

# ***Innovation.bg 2007: The Bulgarian Innovation System in the European Union***

(Summary of the Bulgarian Annual Innovation Performance Assessment Report)

*Innovation.bg 2007* analyzes the state of the national innovation system and makes recommendations for improving the innovation potential of the Bulgarian economy. Because of the importance of the financial instruments of the EU for developing the innovation capacity of Bulgaria this year's report makes a review of the European innovation policy and the opportunities that it offers to Bulgaria. Following the established methodology of the previous edition, *Innovation.bg 2007* analyzes the dynamics of the development of the national innovation system during the past year and the development opportunities in 2007 through five groups of indicators:

- gross innovation product;
- entrepreneurship and innovation networks;
- investment and financing of innovation;
- human capital for innovation;
- information and communication technologies (ICT).

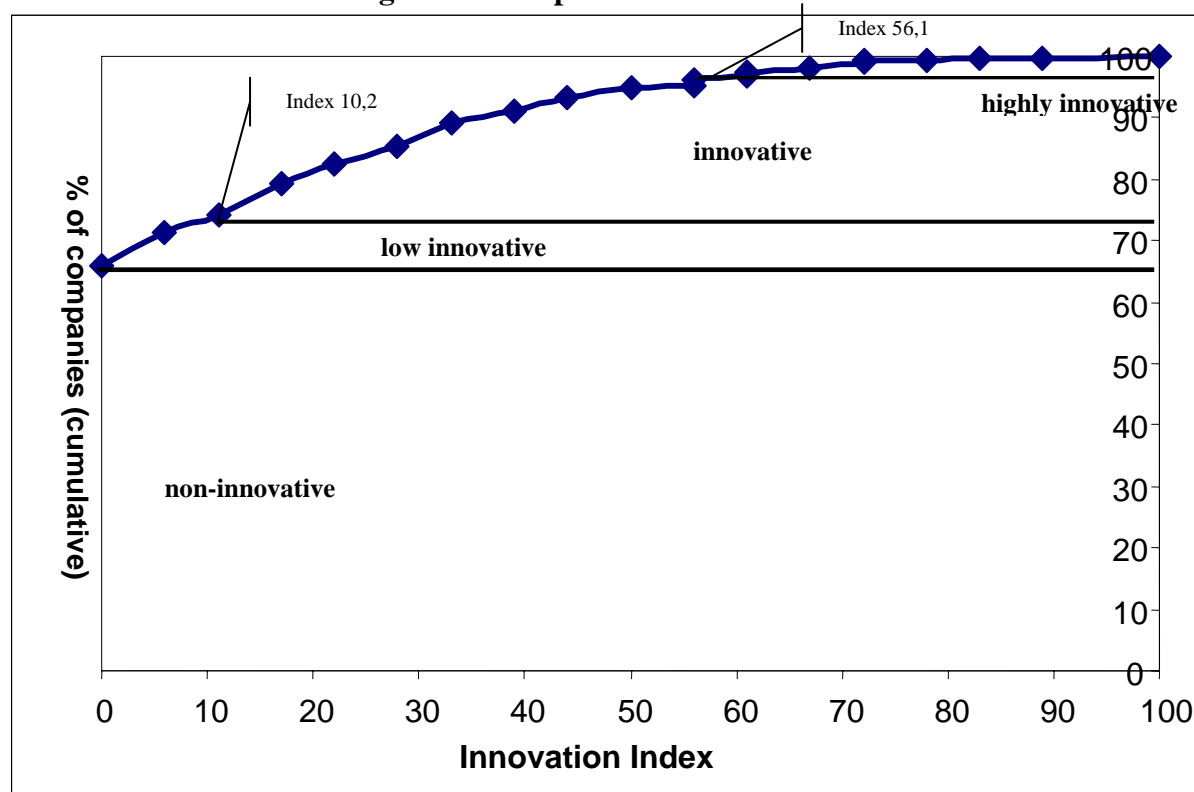
This year's report introduces a special Innovation Index of Bulgarian Enterprises based on the results of the annual surveys of the Innovation Relay Center and a profile of the Bulgarian innovative companies based on panel data and in-depth statistical analysis.

**The Innovation Index of Bulgarian Enterprises<sup>1</sup>** reveals that a sizeable share of companies (over 65%) did not implement any innovations during the last year, the index values of most innovative enterprises (about 24% of all companies) did not exceed 40, while the average weighted innovation index of Bulgarian enterprises in 2006 was 10.2. This is a sign of their modest ability to combine several types of innovations and of the implementation of innovations mostly with low degree of novelty (advanced for the company or the Bulgarian market, but no longer cutting edge internationally). The average value of the innovation index is 56.1. The highly innovative Bulgarian companies, i.e. those with above-average index values (over 56.1) are less than 4% of all Bulgarian enterprises.

