



54ème colloque
ASRDLF

5-7 juillet 2017, Athènes, Grèce



15th conference
ERSA-GR



Les défis de développement pour les villes et les régions dans une Europe en mutation

The drivers of regional innovation in periods of booms and busts: the case of Greece

Mr Ioannis KAPLANIS

Hellenic Industrial Property Organisation Director General

Tralleon 43 111 42 Athens Greece

i_kaplanis@yahoo.co.uk

Mme Theano-maria TAGARAKI

Athens University of Business and Economics PhD Student

Agkylis 77 11743 Athens Greece

t.tagaraki@gmail.com

Référence à la session / reference to the session

Résumé / Summary

There has been extensive literature that associates patent activity with strong innovative performance, technological diffusion and consequently growth. The differential patterns of innovative performance across regions warrant for a thorough analysis at the spatial level, that takes into account the regional industrial structure and the local institutions. Such regional traits might matter not only for periods of booms in order to utilize local talent and boost performance, but also in periods of bust in order to curtail recessionary pressures.

The case of Greece might be insightful, as during the recent period of acute crisis (2009-2015), that followed decades of robust growth, there have been distinct patterns in the regional performance that need to be further explored. Country's regional innovative performance has been scarcely investigated, amongst others due to data availability limitations.

In this paper, we use for the first time newly collected and processed data from the Greek Patent Office (Hellenic Industrial Property Organization- OBI), in order to frame and analyse the industrial profile, innovative performance and economic growth for each of the thirteen geographical regions of Greece for the time period of 1988-2016.

In our attempt to determine innovative performance we use various measures of patent quantity and quality, like the radicalness indicator and the patent score. Different models of regional knowledge production

functions with appropriate econometric techniques are used to shed light on the relationship between regional innovation and regional characteristics, that have been proposed in the literature, such as institutional conditions, human capital, social factors, corporate and market characteristics. Interesting results are drawn from our study both for the regional traits that drive innovative performance, but also on how their impact might differ in periods of bust, compared to the boom ones.

Keywords: Patents; regional innovation; regional growth; Smart specialization; knowledge spillovers
JEL codes: O32; O34; R11; R58

Bibliographie / Bibliography

Buesa, M., Heijs, J., & Baumert, T. (2010). The determinants of regional innovation in Europe: a combined factorial and regression knowledge production function approach. *Research Policy*, 39 (6), 722–735.

Buesa, M., Heijs, J., Pellitero, M., & Baumert, T. (2005). Regional systems of innovation and the knowledge production function: the Spanish case. *Technovation*, 26, 436-472

Charlot, S., Crescenzi, R., & Musolesi, A. (2015). Econometric modelling of the regional knowledge production function in Europe. *Journal of Economic Geography*, 15 (6): 1227-1259.

Crescenzi, Riccardo and Rodríguez-Pose, Andrés (2011) *Innovation and regional growth in the European Union Advances in spatial science*. Springer, Berlin, Germany. ISBN 978364217760

Crescenzi, Riccardo and Rodríguez-Pose, Andrés (2013) R&D, socio-economic conditions, and regional innovation in the U.S. *Growth and Change*, 44 (2). 287-320. ISSN 0017-4815

Crespi, F. (2004). *Notes on the Determinants of Innovation: a Multi-Perspective Analysis*. Fondazione Eni Enrico Mattei Note di Lavoro, 42.

Freeman, C. (1997). The “National System of Innovation” in historical perspective. In: Archibugi, D., Michie, J. (Eds.), *Technology, Globalization and Economic Performance*. Cambridge University Press, Cambridge, 24–49.

Gambardella, A., Harhoff, D., & Verspagen, B. (2011). The determinants of the private value of patented inventions. WIPO. retrieved by http://www.wipo.int/edocs/mdocs/mdocs/en/wipo_ip_econ_ge_2_11/wipo_ip_econ_ge_2_11_determinants.pdf.

Griliches, Z. (1979). Issues in Assessing the Contribution of Research and Development to Productivity Growth. *The Bell Journal of Economics*, 10(1), 92-116.

Hall, B., H., J. H. Graham, and D. C. Mowery (2003). “Prospects for Improving U.S. Patent Quality via Post-grant Opposition”, NBER Working Paper, No. 9731

Hirschey, M., V.J. Richardson (2001). Valuation effects of patent quality: A comparison for Japanese and U.S. firms, *Pacific – Basin finance journal*. No. 9 (2001), pages 65-82

Morck, R., Yeung, B., (2001). Les déterminants économiques de l'innovation. Paper 25, Gouvernement du Canada, Industry Canada

Rodríguez-Pose, Andrés and Crescenzi, Riccardo (2008) Research and development, spillovers, innovation systems, and the genesis of regional growth in Europe *Regional Studies*, 42 (1). 51-67. ISSN 0034-3404

Squicciarini, M., H. Dernis and C. Criscuolo (2013). "Measuring Patent Quality: Indicators of Technological and Economic Value", OECD Science, Technology and Industry Working Papers, No. 2013/03, OECD Publishing, Paris.