

INNOVATION-LED ECONOMIC DEVELOPMENT THROUGH MARKETING AND TAX INCENTIVES

Conf. univ. Camelia Surugiu, PhD
University of Bucharest
Faculty of Administration and Business
Bucharest, Romania
Marius-Răzvan Surugiu, PhD
Institute of National Economy-Romanian Academy
Bucharest, Romania

Abstract: Specialists and decision-makers recognize the power of innovation in inducing economic growth and development of regions and countries. The question is how to sustain an innovative environment, in order to generate creative ideas for the market. The authors debate two solutions, namely marketing and fiscal policy, but we have to underline that there are other instruments available to induce innovativeness. This paper submits to the attention, the innovation as being one of the main forces which supports economic development and economic recovery. Governments which sustain enterprises' innovation of products and process will have many chances to transform economies into developed and prosperous ones. But innovation by itself does not bring always success, and that is why marketers, economists and innovators must cooperate for favourable outcomes to occur.

JEL classification:O10, O31

Key words: economic development; economic growth; innovation; tax incentives.

1. INTRODUCTION

In order to register economic growth, an economy has to be able to offer on long-term, an increasingly, diverse range of goods, as a result of advancing technology, of institutional and ideological adjustments (Kuznets, 1971). Economic growth is an essential element for reducing poverty in society and may lead to improvements in the living standards for most people (Stephens, 1999).

Economic growth analysis refers more to the aspects of quantitative changes (increases in real GDP) in the economy and economic activity. However, some authors underline that these aspects are highlighted by the concept of economic development, that captures the qualitative and quantitative elements in the economy. Economic development refers to qualitative changes in the economy and to social and technological progress¹. The main determinants of economic growth are not only production factors, land, labour and available capital, natural resources, scientific and technical information, but also human capital, technological innovation, research and development investments and knowledge from various fields, social and cultural dimensions.

As the economy and society have been facing new challenges caused by population growth, environmental protection, globalization, the phenomenon of economic growth was necessary to be considered from a sustainable perspective, being desirable for the economy to record a growth that can be maintained on long-run. The concept of sustainability requires consideration of ecological principles, investments in scientific research, measures to stimulate innovation, technological progress, etc.

Technology and innovation are factors that can contribute to economic development and can support this process. When a threshold of scientific information and technical competence is attained by a country, this may stimulate the innovation in any sector of the economy. The governments may adopt measures to stop the phenomenon of brain drain and to stimulate the relocation of valuable researchers to contribute to economic development.

According to the Community Innovation Survey (CIS), the strategy most frequently mentioned as being highly important for 19 EU Member States, between 2010 and 2012 for both innovative and non-innovative enterprises was the intensification or improvement of marketing of goods and services. Consequently, it is highly important, for the companies, to concentrate on marketing activities, in order to support innovation and innovativeness environment. Marketing tools seem more closely related to disruptive innovations, still sustaining innovation seems more challenging for marketing capabilities.

On the other hand, research and development (R&D) expenditures stimulate innovation, and economic growth. Also, it is important if the governments adopt measures in order to support the development of the business environment. Consequently, R&D activities need to be adequately funded. Incentives for researchers may represent, for a country, the chance to keep valuable brains, to channel their talent and energy on innovation generation, to contribute to society and economy development. In various countries, adopting measures in the area of the corporate tax has an impact on the decision of firms to innovate. If the tax will increase, it may become more expensive to initiate a business, with a negative impact on innovation.

This paper aims to underline the importance of innovation in supporting economic development and to discuss two driving-forces able to boost innovation in the economy, namely tax incentives and appropriate marketing tools. The paper is structured as follows. Next section presents the importance of innovation for the economic development, disparities between growth and innovation in the EU countries through Lorenz curve, Gini index and other statistical indicators. Section 3 discusses the marketing of innovation. Section 4 presents the main trends regarding tax incentives for R&D. Last section concludes the paper.

