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# HUMAN CAPABILITIES AND SPATIAL INNOVATION: AN EMPIRICAL ANALYSIS AT THE EUROPEAN LEVEL

#### Abstract:

The role of human capital for innovation and economic development is widely acknowledged. Yet, though the connection of knowledge and capabilities to innovation has been recognized as early as the theory of Schumpeter (1934), it was the endogenous growth models which emphasized this link and underlined the importance of human capital, due to its effects both on the level of productivity and on the creation of externalities in the form of knowledge spillovers (Romer, 1990). At the same time, along with the growing importance that was given to space and regional economics, different aspects of human capital have come to prominence and were connected to the development, concentration and diffusion of knowledge in space. Knowledge, skills and capabilities, components embedded in human beings, as well as the social networking and the employment mobility, constitute basic components for regional competitiveness in theories of regional innovation that have emerged and expressed with concepts such as the 'learning region' (Morgan, 1997; Florida, 1995), 'innovative milieu' (Crevoisier, 2001), 'industrial districts' (Becatinni, 1992), 'regional innovation systems' (Cooke et al., 1997) and 'intelligent cities/districts' (Komninos, 2002, 2008, 2014). The paper reviews the literature and describes four basic dimensions of innovation for spatial development (in-house innovation, knowledge spillovers and innovation networks, open innovation, spatial and collective intelligence) which underline the importance of different aspects of human capabilities. Based on a simple methodology similar to the UNDP's Human Development Index, this paper calculates a measure of regional development in the EU regions giving emphasis to the aspects of human capabilities that contribute to innovation. Conclusions are drawn by comparing the results of this composite indicator with GDP-based development indexes as well as the innovation scoreboard.

### **Keywords:**

human capital, human capabilities, innovation, spatial development