

## **A multi scale approach to explaining regional cluster performance**

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In economic development policy the cluster 'concept' has established itself as a de-facto standard for enhancing growth performance of cities, regions and even nations. More than three years ago Martin and Sunley have argued that the geographical fuzziness disavows any analytical claims of Michael Porter's pseudo-concept and warned economic geographers against following a prescriptive fad. In a more recent contribution the same authors continue to warn us, this time cautioning the insouciant use of evolutionary terminology and concepts. In an attempt at a combined reply to these warnings this paper suggests that only an evolutionary understanding of the cluster phenomenon can finally free the concept of its geographical fuzziness and turn it into a theoretically solid multi scale model. Such a model is construed in a two step procedure. In a first part recent evolutionary theorizing from economic geography and economics is drawn upon to define the conceptual framework for investigating the technological and institutional changes relevant for cluster development. Particular emphasis is given to the question of agency in change. In a second step this new framework is applied to a well known empirical example namely that of biotechnology clusters in the U.S. It is shown that in the evolutionary perspective these high-tech clusters can only be understood as a co-evolution of technological and institutional enabling processes mainly associated with agency on the national level and a concurrent competition of institutional configurations linked to agency on the regional level. In an evolutionary view, therefore, geographical fuzziness disappears and becomes a multi-scalar interpretation of change-agency. As counter-intuitive as it might seem, this new evolutionary perspective unveils the regionally visible clusters as decisively multi-scalar phenomena.

### REFERENCES

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