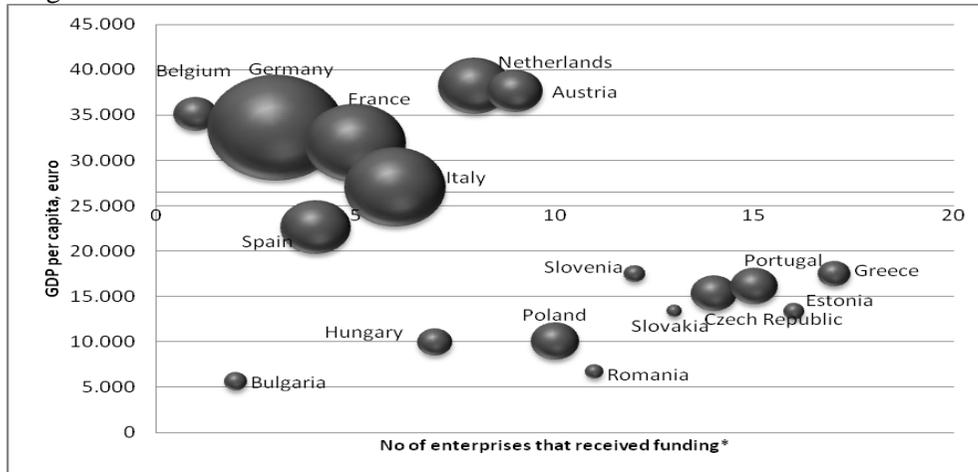
2. INNOVATION AS THE PATHWAY TO DEVELOPMENT

Many economists are constantly looking for the efficient and effective social, economic, environmental, political instruments, in order to sustain growth and to support sustainable economic development. For decades, various solutions were discussed, accepted or criticized but the history proved that without innovation a society cannot evolve and develop.

There is no doubt that R&D, covering activities such as basic research, applied research and experimental development, has an important role in economic growth, R&D comprising “creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use

of this stock of knowledge to devise new applications” (OECD, 2002). Governments aim to support R&D in firms, with impact on the economic growth. Due to innovation and R&D, the high-income countries development takes place in a rapid pace (Nicolaidis, 2014). Also, innovation and technology are important in tackling developmental challenges, related to providing access to drinking water, eradicating diseases or reducing hunger in various countries (OECD, 2012).

Countries with the highest GDP per capita (Germany, France, Italy) have registered, in 2012, the highest number of innovative enterprises, receiving public funding from European Union (EU), central government (including central government agencies or ministries), local or regional authorities, any public funding, 7th Framework Programme.



Source: processed data from Eurostat

Figure no. 1 Funding of enterprises vs. GDP per capita, 2012

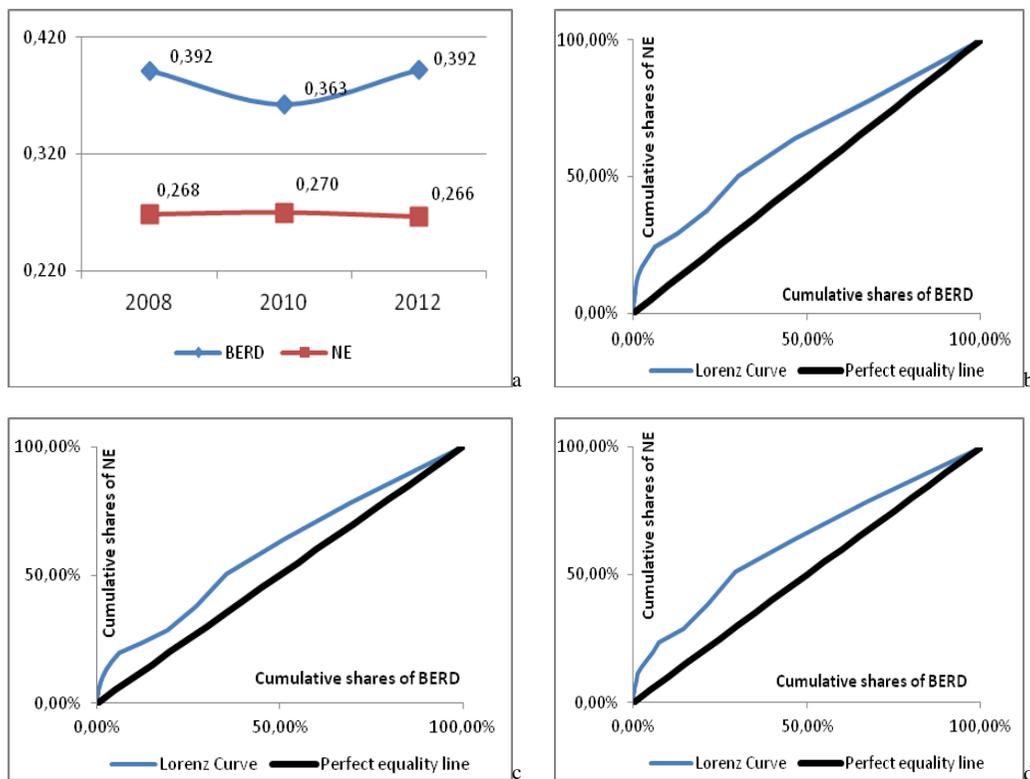
The value of the Gini index for number of enterprises by innovation core activities (NE) increased from 0,268 to 0,270 in 2010 compared to 2008, then dropping to 0,266 in 2012 (see Fig. 2) . The increase of the value is a sign of growing disparities related to NE in EU20¹ countries. Increasing values represents an increase of the NE concentration by countries; some countries have a higher NE than others countries. Gini index for business enterprise R&D (BERD) has recorded a significant change during the analysed years, the decrease of the Gini index value of 0,363 in 2010 compared to 0,392 in 2008 highlighting the decrease of the disparities of BERD in EU20 countries. The index has approximately the same value in 2012, as compared with 2008.

