UABDIVULGA
BARCELONA RECERCA I INNOVACIÓ

05/2014

Factors Affecting Geographic Distribution of Populations

Traditionally, economic theory explains population distribution according to the physical distance from the centres of interest. One study proposes a new methodology which introduces the idea of *subjective distance*, which also takes into account other variables. In its application to the state of Massachusetts researchers stress on the importance of factors such as level of income, ethnicity, education level of other persons located in the same environment and the presence of scenic attractions.

Where are people more willing to settle down? This question has no clear answer. Several factors contribute in defining location choices: willingness to be close to the job place or other amenities, preferences to be in a neighbourhood with other citizens sharing the same hobbies (theatres, museum etc.) or the same age or even far from everything and enjoying being surrounded by nature.

This study proposes a new methodology to address this question from an empirical viewpoint. Literature usually models location choices by referring to a deterministic idea of distance. People

select their location with the scope of reducing travelling time to reach their major centre of interest. Here, we are introducing a new idea of subjective distance. Our novelty relies on the decision to model this idea of proximity not only as a variable limited to the physical distance from a selected place. The importance of the physical distance is corrected by the presence of other factors that have an important influence on defining location preferences as well. In this way, we model a clear trade-off mechanism and the final result (namely, the decision choice) will be driven by a few factors among the ones we have previously defined.

In order to test our new idea, we propose an empirical case study for Massachusetts. We aim at shaping the population distribution in that state by taking Boston as the principal pole of attraction and looking at the determinants of such distribution. Even if the dominant variable is still the distance-from-Boston, other factors such as the income of other people in the same neighbourhood, the ethnic composition and the education level composition as well as other measures for natural amenities turn out to be important.

Our estimations deliver an important and novel quantitative result. It clearly appears that the physical distance and the ethnic composition are the two driving forces in shaping the distribution. In particular, the detected factors identify that people valuate a lot the proximity to Boston, but this priority is counterbalanced by the propensity to live in areas whose inhabitants belong to the same ethnic group. Put differently, the racial dimension competes with the physical distance: ethnic preferences often overcome the material costs associate with commuting.

Rosella Nicolini
Rosella.Nicolini@uab.cat

References

Epifani, Ilenia; Nicolini, Rosella. On the Population Density Distribution Across Space: A Probabilistic Approach. Journal of Regional Science 53(3): 481-510. DOI: 10.1111/jors.12018.

View low-bandwidth version