



EXTENDED ABSTRACT

Title:

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Abstract:

1.-INTRODUCTION

There has been a great effort researching the relationship between localization externalities and firm performance, from different yet related disciplines and approaches encompassing management, innovation and economic geography (e.g. Shaver and Flyer, 2000; Knoben et al., 2016). Literature on agglomerations and firm performance, however, has continuously assumed that most innovations follow a continuous or incremental innovation pattern, omitting the explanation and rationale of how agglomerations enable discontinuous or radical innovation to occur and thus overlooking the potential effect that an agglomeration can exert on a firm's discontinuous innovation. Focusing on firm heterogeneity and addressing the firm level, to the best of our knowledge, there is no study focusing on understanding the relationship between collocation in an agglomeration and the occurrence of radical innovation. In this study, we attempt to fill this gap mostly overlooked by scholars. It is aimed at deciphering whether localization externalities¹, measured as industry specialization or a firm's collocation in a relatively high own-industry employment region, exert a potential effect on a collocated firm's radical innovative performance.

¹ Marshall (1890), Arrow (1962), and Romer (1986) put forward a concept, which was later formalized by the seminal work of Glaeser et al. (1992) and became known as the Marshall–Arrow–Romer (MAR) mode



Generally, very few studies have looked at radical innovation in agglomerations theoretically (Pouder and St. John, 1996; Gilbert, 2012; Hervás-Oliver, 2016) or empirically (e.g. Sull, 2001; Ostergaard and Park, 2015), the latter being restricted exclusively to case studies. Combining geography of innovation and strategy frameworks, we posit that in agglomerations discontinuous innovation and its associated changes, however, neither frequently occur nor are facilitated. This study refers to agglomerations as localization externalities that are measured as industry specialization or a firm's collocation in a relatively high own-industry employment region, and results show that industry specialization has a negative influence on the occurrence of a firm's *radical* innovation. Discontinuous innovation requires a different pattern of innovation not frequently observed, nor facilitated by localization externalities.

This article contributes to the geography of innovation by unfolding the different effects that localization externalities play on a firm's innovation and thus disentangles how, both incremental and radical innovation patterns, are differently activated in agglomerations, presenting a novel debate at the core of the geography of innovation. Using CIS data and regional data from Spain (3,602 firms) we test our model.

Keywords: radical innovation; localization externalities; CIS data; agglomerations

JEL codes: : O3, R1