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Innovation and competitiveness in European context

Adrian Bogdan Ciocanel[a,b*], Florin Marius Pavelescu[a,b]

[a]*IRECSON, Str. Franceza nr.68 sect 3 Bucharest, Romania*
[b]*Institute of National Economy, Casa Academiei, Calea 13 Septembrie, nr.13, Bucharest, Romania*

Abstract

An almost unanimously accepted issue is that the path to competitiveness of economies, whose companies are exposed to international competition, goes through innovation. This enables companies to adapt quickly to the pace of the technological change, in order to increase competitiveness. This article aims to test the links between innovation and competitiveness having considered the results of the performance evaluation models in matters of innovation and competitiveness for different countries, such as the Innovation Union Scoreboard and IMD World Competitiveness Yearbook. Using these models we can evaluate the connection between the composite indicators calculated by using the methodologies mentioned above. To determine the connection we will use a panel-type econometric model. The econometric analysis aims to confirm a cause-effect relationship between innovation and competitiveness through which we will be able to assess the impact of innovation on competitiveness growth.
In accordance with the European and national policies for stimulating innovation through increased R&D funding intensity, raising the average level of spending in the EU of R&D to 3% of GDP could significantly enhance the competitiveness of European economies compared to other states.

Key words: Innovation, Competitiveness, Scoreboard.

1.Introduction

For many of us, the concept of competitiveness involves a situation where a person, company or nation wins or loses against another. It would be better to say that a competitive person, company or nation strives to

* Corresponding author.
E-mail address: bogdan.ciocanel@irecson.ro

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develop a comparative advantage in an area where they exceed others. It is highly unlikely to achieve a high level of competitiveness in all areas. As a consequence, a weakness in one area can be offset by strengths in another area. This concept led to the specialization theory, developed within the international trade, by David Ricardo [1]. The most recent illustration of it is the strategy of off-shoring used by many companies worldwide. As a result, the specialization plays an important role in matter of competitiveness. Open global markets have led to the phenomenon of competitiveness of nations. In this context we can talk about competitive strategies that are considered successful when there is a balance between the economic requirement imposed by global markets and the social requirement of a nation formed by history, tradition and value systems.

Competitive enterprises are the key drivers in a country's competitiveness. They create the core of the economic development. But in a modern economy, nations do not rely solely on products and services. The abilities of a nation to develop an excellent educational system and to improve their employment skills through training are vital for competitiveness. The knowledge triangle (education, research and innovation), defined by the Lisbon Strategy [2], is one of the important factors of competitiveness. Oslo Manual [3] defined innovation as an activity that leads to a product (good or service), which product is either new or significantly improved or made using a significantly improved process, a new marketing method or a new organizational method in business practices, workplace organization or external relationships. Innovation is based on the results of new technologies, new combinations of existing technology or the use of other knowledge acquired by the enterprise. Probably, one of the biggest challenges for European countries, as shown by an important number of national and European documents, is to find a much more strategic approach to innovation. Europe 2020 Flagship Initiative Innovation Union [4] sustains an approach where innovation becomes a main political objective on a medium and long term perspective, where all policy instruments, measures and fundings are designed to contribute to innovation, where EU policies and national / regional authorities are closely aligned and mutually reinforcing and where the highest political level sets a strategic agenda, monitors progress regularly and tackles delays. At a European level, the "Innovation Union" initiative considers that it is necessary to build a different paradigm because the current one, "business as usual", is equivalent to the gradual loss of EU competitive advantages and the acceptance of Europe's decline. We could call it an "innovation paradigm." There are numerous studies correlating innovation indicators and competitiveness indicators, but there are few articles that investigate the relationship between innovation and competitiveness in terms of performance, being assessed by analytical models, which are internationally recognized, like Innovation Union Scoreboard (IUS) and IMD World Competitiveness Scoreboard (WCY). The purpose of this article is to prove whether or not the innovation has a positive impact on competitiveness, or if other determinants may have a higher influence than the influence of innovation on competitiveness. A positive relationship between innovation and competitiveness in the European countries is important from the European real convergence perspective. By analysing the impact of innovation on competitiveness using the 29 European countries, we will be able to test if the "innovation paradigm" is sustainable concerning the recovery of the competitive advantages lost during the economic crisis. Reducing the innovation gaps between the European countries can boost competitiveness and increase the rate of economic growth. Using a panel-type regression with fixed effects for the 29 European countries, we will estimate the intensity of the relationship between Innovation Union Scoreboard and IMD World Competitiveness Scoreboard. Both scoreboards are calculated as composite indicators based on statistical data of innovation and competitiveness.

2. Literature review

Schumpeter considered innovation as a critical dimension of economic change [5]. From his point of view, economic change revolves around innovation, entrepreneurship and market power. According to Schumpeter's theory, we can have better results concerning the increasing of the market power by using innovation, than by using competitive pricing compared to the competition. Schumpeter argues that technological innovation often