

Agglomeration literature

A Meta-analysis

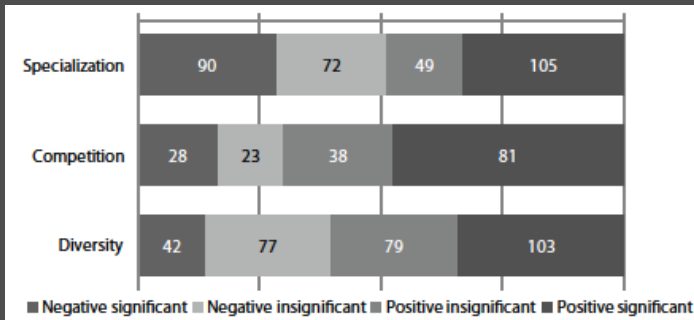
In 1992, Glaeser et al. published a seminal article on the relative importance of three mechanisms that are supposed to stimulate growth:

- Marshall effects of specialization and concentration
- Porter effects of competition
- Jacobs effects of diversity

Famous examples of Jacobs-style cross-over products include the Senseo coffee machine, created by Philips and Dutch Douwe Egberts coffee makers.



Subsequently, as many as 73 other papers performed a regression exercise similar to Glaeser's regression. They found in general that specialization had negative effects even more often than positive effects; for competition and diversity, the picture looks more positive, but there is also evidence to the contrary.



Meta-analysis is a method to quantitatively summarize the results from different studies of the same topic. The results of studies are analyzed using for example the region studied or the date of publication.

We then analyzed the outcomes of these post-Glaeser analyses to look for patterns. This includes both their results, the proxies they use, and their statistical methods to handle the regression.

- Effects differ a lot across space, time and sectors. Diversity effects seem to get stronger over time; specialization seems to be more important in less densely populated areas.
- Development stage (GDP/capita) or the length of the period looked at does not influence the results; i.e., studies differing in these respects can still be compared.
- The specification of the agglomeration variables also drives results.



Cluster policy

Recommendations

The city is generally considered the focus point of all innovative ideas. Notwithstanding modern communication techniques, face-to-face contacts remain dominant, especially for creating contacts between people that otherwise would not have met.

However, the debate which aspects of the city economy strengthen this innovative inclination has not been conclusively decided yet, and it can be doubted whether it will ever be.

Over a series of projects, we studied the benefits of clustering (agglomeration) for knowledge transfer and innovation. It turns out the case for agglomeration is not that strong; even when measuring the current distribution of firms, benefits are low.

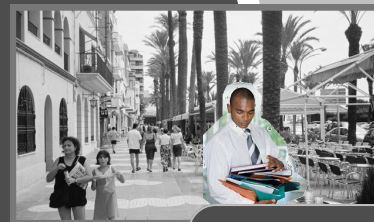
We found that

- firm characteristics explain much better which firms innovate than agglomeration effects or clusters
- accumulated knowledge (R&D) in a region does not enhance innovation in other local firms
- wage differences exist, but can of course be attributed primarily to sorting; agglomeration forces are only a weak determinant of regional wages

How much lower then will be the benefits of policy-driven clusters, where a large degree of uncertainty is added to the mix! It is difficult to pick the winners, at the firm level, at the sectoral level (cf. the new Dutch 'top sector' policy), and at the regional level. Caution is called for, and a healthy sectoral and regional spread of public investments seems wisest.

References

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[I]ntellectual breakthroughs must cross hallways and streets more easily than oceans and continents. (Glaeser et al. 1992, page 1127)



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