Ageing, human capital and growth: a regional analysis

Alberto Bucci
(Università degli Studi di Milano)

Rosella Nicolini
(Universitat Autònoma de Barcelona)

Pedro Trivín Garcia
(Università Piemonte Orientale)

(January 2026)

Abstract

In this contribution, we propose a theoretical framework that highlights the role of human capital in mitigating the negative effects of an ageing population on long-run economic growth, particularly when a region is also experiencing significant immigration inflows. The analysis is conducted at the sub-national level to account for the spatial dimension of one of the keys (and expected) determinants of economic growth: migration. Available evidence confirms that migration inflows are territorially unequal, with immigrants tending to concentrate in specific areas due to network effects. Our theoretical model reinforces the idea that investment in human capital is a key driver of economic growth. However, it also suggests that large inflows of migrants into a region can reduce per capita investment in human capital, thereby negatively affecting that region's growth rate. An empirical application of this theoretical framework is presented for Spain at the NUTS2/NUTS3 level. Spain provides a relevant case study, as it has been one of the main recipients of immigrants since the 2000s and is also one of the European countries most affected by significant regional disparities in ageing.

Keywords: Growth, human capital, migration, ageing and spatial analysis.
JEL Classification: F22, F43, R11