---

<sup>1</sup> The values of the index differ from these of the National Statistical Institute because of the different calculation method.

**Innovation Index of the Bulgarian Enterprises**



**Note:** 10.2 and 56.1 are average values for all companies and for the innovative companies respectively.

**Source:** Applied Research and Communications Fund, 2006.

In the last year the Bulgarian economy improved its **gross innovation product** and this rising trend is expected to remain firm after Bulgaria's accession to the European Union in 2007. The innovation product is a major driving force, but the scientific product is growing as well. Enhanced innovation and R&D activities, however, have not yet resulted in an advanced technological product, although there are some signs of improvement in this area. Still, the national innovation system is at an early stage, especially when Bulgaria is compared to the average innovation levels across the European Union. In the first year of EU membership Bulgarian enterprises are expected to expand further their innovation activities, to update their technological resources, and to step up their R&D efforts.

The **entrepreneurial** and business environment in Bulgaria continues to improve together with the overall sustainable growth of the economy. Macroeconomic stability provided conditions for the growth of companies and the establishment of productive partnerships for innovations. Yet, certain macroeconomic factors continue to disrupt the innovation system and, therefore, the competitiveness of Bulgarian business in the EU. If those negative factors

are removed quickly and successfully, Bulgaria's EU membership could lead to the expansion of innovative entrepreneurship.

**The investments in innovations** in Bulgaria remain related mostly to knowledge transfer from the EU through foreign direct investments or import of investment goods. R&D expenditures are relatively low (0.51% of GDP), but there is growth due to increasing investments by the companies. The financial system of the country develops quickly, but still there are no specific instruments for financing innovations. Investment in innovations will presumably continue to increase in the next few years, driven by EU funding and the growing robustness of the private sector.

Though difficult to measure, in the years of transition the **human capital** in Bulgaria has lost substantially in quantity and quality alongside the depreciation of physical capital. Secondary public education and R&D institutes were most severely affected. After 2002–2005, all elements of the educational product and employment have started to rebound, except in the high-tech industries. Nevertheless, performance remains below the level of EU-10 and EU-25.

**Information and communication technologies** penetrate into Bulgarian enterprises at an increasing pace, but the available technology is not yet used to its full capacity, especially by micro enterprises in the traditional sectors of the economy. The process of introducing ICT solutions in enterprises was largely dependent on the evolution of administrative systems. 2007 is expected to be a turning point in the development and growth of innovative online services and companies.

Comparing Cohesion and Structural Funds resources allocated for Bulgaria and the national funding available for the development of innovations and the innovation potential for 2007–2013, it is evident that Bulgaria's national innovation system will have to rely mainly on EU funds. The analysis of some current operational programs for EU funds management reveals significant wants of administrative capacity and experience for developing and executing projects in the field of innovations both in the public and the private sector. Coordination between the administrative units implementing the set of policies that determine the innovation environment in the country—innovation, entrepreneurship and SMEs, R&D, educational and ICT policies—also needs to be improved in order to overcome the existing imbalance between supply and demand in the Bulgarian innovation system. This will enable

the country to take full advantage of all policies and supporting financial instruments of the EU in the field of innovation, such as the Cohesion and Structural Funds, but also the Framework Programs for research, innovations and competitiveness.

The first years of Bulgaria's EU membership will be crucial for the national innovation system in determining its character and functions, as well as the overall structure and competitiveness of the Bulgarian economy in the long term. Through the varying pace of their integration some EU members from previous enlargements, such as Greece, Ireland, Spain and Portugal that had to overcome their lagging initial position and a number of external constraints, showed that the chosen policies were no less important for the success of integration. Bulgaria, as the other new member states, will access smaller resources compared to those available during earlier enlargement waves. Therefore, as the challenge, the gap that will have to be bridged is much greater, it is imperative to set national policies and priorities with even greater care. *Innovation.bg 2007* offers several sets of **conclusions and recommendations** that will contribute to the debate on how to draw a successful national innovation policy.

## **Conclusions**

- The market component of the Bulgarian innovation system is at an early stage of development—Bulgarian enterprises have a low degree of innovativeness.
- The innovation and the R&D products are developed in structural isolation of each other within the national economy—the links between them are weak.
- The national innovation system is formed and influenced mainly by its integration and funding within European innovation networks and the changes of Bulgaria's public innovation policy and financing.
- The major setbacks for the development of the national innovation system are the lack of appropriate sources of financing (in the short term) and the lack of qualified personnel (in the long term).
- The national innovation system has started to improve its performance, giving a clear sign that the time for action in this area has come.

**Recommendations**

- Greater political, administrative and financial resources should be pooled for implementing the national innovation policy.
- The coordination between strategic papers, policies, administrative and financial instruments that bear relation to the national innovation system should be improved.
- Cohesion and Structural Funds resources for innovation should be channeled and fine tuned on a national level and in relation to other European programs.