

Chapter 2

Smart Specialization Strategies and Universities: Searching for New Theoretical Foundations

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ABSTRACT

The smart specialization strategy is a cornerstone in the EU policy. The smart specialization policy and the entrepreneurial discovery process is formalized in order to generalize and implement the smart specialization concept. The main conclusion of the proposed theoretical framework is that the smart specialization strategy is efficient if it increases the productivity of the largest factor in the region. Starting from the biased technological change notion, the proposed theoretical framework shows the pivotal role of the university for the efficient implementation of the smart specialization strategy not only in the short and medium term but also in the long term.

INTRODUCTION

The main goal of the Europe 2020 strategy is smart, sustainable and inclusive growth (European Commission, 2010a). When comparing the European Multiannual Financial Frameworks 2007-2013 and 2014-2020, it is evident that much attention has been paid to European growth (European Commission, 2004, 2012a). Therefore, to increase European competitiveness it is necessary to invest in technological change

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and innovation. In other words, to increase productivity, EU policy is principally oriented to increase entrepreneurial attitudes and knowledge because they are the most relevant factors for growth (European Commission, 2011a, 2011b).

Smart specialization strategy is one of the most innovative tools of the EU policy to achieve innovation in, and cohesion between, the European regions (Foray and van Ark, 2008; Foray et al., 2009; Dhéret et al., 2014). It is defined as the regional ability to discover new specialties and is based on two pillars: the regional policy-maker strategy, and the entrepreneurial discovery process (Foray, 2015). The policy of the smart specialization strategy supports both innovation and R&D in individual firms that are likely to transform the structure of the regional economy via these firms' intention to increase their own productivity. Entrepreneurial discovery is the process at firm level that precedes the innovation process, during which the entrepreneur first explores and then establishes new business opportunities (Hausmann and Rodrik, 2003). Therefore, the smart specialization strategy is an innovation process which is differentiated at the regional level and closed to the regional endowment of inputs (Boschma and Gianelle, 2014; McCann and Ortega-Argilés, 2014, 2015).

Starting from this idea, the aim of this chapter is to highlight the characteristics of the smart specialization strategy in order to study its key drivers and suggest some efficient political directions. For this purpose, the author used the biased technological change approach to formalize the smart specialization concept. Technological change is biased if and only if it has a differentiated impact on the productivity of the inputs and then the regional endowment is the key variable (Acemoglu, 1998). Biased technological change is formally represented as a change of output elasticity of inputs (Acemoglu, 2015). As suggested by Aghion et al. (2011), the biased technological change approach is useful for EU policy as it induces (directed) structural changes in the economy, i.e. it describes an innovation process, and it selects specific policies for the regional heterogeneity of endowment, i.e. the policies are tailored to the regional endowment of inputs. In other words, the use of the biased technological change approach at the regional level is able to strengthen and develop the smart specialization concept, since it describes the heterogeneous structural evolution of the regions in a simplified way.

The extensive use of smart specialization strategy at government level in Europe and beyond (European Commission, 2010b, 2011c, 2012b, 2014; OECD, 2012) is not paralleled by appropriate investigations in the academic literature. Moreover, not many studies have been carried out that measure the impact of the smart specialization policy, known as the RIS3 policy (Neffke et al., 2011; Gianelle et al., 2014; Navarro et al., 2014; Rodríguez-Pose et al., 2014). There are three explanations for this imbalance. Firstly, there are few useful indicators due to the novelty of the concept, therefore, new databases are required. Secondly, the complexity of the econometric

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