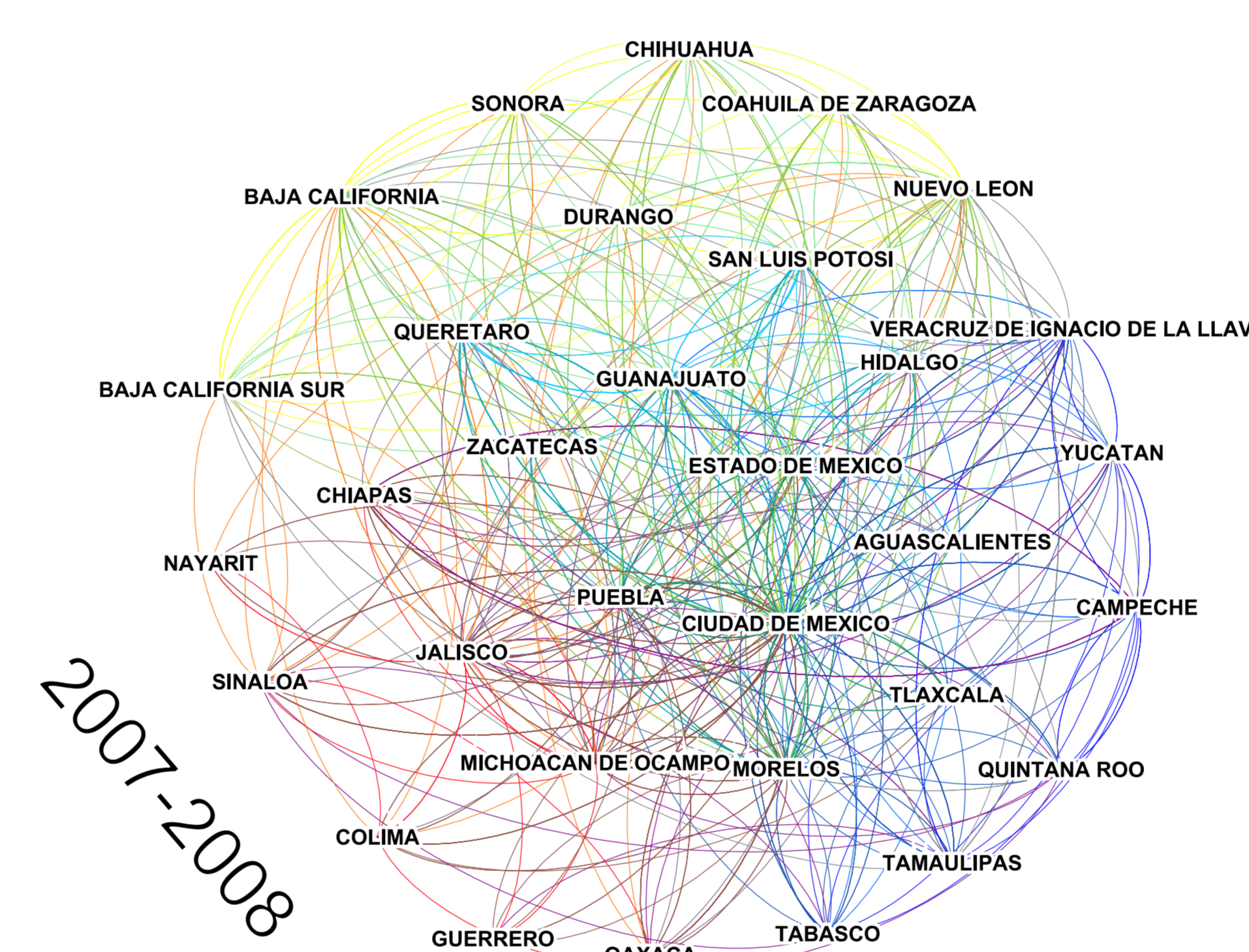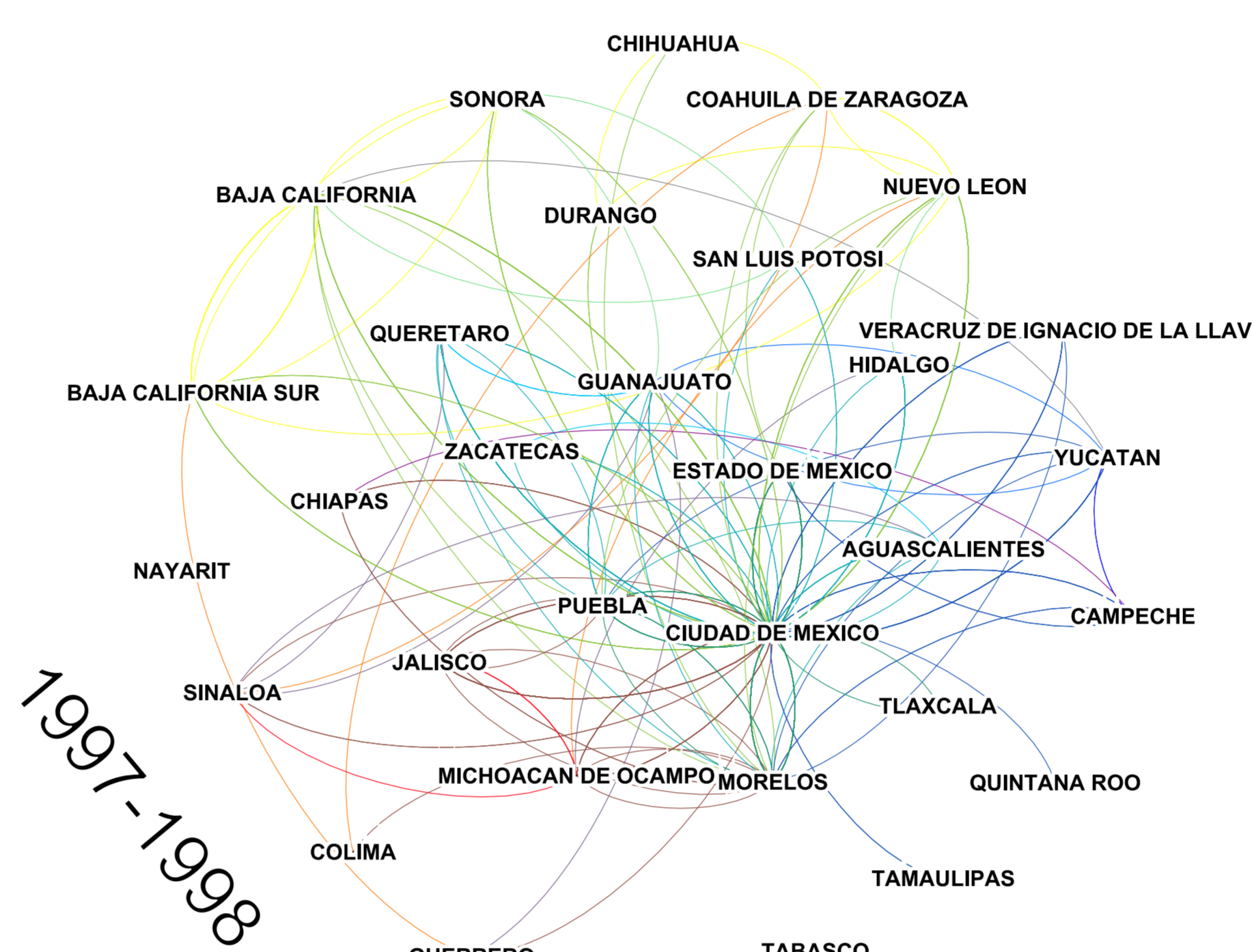