As it regards the Lorenz curve for business enterprise R&D and NE in the case of EU20 countries, in 2008, 63,8% of enterprises carried out approximately 46% of the R&D expenditure in the business sector. In two years, the situation has changed and 64% of enterprises carried out approximately 51% of the R&D expenditure. In 2012 the situation is almost similar with the one in 2008 (63,8% of enterprises carried out approximately 46,2% of the R&D expenditure).

If the case of the relationship between the NE and BERD, the Lorenz curve changed in 2012 compared to 2008 and 2010, indicating a decrease of the inequality of

¹ In our case, EU20 refers to EU28 countries, except eight countries, due to data availability: Austria, Greece, Germany, Ireland, Luxembourg, Netherlands, Slovenia, and Sweden.

the distribution in 2010 compared to 2008, and its increase in 2012 compared to 2010.



Note: BERD - business enterprise R&D expenditure, for innovation core activities, million euro; NE- no. of enterprises by innovation core activities

Source: authors' calculations, based on Eurostat data.

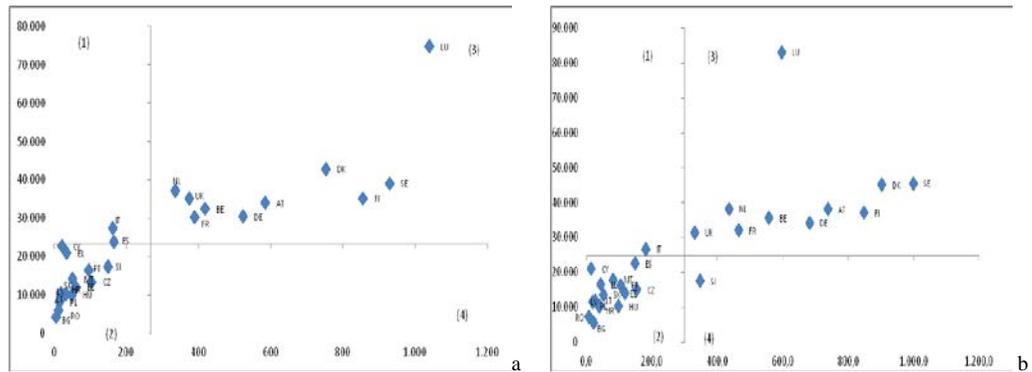
Figure no. 2 Gini index for no. of enterprises (NE) and BERD, UE20 countries (a) and Lorenz curve for UE20 countries in 2008 - b ; 2010 - c; 2012 - d

The analysis of disparities between EU countries, in regards to propensity of business enterprises to invest in R&D indicates two main clusters of countries: developed countries with high propensity to R&D (Luxembourg, Sweden, Germany, Finland, Austria, Denmark, Belgium, France, Netherlands, United Kingdom) and developing countries with low propensity to R&D (Cyprus, Bulgaria, Croatia, Czech Republic, Estonia, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia, Slovenia). No major changes were observed in the disparity's analysis from 2007 to 2013, except for Slovenia where there is an increased propensity to R&D with high perspectives to overcome the EU average of GDP per capita (see Fig. 3).

