

The role of regional technological branching and ICT on regional new specializations

Sergio I.*, Iandolo S.*, Ferragina A.M.*

Preliminary draft 30/07/2022. Not to be quoted!

Abstract

The paper aims to study the regional propensity to innovate through patents focusing on the intra and extra-regional branching dynamics in the development of new specialization technologies specify the indicator to measure this: measured by a revealed technology advantage index (RTA). Furthermore, we consider the role of ICT technologies as a driver of regions technological diversification. Considering the attributed properties of ICT firms and their technologies – universally recognized as general-purpose technologies – and referring to theories of recombinant innovation, we argue that ICT knowledge and innovation could reduce the constraints arising from natural industrial branching attributable to technological branching, giving regions more room for developing technological diversification strategies. In our analysis we used data provided by the OECD on patent applications and economic taken from large region for the period 2000 – 2015. The aims of this paper are a) to demonstrate the existence of technological branching phenomenon; b) to underline the presence of spatial branching; c) to highlight that ICT affects technological branching. Our results show that the propensity to innovate of the regions considered is influenced by both spatial proximity and technological proximity.

Keywords: ICT; R&D; Smart specialization strategies, Revealed Technological Advantages

JEL classification: R11; R58; O31; O33

*University of Salerno