

The Effects of Research & Development Expenditures on Economic Growth using PMG and MG (A Case Study of Iran and the Selected Business Partners)

*Elaheh Bohloolvand **

*Asaad Shemshadi ***

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Abstract

Today, one of the important issues in macroeconomic planning of countries is investing in research and development (R&D). Considering that the cost of this type of investment is significant, it is important for policymakers to assess the effects of R&D spending on economic growth and its real return. Therefore, this study analyzes the effect of R&D expenditures on economic growth for Iran and its selected business partners during the years (2001-2018) using the pooled mean group (PMG) method. The results show that in the long run, R&D expenditures Growth with a coefficient of 0.46 has a positive and significant effect on economic growth of countries. In addition, the variables of physical capital stock growth and employed labor force growth have been used in the model and the results indicate that there is a long-term causal relationship between these variables and economic growth. short-term results for Iran indicate that the variables of R&D expenditures growth, physical capital stock growth and employed labor force growth have significant effects on Iran's economic growth in the period under review; Therefore, In order to achieve continuous and sustainable economic growth, it is necessary to increase the credits of the R&D sector in all economic sub-sectors while increasing the quality and quantity of factors of production.

Keywords: Research & Development; Gross Expenditure on R&D; Economic Growth; Panel Data; Pooled Mean Group (PMG).

JEL Classification: O11, O32, C23.

* Ph.D. Student in Economics, Faculty of Economics and Management, University of Qom, Qom, Iran. (Corresponding Author). Email: ebohloolvand@yahoo.com

** Assistant Professor, Department of Electrical Engineering, Arak University of Technology, Arak, Iran. Email: Shemshadi@arakut.ac.ir



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