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Innovation and the Effect of Research and Development (R&D) Expenditure on Growth in Some Developing and Developed Countries

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Abstract

The concept of globalization accelerates the transfer of the trade from the local point to the international dimension. In today's information age, besides getting the information, it is important to use the information effectively and create value. This context increases the value of the innovation that means renewal of science and technology that provide economical and social benefits. The goal of innovation is positive change, to make someone or something better. Innovation leading to increased productivity is the fundamental source of increasing wealth in an economy. Hence innovation is the most important factor for countries that guarantees employment growth, sustainable growth, social welfare and the quality of life. International competition and sustainable growth have increased the importance of Research and Development (R&D) expenditure. So for this, a good R&D level is required for whole countries. The increase of the R&D level forms a basis for the innovation to move. The main scope of this study is to investigate the relationship between R&D and economic growth. In this study, firstly literature review is analyzed about the innovation and afterward is focused on R&D expenditures and economic growth corresponding with innovation and their relative influence on some developing and developed countries in the world.

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Keywords: Innovation, Research and Development (R&D), Growth

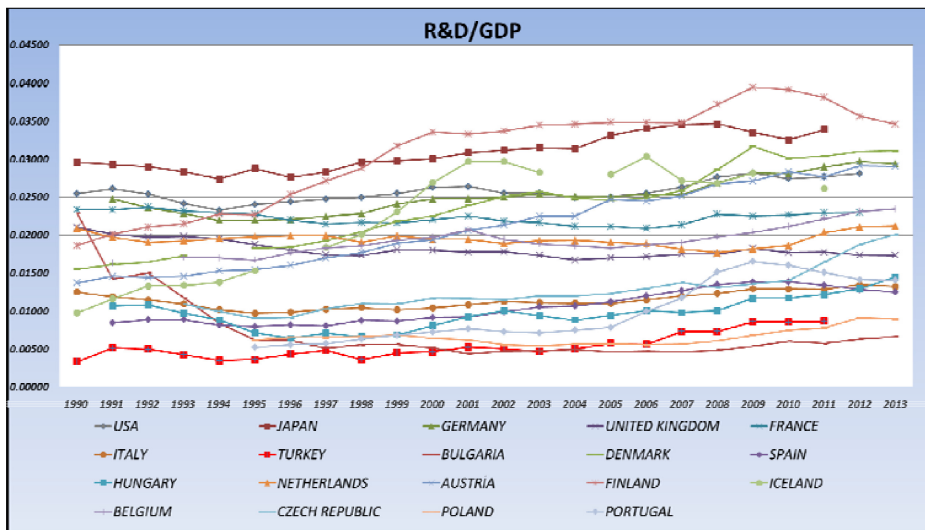
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1. Introduction

In recent years have seen tremendous economic and technological catching up in the world. Successful technology upgrading also needs policies that are relevant to technological innovation. Innovation is generally acknowledged to be a principal means by which regions increase economic growth and competitiveness. Effectively and efficiently adopting existing technologies is thus an important way to sustain economic growth and development (Hu, 2015; Huggins et al., 2015). So for this, R&D becomes a key role of economic growth.

In first place, R&D expenditures of Gross Domestic Product (GDP) (R&D/GDP- per capita) and, R&D expenditures and Gross Domestic Product (GDP) (per capita) as on average of period of 1990-2013 are shown in Fig. 1. and Fig. 2. respectively and also, data is used for both R&D and GDP as euro and per capita in this study.



Countries	Average R&D/GDP (1990-2013)
Japan	0.0308
Finland	0.0307
USA	0.0257
Germany	0.0251
Denmark	0.0236
France	0.0222
Iceland	0.0221
Austria	0.0211
Netherlands	0.0194
Belgium	0.0193
United Kingdom	0.0181
Czech Republic	0.0126
Italy	0.0114
Spain	0.0105
Portugal	0.0098
Hungary	0.0096
Bulgaria	0.0072
Poland	0.0066
Turkey	0.0054

Fig. 1. R&D expenditures per capita of Gross Domestic Product (GDP) per capita (1990-2013) (Euro)

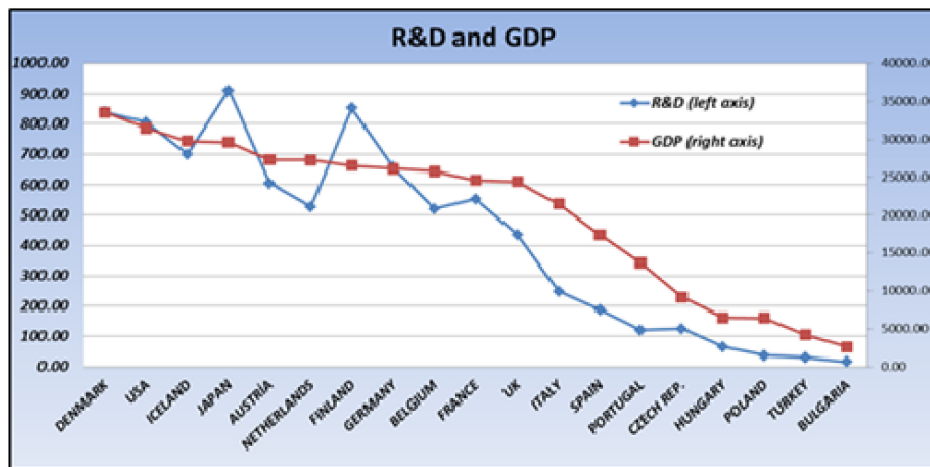


Fig. 2. R&D expenditures per capita and Gross Domestic Product (GDP) per capita (1990-2013)

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