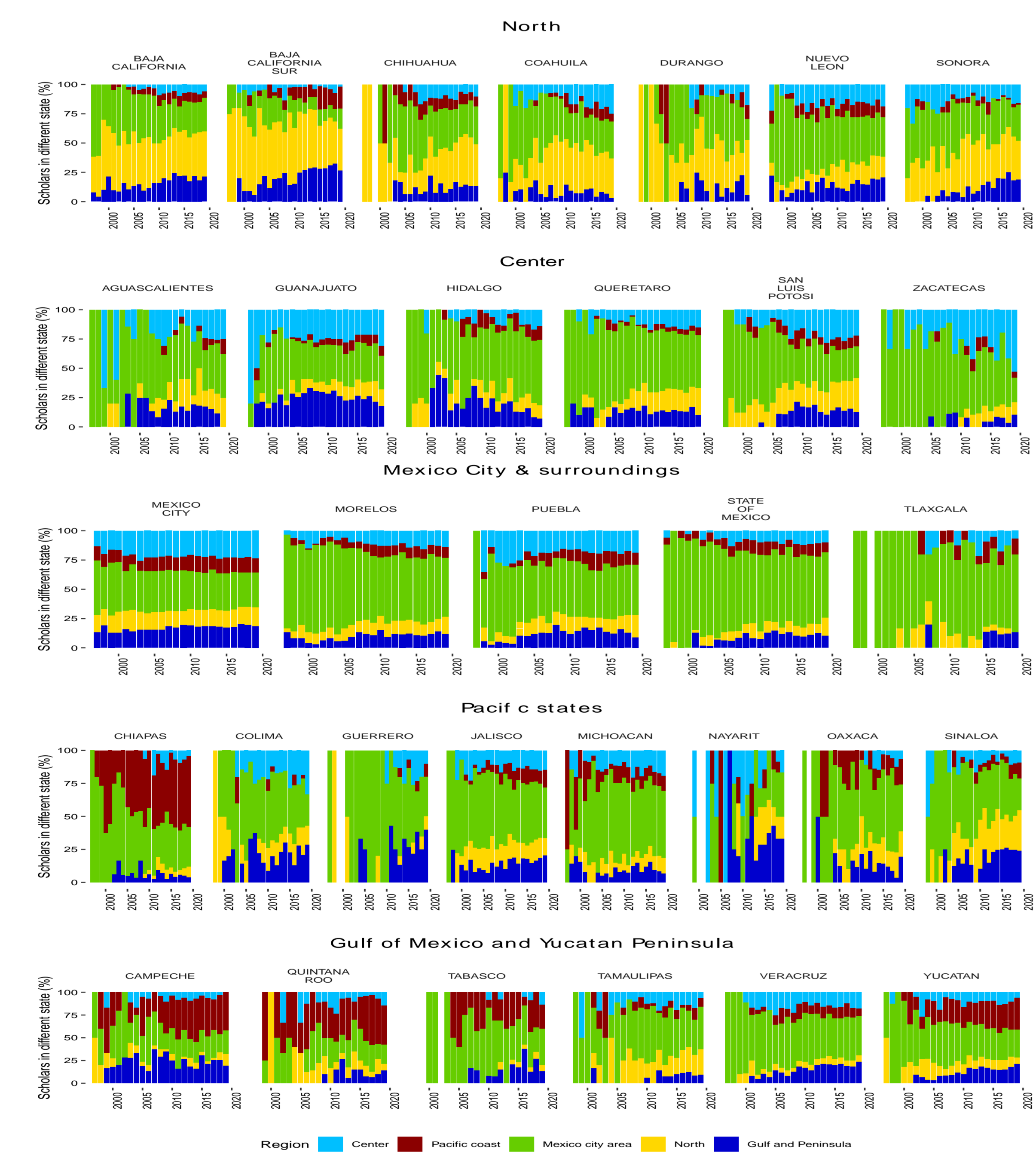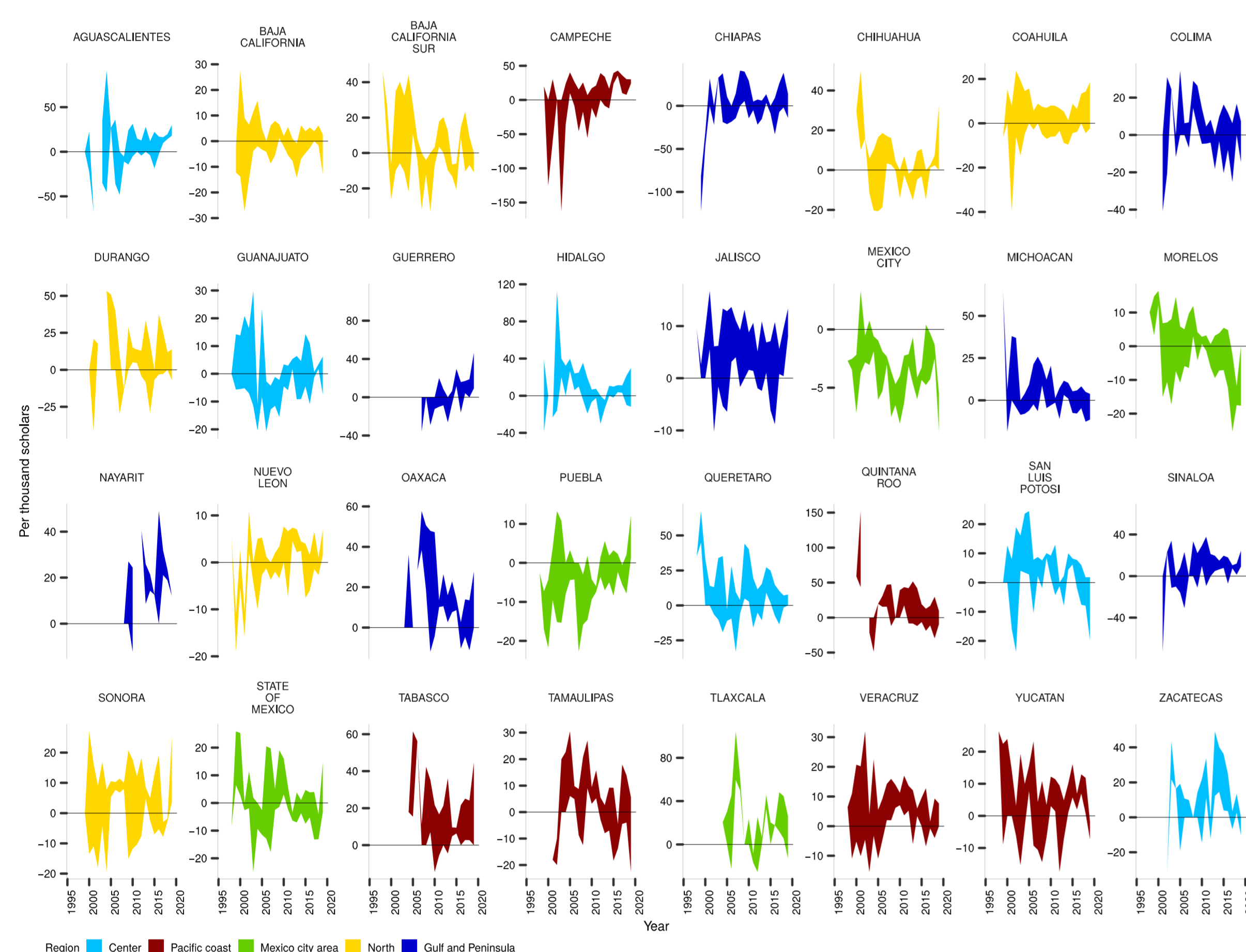# Analyzing large-scale bibliometric data shows that internal scholarly migration in Mexico is experiencing a "mobility transition" in which migration between urban centers increases, especially to and from a single metropolitan region.

