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Innovation systems in the emerging countries from Central Europe: Can innovation be a base to compete successfully with Asian emerging economies?

Abstract

The study gives an overview of recent developments in the concept of national innovation system (NIS), which was introduced by Ch. Freeman (Freeman, 1987) and further elaborated on by G. Dosi, B. Lundvall and Ch. Edquist, B. Carlsson, L. Cohen & F.J. Díaz López (Dosi, et al., 1988; Lundvall, 1992; Edquist, 2000; Carlsson, 2004; Coenen & Díaz López, 2010). The main elements of the NIS, such as the mix of institutions, policies and practices that constitute the system are presented and described. Based on this theoretical part, the empirical analysis of national innovation systems in the emerging Central European countries is conducted. The aim here is the comparative assessment of the national innovation systems in the emerging countries from Central Europe, such as Poland, the Czech Republic, Slovakia, Hungary, Romania and Bulgaria. In the last decade of the 20th century all these countries underwent transition from a centrally planned to a market economy and, in the beginning of the 21st century, joined the European Union. Both, transition and integration processes in these countries re-shaped their system of innovations, but the results reflected in their innovation performance have been diverse. First, the national innovation systems of these emerging Central European countries vary significantly with respect to R&D financing, human resource development as well as science and technology policies. Second, these countries differ significantly with regard to their innovation position. According to the Innovation Union Scoreboard published every year by the European Commission, the Czech Republic, Hungary and Slovakia are so called ‘moderate innovators’, while Poland, Romania and Bulgaria belong to the group of ‘modest innovators’ (IUS, 2013, p. 5). Third, there are differences in the technological specialization of these countries measured by the patent statistics and reflected in the Revealed Technological Comparative Advantage (RTCA) indices.

In this context the crucial questions follow: Are these countries converging or diverging in terms of innovation performance with the EU average? What are the main differences in their innovation performance? To what extent can innovation constitute a base for Central European countries to compete successfully with China and other emerging Asian countries? This study aims at providing answers to these questions.

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