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THE EFFECTIVENESS OF R&D PUBLIC POLICY ON THE CORPORATE LEVEL – EVIDENCE FROM THE VISEGRAD GROUP COUNTRIES

Abstract:

The positive impact of R&D corporate investment on macroeconomic growth is well documented in economic theory and empirical research. At the company level however, the decision whether to undertake R&D project is not so clear. Many studies confirm the intuition that this type of investment is very risky and therefore the result is difficult to predict. Secondly, the commercialization process brings the threat that R&D benefits may be realized by other parties and not only the company wich originated and financed R&D. The last argument is especially important for developing countries, for which R&D investments are much more difficult to pursue due to the lack of proper infrastructure, stable financing, access to high-technologies, etc. In countries like Poland, Czech Republic, Hungary and Slovakia we observe a low-level of R&D investment but still relatively high GDP growth. This is known as a catch-up effect but it seems that this fuel of GDP growth will not last forever and CEE countries will face a barrier in their furure development. To adress this problem, many countries decided to change their R&D policy and introduce or expande fiscal incentives for business R&D. The paper investigates the recent changes in the policy mix designed to support business R&D in four CEE countries: Czech Republic, Hungary, Poland, and Slovakia. These countries, widely known as Visegrad Group, are reasonably homogenous in terms of economic development, post-communist heritage, and current socio-cultural conditions. As a proxy for the generosity of a tax system from the perspective of firm R&D, we use an indicator constructed by OECD - implied tax subsidy rates on R&D expenditures. We formulate the hypothesis that the increase in the fiscal support offered by a state is followed by the rise in the R&D corporate intensity (defined as a ratio of R&D expenditures to total assets). Our sample consists of large and very large companies (with more than 150 employees, total assets of more than 20 mln EUR, and operating revenue of more than 10 mln EUR) in a time period from 2010 to 2018. Initially the sample consists of 44 305 companies. We employ regression analysis controlling for the other factors influencing R&D (sector affiliation, profitability, financial leverage, liquidity and company size). Results support our hypothesis suggesting that public policy has a positive impact on R&D intensity. The analysis also reveals other interesting facts about R&D, e.g. phenomena of R&D underreporting in the accounting practice of CEE companies.

Keywords:

R&D tax incentives; R&D policy; R&D intensity

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