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Desafíos, políticas y gobernanza de los territorios en la era post-covid

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ABSTRACT

Title: Human capital, agglomeration, and convergence: A Spatial Mankiw-Romer-Weil model for the European regions

Authors and e-mail of all:

Alicia Gómez Tello: alicia.gomez-tello@uv.es

M^a José Murgui García maria.j.murgui@uv.es

M^a Teresa Sanchis Llopis m.teresa.sanchis@uv.es

Department: Anàlisi Econòmica

University: Universitat de València

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Abstract:

In the last two decades a well-known fact has been observed across the European regions. It consists on the rapid increase in productivity on a handful of very rich regions, the slow progress of the less developed ones and convergence in the middle incomes regions. The new wave to technological progress is more knowledge intensive than used to be in the past and, according to the Economic Geography and NEG models, the big cities, or regions where they are located, tend to be better candidates to accommodate such activities; just as it seems to be happening in Europe. To explain such fact this paper extends the theoretical growth model of Mankiw, Romer and Weil (MRW, 1992) in two ways. First, we take the extension made by Fischer (2011) assuming that interdependence across regions works through spatial externalities linked to disembodied knowledge diffusion. And in addition, we assume that disembodied knowledge diffusion works not only in the form of technological interdependence across regions but also through agglomeration economies that could spread their effects within and between regions. The agglomeration effect is incorporated in the model such as a specific spillover of human capital. Thus, the transition from theory to econometrics gives a cross-section spatial Durbin model that explains the productivity per worker growth at steady state as depending on investment in physical and human capital, agglomeration economies, population growth rate and interdependence across regions. The results obtained for 121 European regions, belonging to Germany, Austria, Belgium, Spain, France, Netherlands, Italy, Portugal and Sweden, shed some interesting light on the contribution of agglomeration and human capital spillovers to regional productivity growth. Both human capital and agglomeration have a positive and significant direct impact on the own region productivity growth; however the indirect impact is not significant at any specification considered. Moreover, a positive premium in productivity growth is observed in the top 90 percentile regions both in terms of

agglomeration impact and human capital impact, whatever the measure of human capital considered. Contrarily, the bottom 25 regions exhibit a penalty in the impact of human capital in its productivity growth and, as expected by definition, a not significant effect derived from agglomeration.

Keywords: Human capital, labour productivity, spatial externalities, European regions.

JEL classification: C21, O18, O47, O51, R11

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