Scholarly migration within Mexico: To what extent can we use bibliometric data to study internal migration of scholars?
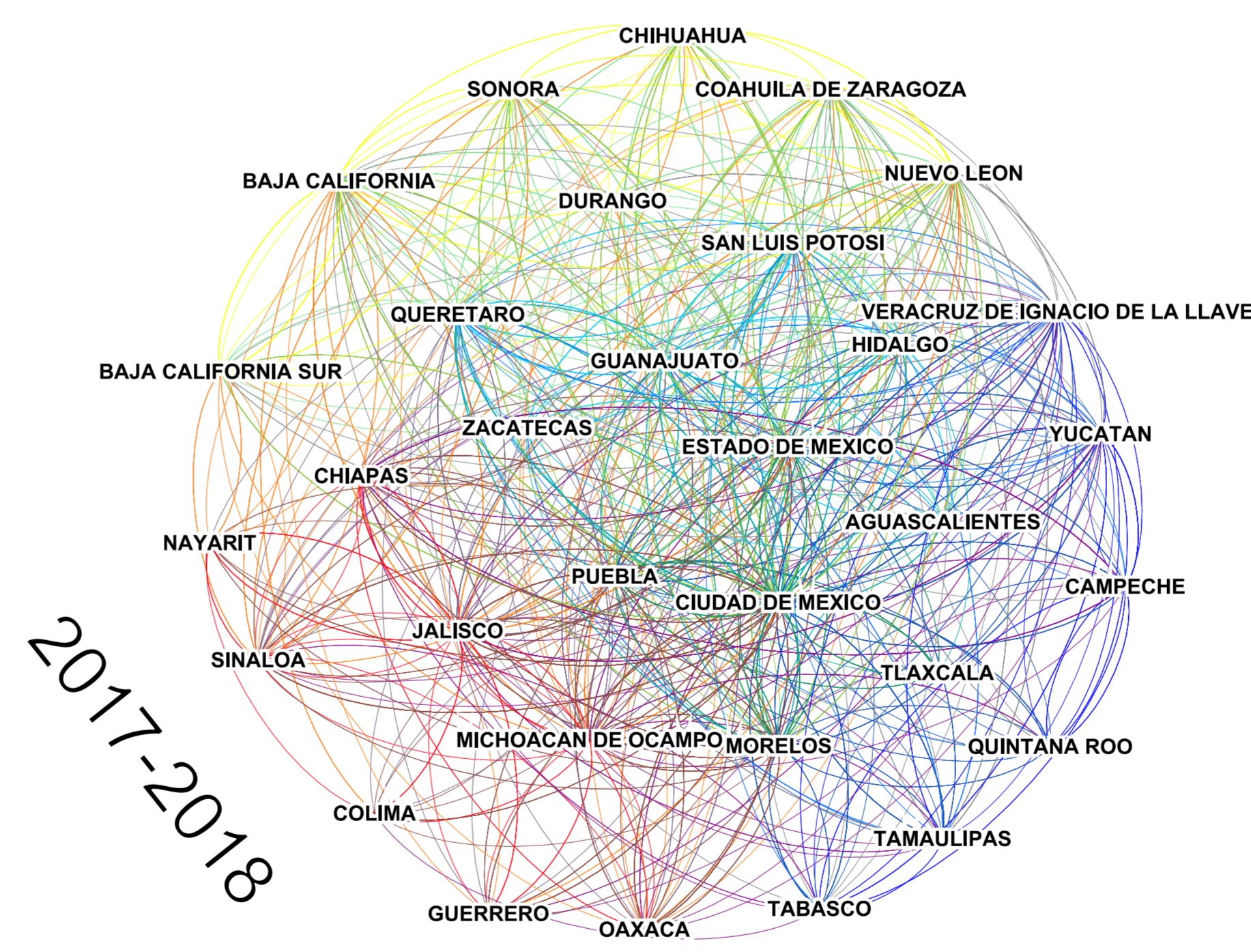
Materials

Scopus publications over 1996-2019: 1.3 million authorship records each linking a Mexico-based researcher to a publication

Method

1) Extracting states from data:
A neural network is developed which accurately predicts the states from affiliations (accuracy=98.4%).

2) Migration rates:
The net migration rate (NMR) of state s between years t and $t-h$ is given by the difference between the immigrating (IM) and emigrating (EM) scholars:

$$NMR_{sth} = \frac{IM_{s,\{t,t-h\}} - EM_{s,\{t,t-h\}}}{Population_{st}}$$

3) Constructing networks:
Each change of affiliation from state i to state j at year y is recorded as a directed edge (i,j) with timestamp y.

- Proof-of-concept for repurposing bibliometric data
- Heterogeneity in migration rates and patterns
- Many mobile authors move to or through Mexico City during their academic life course
- The exchange between states along the Gulf and the Pacific Coast has particularly increased
- Emergence of a core-periphery structure in the migration network

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