The enterprises deal with several obstacles in innovative process, putting pressure on the managerial team to cope with these barriers. The identification of innovation barriers can be a major step in encouraging innovative culture in firms and thus sustaining new ideas and encouraging innovation management (Talegeta, 2014).

According to Eurostat data, the most cited obstacles mentioned by both innovative and non-innovative enterprises are related to strong price competition (51,7% of innovative enterprises, respectively 45,7% of non-innovative enterprises),

and lack of demand (26,7% of innovative enterprises, respectively 26,1% of non-innovative enterprises) (see Fig. 4).



(1) – Developed countries with low propensity to R&D; (2) – Developing countries with low propensity to R&D; (3) – Developed countries with high propensity to R&D; (4) – Developing countries with high propensity to R&D
 Note: Austria- AT; Belgium-BE; Bulgaria-BG; Croatia-HR; Cyprus-CY; Czech Republic-CZ; Denmark-DK; Estonia-EE; Finland-FI; France-FR; Germany-DE; Greece-EL; Hungary-HU; Italy-IT; Latvia-LV; Lithuania-LT; Luxembourg-LU; Malta-MT; Netherlands-NL; Poland-PL; Portugal-PT; Romania-RO; Slovakia-SK; Slovenia-SI; Spain-ES; Sweden-SE; United Kingdom-UK

Source: authors' calculations based on Eurostat data.

Figure no. 3 Distribution of countries considering the propensity to R&D in accordance to the level of development, (a)-2007; (b)-2013



Source: authors' calculations based on Eurostat data

Figure no. 4 Highly important obstacles of innovative and non-innovative enterprises, EU-22, 2012 (% of all innovative and non-innovative enterprises)

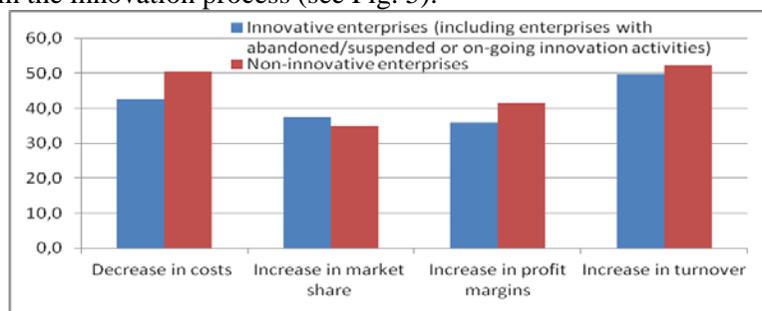
Other obstacles considered as being imported for companies are related to: high costs of access to new markets; innovations introduced by competitors; lack of adequate finance; strong competition on product quality; high costs of meeting regulations; dominant market share held by competitors etc. Still, the distributions of responses at country level are relatively homogeneous, with few exceptions. Enterprises from Greece prioritized lack of demand, enterprises from Romania mentioned first the innovations introduced by competitors.

3. MARKETING OF INNOVATION

As it concerns the marketing for innovation, it could be seen as a set of

valuable instruments able to help companies to operate in an environment with risks and uncertainties and overcoming the major problems related to distribution, pricing, promotion, planning, targeting, using in a sustainable and intelligent manner the limited resources of the companies. Moreover, marketing is able to sustain a proper climate of innovation in a company, valorizing the ideas and suggestions of customers through co-creation process.

The enterprises innovate for various reasons and adjust their strategies in order to achieve those goals. For innovative and non-innovative enterprises in the 22 EU Member States, in 2012, the highly important goal considered was the increase in turnover, followed by a decrease in costs. The enterprises from Hungary, Cyprus and Malta consider the increase in turnover and the decrease in costs as main goals of innovation (around 80% of enterprises). For innovative enterprises, an increase in profit margins (35.9%) was slightly less than the share reporting an increase in market share (37.5%). Romania is the only country which does not consider these goals as being important in the innovation process (see Fig. 5).



