MIGRATION CLUSTERS IN BRAZIL: AN ANALYSIS OF AREAS OF ORIGIN AND DESTINATION

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RESEARCH QUESTION

✓ The main goal of this research is to analyze whether the pattern of concentration of migrants in a specific area of destination is the same as that of the area of origin of those migrants.

✓ Migration flows from 415 municipalities in the state of Bahia to 875 groups of census tracts in the mesoregion (metropolitan region) of São Paulo are analyzed.

DATA

✓ The 2000 Brazilian Census has migration data for regions of origin (municipality) and destination (group of census tracts).

✓ Migrants were considered men with at least 23 years of age (N=4,553). Using this classification, this study avoids the inclusion of familial migration (women and children). Moreover, since the migration was done between 1995 and 2000, the age of 23 is chosen to get those men that migrated with at least 18 years of age.

REGRESSION MODELS

✓ The software GeoDA was used to run regression models that could explain both the out-migration rates from Bahia to São Paulo, and the in-migration rates to São Paulo from Bahia. After the use of OLS regressions, the results suggested the need to use spatial error models (Lagrange multiplier).

BAHIA

Mean years of education in each municipality

Proportion of population working in each municipality

→ Out-migration rates (denominator: male population with at least 23 years of age in each municipality)

SÃO PAULO

Mean years of education in each group of census tract

Proportion of population working in each group of census tract

→ In-migration rates (denominator: male population with at least 23 years of age in each group of census tract)

FOUR SETS OF INDEPENDENT VARIABLES

✓ The regression models were built using four different groups of independent variables:

- Only for males aged 23 or more:
  - Original independent variables.
  - Independent variables weighted by estimates of neighbor areas.
- For the whole population:
  - Original independent variables.
  - Independent variables weighted by estimates of neighbor areas.

RESULTS

✓ The analysis of regression models indicated that there was no significant difference between models using only men 23+ and whole population in covariates. Moreover, the OLS results indicated the need to use spatial error models (Lagrange multiplier).

✓ The models for the state of **BAHIA** indicated better estimates for spatially weighted years of education. In general, years of education are inversely correlated with out-migration. In addition, the proportion of population working is also inversely correlated with out-migration, but not statistically significant.

✓ The models for the mesoregion of **SÃO PAULO** indicated better estimates for original covariates (non-spatially weighted). Such as observed above, years of education are inversely correlated with in-migration. Finally, results suggest that proportion of population working is positively correlated with in-migration.

SPATIALLY WEIGHTED COVARIATES

✓ In **BAHIA**, migrants are more likely to leave municipalities with low levels of education, which are surrounded by municipalities with the same levels of education.

✓ In the case of **SÃO PAULO**, migrants are more likely to move into areas with low education, and high proportion of population working, which are surrounded by areas with different levels in covariates.

✓ This is suggesting that for larger areas (municipalities), mean education and employment tend to have same levels of neighbors.

FUTURE IMPROVEMENTS

✓ Low-skilled migrants are moving into areas with higher opportunities of jobs, but with low-skilled population. The question on whether this is an indicative that those migrants are working on low-skilled jobs in São Paulo is not yet answered (residuals are not randomly spatial distributed). One improvement would be the inclusion of occupation variable in the model to get better estimates.