Chapter 4

The Impact of Universities on Regional Competitiveness: A Review of the Main Theoretical and Methodological Approaches

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ABSTRACT

This chapter presents an in-depth critical overview of the theoretical and methodological approaches that have been used to assess the impact of Universities on regional competitiveness and development, including short-term/demand-side (economic) perspective and long-term/supply side (endogenous growth, technological transfer and commercialization, and institutional) perspective. It gives special attention to the potential impacts of universities’ technology transfer and entrepreneurship activities on regional competitiveness, considering the ongoing transformation process of universities towards a ‘regional engaged entrepreneurial university’ model.

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INTRODUCTION

Universities are considered nowadays crucial actors in the knowledge-based economy, not just has a hub of new knowledge generation, but also as booster of entrepreneurship and regional economic development. In fact, the emergence of the entrepreneurial university is a fairly universal, albeit controversial (see Jessop 2017), phenomenon reflected in a new type of institution integrating economic development as an academic function alongside teaching and research (Rodrigues 2011; Sá, Dias & Sá 2018).

Entrepreneurial universities may contribute to social and economic development through the generation, attraction, and retention of job seekers and entrepreneurs, as well as the retention of prestigious researchers (Bramwell & Wolfe 2008). They could attract or generate new enterprises that promote competition and diversity (Urbano & Guerrero 2013) and provide leadership for the creation of entrepreneurial thinking and the development of the ‘entrepreneurial capital’ (Audretsch 2014; Audretsch & Pena-Legazkue 2012; Guerrero, Urbano & Fayolle 2016). Their role is especially important in structurally weak and peripheral regions where universities tend to have a monopoly over the production of intellectual capital (Baptista, Lima & Mendonça 2011).

Some critics have argued that the process of transforming traditional university into an entrepreneurial one is more complicated than it might have been assumed (Kirby 2006; Jessop 2017), and that there are “limits of entrepreneurialism” (Vestergaard 2007: 43). In fact, some authors have argued that technology transfer has only a modest potential for creating new jobs or businesses, and it has just modest impact on regional development (Bozeman 2000; Harrison & Leitch 2010).

The transformation process mentioned above has motivated new research on the impact of Higher Education Institutions (HEIs) at the regional level (Valero & van Reenen 2019), and we find a broad spectrum of approaches, theoretical frameworks and methodologies within the literature. As we will see in detail in the next sections, most of the empirical studies present limitations, either because of their geographical scope (e.g., empirical macro literature assesses the impact of education at a country level, raising issues concerning omitted variables) (Valero & van Reenen 2019), or because they use proxies instead of economic output (e.g. technology transfer and commercialization literature) (Valero & van Reenen 2019), or because the methodology used leaves apart some sources of impact (e.g., methodologies under a direct approach) (Drucker & Goldstein 2007).

The aim of the present chapter is to provide an in-depth overview of the literature on the theoretical and methodologic approaches for assessing the impact of Universities on regional development and competitiveness, embracing not only the demand-side/ economic approach and related methodologies but also those more recent approaches/ methodologies, related to knowledge spillovers – endogenous growth, technology transfer and institutional - which reflect the impact of activities associated with universities’ third and fourth missions (commercialization of technology and social-local development).

Such updated literature on the theoretical and methodologic approaches used for assessing the impact of Universities, most notably, Entrepreneurial Universities contributes to fill in a gap in the extant literature as, to the best of our knowledge, no comprehensive literature review exists on this topic.

This chapter is organized as follows. Section 2 starts by providing an overview of the definition of ‘entrepreneurial university’. Section 3 details and discuss the types of activities, by main mission, Universities potentially develop which are likely to contribute to local and regional competitiveness and growth. The distinct theoretical and methodological approaches used to assess the impact of Universities are described in Section 4. Finally, Section 5 provides some concluding remarks and avenues for future research.