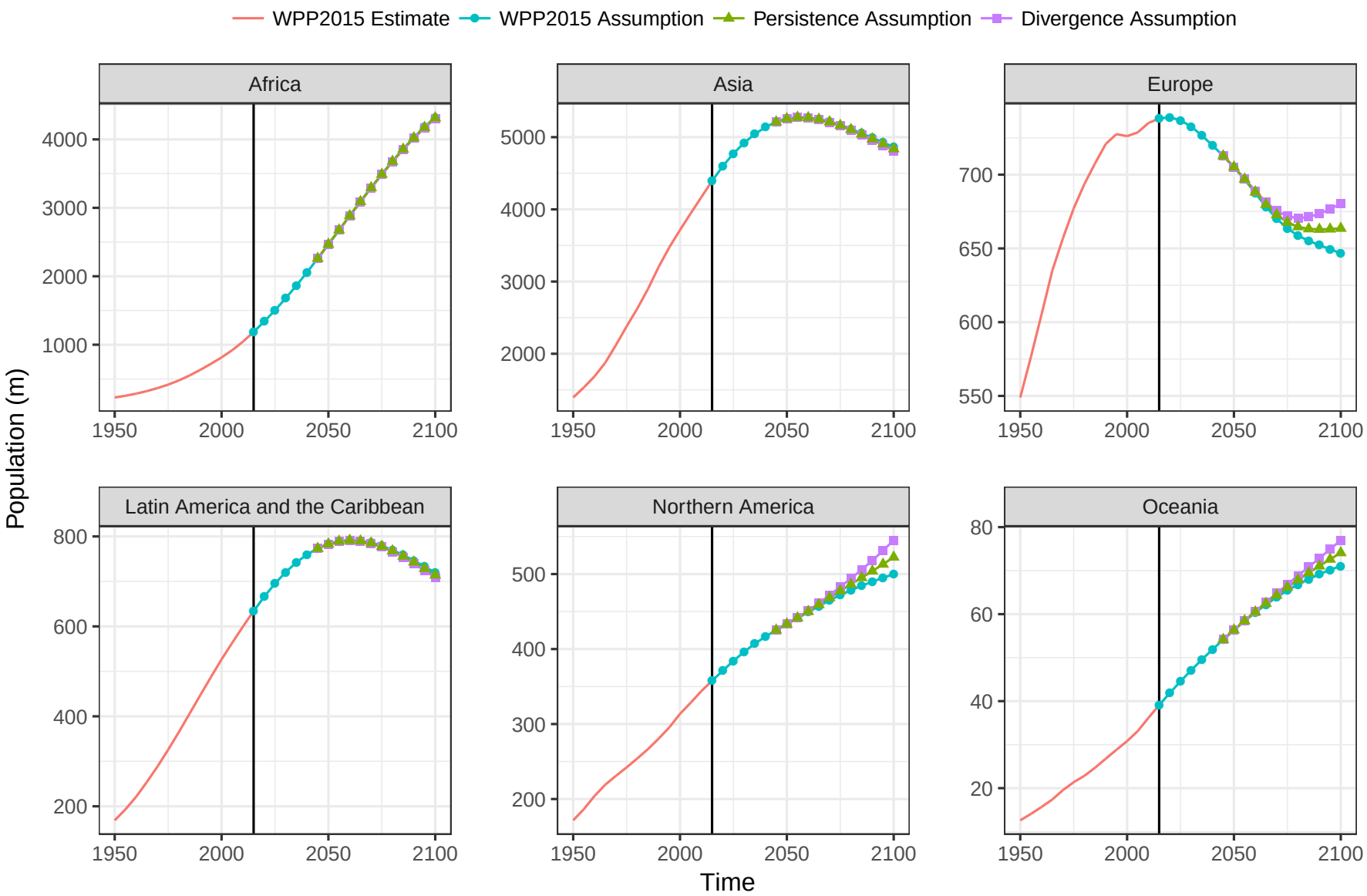

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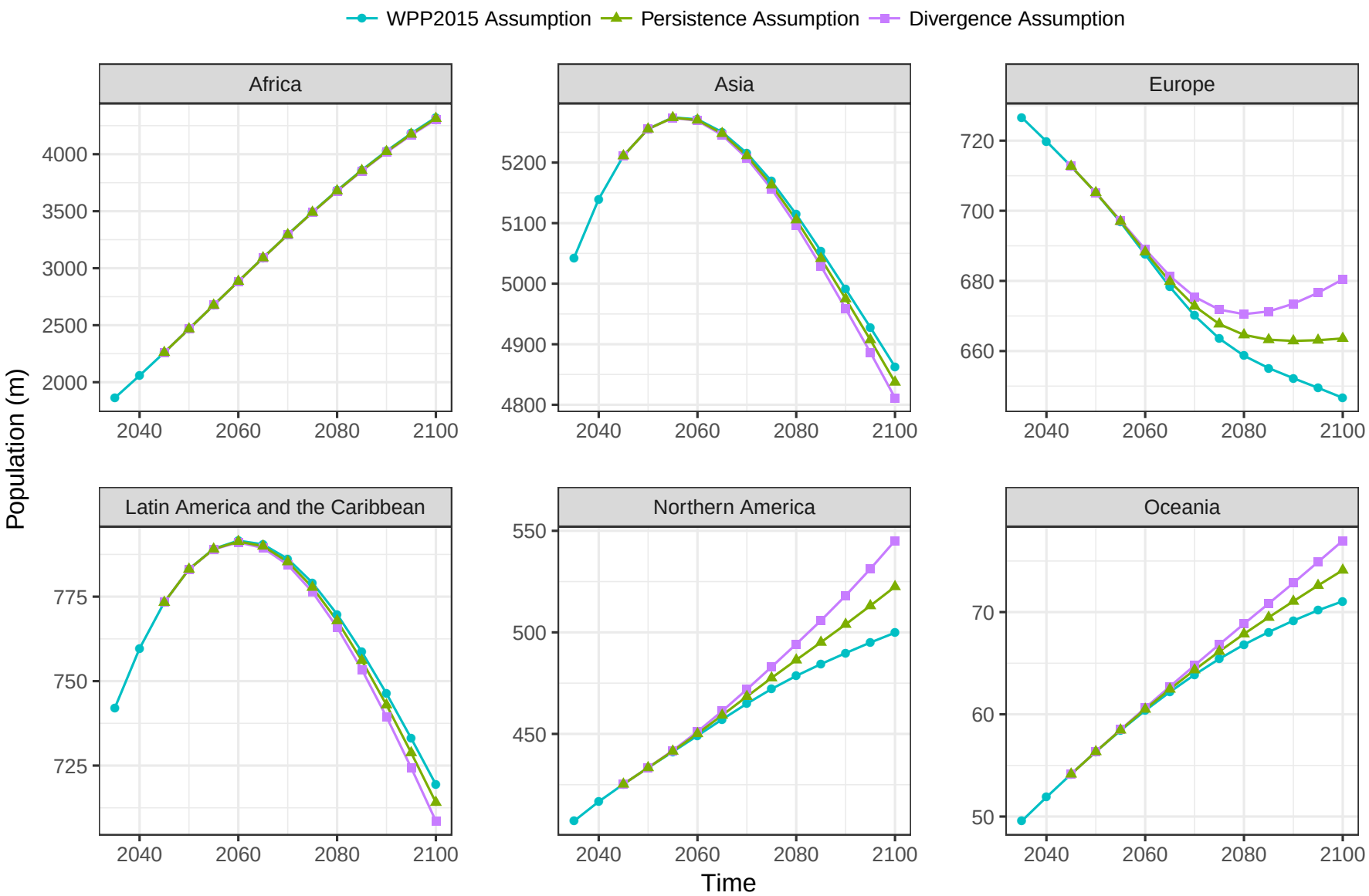

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- At aggregated levels **minimum** estimated flows seem plausible. Sensitive to the input (stock and demographic) data.
- Forms a crude global demographic accounting system. Helps detect inconsistencies and errors in the demographic and stock data.
- Current efforts on using estimates:
  1. Within bi-regional and multi-regional projection models
  2. Disaggregation to finer spatial scales

Further Details

- Further detail on latest estimates in:
  Abel, G. J. (2016). Estimates of Global Bilateral Migration Flows by Gender between 1960 and 2015. *Vienna Institute of Demography Woking Papers* 2/2016.

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Thank you for listening!