Source: authors' calculations based on Eurostat data

Figure no. 5 Highly important goals of innovative and non-innovative enterprises, EU-22, 2012 (% of all innovative and non-innovative enterprises)

Innovativeness grow in a fertile soil, if the organization culture supports creativeness and successful adaptation. Hurley and Hult (1998) suggest that innovation supports the adaption of companies in dynamic environments, but innovation needs a specific firm's culture that emphasizes learning, development and participative decision making. Cooper (2011) considers that, beside **culture and climate of the organization**, which are able to promote innovation, other vectors are necessary in order to drive bold innovation such as: innovation strategy; integrated product-service solutions; a robust idea-to-launch system; a solid business case. According to Nielsen Breakthrough Innovation Report (European Edition, 2014) a passionate culture around innovation from marketers' approach will transform 85% failure to 85% success of the proposed innovation.

Another driving force for success in innovation implementation is **market-oriented firms**. According to Vázquez et al (2001), pro-active firms, which are market-oriented, have a greater willingness to innovate and they have higher rates of innovativeness than their competitors. Consequently, these firms have the desire to initiate commercial performance and to explore new business opportunities. Market-orientation also means a strong collaboration between manufacturer and retailer. Still, in some circumstances, market-based approach and costumer orientation may lead to innovation failures (Ehret and Galanakis, 2013).

The final objective of an innovation is to better satisfy the consumer in order to

obtain profit, as a result of the selling process. Innovations have to address to customer's unique problems, as the customer centricity matters to companies (Gulati and Herrin, 2010). In this regard, marketers have an important role to play to reach the proper **customer centricity** and become not only innovators, but also: instigators of new ideas; integrators of the customers' problems into company capabilities; implementers and producers of value. Not all the innovation arrive or should arrive to the market, as the consumer choose what products or services or operations is willing to pay, as a result of their distinctive, competitive strengths.

On the other hand, each innovation should have its own strategy. According to Jaruzelski and Dehoff (2010) the **innovation strategy** should not only be aligned with other enterprise capabilities, but also with overall strategy and thus, the innovations will arrive to market more efficiently and will reduce relative costs.

Potočan (2013) suggests that **marketing capability** (customer service, sales person, marketing communication budget, market, speed of new product introduction) influences the company's innovation.

Consumers are more present than ever on social networks, and their feedback is more valuable nowadays, as they provide significant and valuable suggestions for the improvement of products, services and organizational processes. Customers are a viable source of innovation having as instruments **co-creation** and **communication processes** stimulated through viral marketing strategies (Kotler et al, 2010; Ehret and Galanakis, 2013).

In order to break through the market, innovations need strong background as the reception of an innovation is more feasible, if supported by strong brands. **Branding** is an important path to innovation and brand managers should consider innovation across the organization. A strong brand equity means more changes for the innovation to penetrate the market and general economic and social benefits for the company, consumers and other stakeholders.

Innovations are the secret weapon for the companies as they help differentiation, transforming the firms in relevant and superior competitors on a crowded market. Still, innovations need **strong cooperation** between all departments of the company, encouraging participation and collaborative innovation, and thus getting everyone involved in order to increase the cross-fertilization of ideas (The Economist Intelligence, 2012).

Consequently, marketing has the main role to ensure the market performance of an innovation bringing together resources, capabilities, relevant knowledge and insights (Ehret and Galanakis, 2013).

4. TRENDS REGARDING TAX INCENTIVES FOR R&D

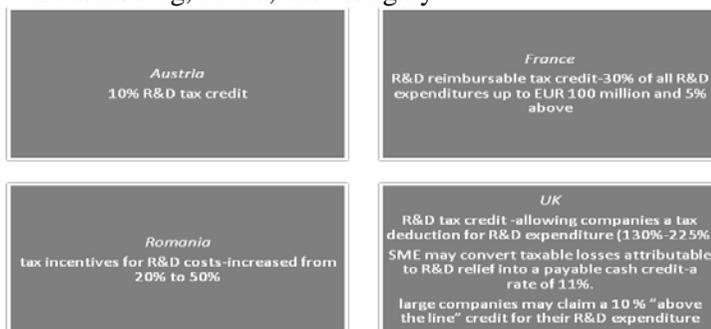
Firms invest in R&D when aiming to increase the efficiency with which to produce their own products or to develop new ones. Firms are investing in R&D to become more productive or to extend the range of the offered products. Firm' investments in R&D depend on the policy developed by governments, measures adopted in a country having an impact on other countries.

Governments may adopt appropriate policies to support investments, savings, competition, to encourage entrepreneurs, etc. It is important that R&D activities to be adequately funded, because good incentives for researchers means that a country recognizes the value of its human capital and properly rewards it, and thus stimulates the innovation which contributes to economic growth.

Tax incentives are tools used by governments to encourage R&D expenditure in firms. Through tax incentives for R&D, governments may stimulate innovation, while firms may choose in what R&D activities to invest. Governments may choose to stimulate R&D in firms through direct support grants.

In EU, tax incentives for R&D differ from country to country and they are represented by (CPB Netherlands Bureau for Economic Policy Analysis, 2014):

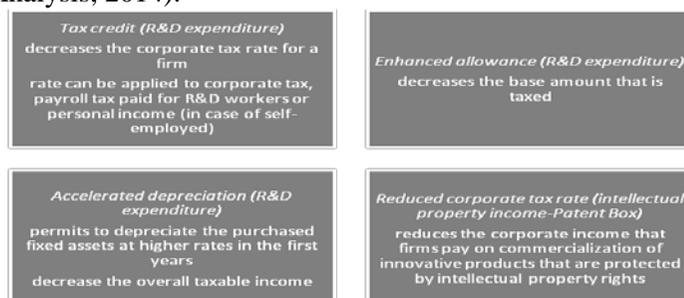
- **tax credits:** Austria, Belgium, Bulgaria, Czech Rep., Denmark, France, Ireland, Italy, Malta, Netherlands, Poland, Portugal, Slovak Rep., Spain, Sweden, and United Kingdom;
- **enhanced allowance:** Croatia, Cyprus, Czech Rep., Denmark, Finland, Greece, Hungary, Latvia, Lithuania, Netherlands, Poland, Romania, Slovenia, and United Kingdom;
- **accelerated depreciation:** Belgium, Bulgaria, Denmark, Finland, Italy, Lithuania, Romania, Slovenia, and United Kingdom;
- **Patent Boxes** (a reduced corporate tax rate for income from patents): United Kingdom, Belgium, Spain, Portugal, France, Greece, Cyprus, Netherlands, Luxembourg, Malta, and Hungary.



Source: authors' contribution based on information from European Commission, 2014

Figure no. 6 R&D tax incentives in some EU countries

The majority of tax incentives are based on corporate tax, while there are additional incentives related to social contributions and/or wage taxes. Tax incentives based on the wage bill, paid to researchers, may generate higher knowledge spillovers. Many countries have more than one type of incentive, but Germany and Estonia do not have a tax policy for stimulating innovation (CPB Netherlands Bureau for Economic Policy Analysis, 2014).



Source: authors' contribution based on information from CPB Netherlands Bureau for Economic Policy Analysis, 2014

Figure no. 7 Types of R&D tax incentives

The tax incentives for R&D and innovation may have, as result, an increase of the number of patents, scientific papers, the number of employees in R&D, etc. The level of R&D expenditures of firms are influenced, in a country, by the technological level attained, structure of the economy, number and size of firms, the level of government expenditures in R&D, etc. Through tax incentives, the R&D activities of firms may be influenced, and thus firms may invest more in this field.

5. CONCLUSIONS

Innovation is an important aspect influencing the economic development. Thus, through innovation, countries may pass more easily through various stages of growth and may overcome various developmental challenges influencing the future of society. At firm level, innovations represent the secret weapon, because through innovation a firm may have access to benefits and thus be more competitive on the market, leaving behind its competitors. This situation may occur due to the fact that at that point, the firm knows how to better satisfy its customers, and meets its customers' demands.

According to the results, in the case of EU20 countries, in 2008, 63,8% of enterprises carried out approximately 46% of the R&D expenditure in the business sector. In 2012 the situation is almost similar with the one in 2008 (63,8% of enterprises carried out approximately 46,2% of the R&D expenditure).

There are two main clusters of countries, with regards to propensity of business enterprises to invest in R&D, namely: developed countries with high propensity for R&D (Luxembourg, Sweden, Germany, Finland, Austria, Denmark, Belgium, France, Netherlands, United Kingdom) and developing countries with low propensity for R&D (Cyprus, Bulgaria, Croatia, Czech Republic, Estonia, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia, Slovenia).

This paper brings into discussion two important directions that can be followed to sustain the innovative environment namely marketing and fiscal policy. Thus, it is underlined that innovation play a key role in driving economic development. Also, if firms' innovation is sustained by government policies, the economy may have chances to transform into developed and prosperous one. Investments in R&D may stimulate economic growth, and a tax system created to enhance the effects of R&D is important. There are countries in EU that have introduced tax incentives for R&D and innovation, such as tax credits, enhanced allowance, accelerated depreciation, and Patent Boxes.

REFERENCES

1. Cooper, R.G. Perspective: The Innovation Dilemma: How To Innovate When the Market Is Mature, *Journal of Product Innovation Management*, Vol 28, Issue S1, pp. 2-27, 2011.
2. CPB
Netherlands
Bureau for
Economic
Policy Analysis
A Study on R&D Tax Incentives, Final Report, 2014.
3. Economist
Intelligence
Unit
Cultivating business-led innovation, The Economist Unit Limited 2012, <http://www.oracle.com/us/products/applications/eiu-oracle-bus-innovation-1867915.pdf>
4. Ehret, M.,
Galanakis, K. Marketing Innovation The Innovation Challenge, Nottingham Business School, Nottingham Trent University, Creative Trainer,

- http://www.creative-trainer.eu/fileadmin/template/download/Module_Innovation_Marketing_EN.pdf, 2013.
5. European Commission Taxation trends in the European Union — Data for the EU Member States, Iceland and Norway, Luxembourg: Publications Office of the European Union, 2014.
 6. Gulati, R., Herrin, A., Unleash the Power of Marketing to Drive Innovation and Profit, 2010 Harvard Business School Publishing, BullsEye Resources, 2010.
 7. Hurley, R.F., Hult, G.T.M., Innovation, Market Orientation, and Organizational Learning: An Integration and Empirical Examination, *Journal of Marketing*, vol. 62, 42-54, 1998.
 8. Jaruzelski, B., Dehoff, K., The Global Innovation 1000 How the Top Innovators Keep Winning, 2010 Booz & Company Inc. http://www.strategyand.pwc.com/media/uploads/Strategyand_Global_Innovation_1000_2010_How_Top_Innovators_Keep_Winning.pdf
 9. Kotler, Ph., Kartajaya, H., Setiawan, I., Marketing 3.0 From Products to Customers to the Human Spirit, John Wiley & Sons, Inc., Hoboken, New Jersey, 2010.
 10. Kuznets, S. Modern Economic Growth: Findings and Reflections, The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, Prize Lecture, 1971.
 11. Nicolaidis, A. Research and Innovation – the drivers of economic development, *African Journal of Hospitality, Tourism and Leisure*, Vol. 3(2), 2014.
 12. Nielsen Co. Nielsen Breakthrough Innovation Report - European Edition 2014, http://www.nielsen.com/content/dam/nielsen-global/eu/nielseninsight/s/pdfs/Breakthrough_Innovation_Report_EU_FINAL.pdf.
 13. OECD Frascati Manual: Proposed Standard Practice for Surveys of Research and Experimental Development, 2002.
 14. OECD Innovation for Development. A discussion of the issues and an overview of work of the OECD Directorate for Science, Technology and Industry, 2012.
 15. Pop, N.; Fugaru, A.; Ioan-Franc, V.; Despre criza: fara manie si cu discernamant, Ed. Expert, Bucuresti, 2010.
 16. Potočan, V. Marketing capabilities for innovation based competitive advantage in the Slovenian market, *Innovative Issues and Approaches in Social Sciences*, Vol. 6, No. 1, 118-134, 2013
 17. Stephens, R. Economic Growth, Taxation and Poverty, Victoria Economic Commentaries, 1999.
 18. Talegeta, S. Innovation and Barriers to Innovation: Small and Medium Enterprises in Addis Ababa, *Journal of Small Business and Entrepreneurship Development*, Vol. 2, No. 1, pp. 83-106, 2014.
 19. Vázquez, R., Santos, M.L., Álvarez, L.I., Market orientation, innovation and competitive strategies in industrial firms, *Journal of Strategic Marketing*, 9: 69–90, 2001.