



JRC SCIENCE FOR POLICY REPORT

# RIO Country Report 2017: Bulgaria

*Research and Innovation  
Observatory country  
report series*

Todorova, A.  
Slavcheva, M.

2018



## Executive summary

Real GDP growth in 2017 in Bulgaria is estimated at 3.8%, driven by investment and consumption. GDP growth is forecast to remain robust at 3.7% in 2018 and 3.5% in 2019. The main engine of growth will continue to be strong domestic demand, while the external sector's contribution is expected to turn positive only in 2019<sup>1</sup>. EU funds are set to further boost public investment in 2018, following the acceleration in absorption under the 2014-2020 programming period. Increases in wages should continue to stimulate private consumption.

The main impediments to growth, especially growth of private investment, are the limited foreign direct investment (FDI) inflows and the high corporate sector debt, both of which are expected to continue in the forthcoming years. These phenomena are further affected by the labour market trends, namely, high share of long-term unemployed in total unemployment and a high inactivity rate, limited inclusion of young people in the labour market and skills shortages and mismatches.

Bulgaria is categorized as 'modest' innovator by the Innovation Union Scoreboard (IUS) 2017<sup>2</sup>, followed only by Romania from the EU, and lagging behind Serbia and Turkey from the non-members group. In the Global Innovation Index 2017<sup>3</sup> Bulgaria is ranked 36<sup>th</sup>, following 38<sup>th</sup> in 2016. The relative strengths of the innovation system are in Intellectual Assets, Employment Impacts, and Human Resources. Relative weaknesses are in Innovators, Finance and Support, and Attractive Research Systems. The funding approached 1% of GDP in 2015 (GERD=0.96%), especially due to the growing private R&D expenditure (BERD=0.70%). However, in 2016 the rates fell back to respectively 0.78% and 0.57%, which shows that the growing trend is not stable and policy effort is still needed. The overall level of funding is still below the target of 1.5% of GDP, and thus the public expenditure needs to grow substantially by 2020.

## Challenges for R&I policy-making in Bulgaria

**Devoting targeted efforts to implementation and capacity building.** The delayed implementation of the policy and budget arrangements leads to the perception of lack of financial support to the whole R&D&I system. What is highly needed is speeding-up of project implementation for beneficiaries in the public sector and providing institutional support for both public and private sectors with respect to EU-level programme participation, esp. Horizon 2020. The new Implementation Agency for Operational Programme "Science and Education for Intelligent Growth" set up on 18 October 2017 is expected to contribute to the improved functioning of the system.

**Directing the reforms towards rewarding quality and excellence.** There is slow progress in increasing the attractiveness of the national R&D&I system for national and international scientists and researchers. The initiated differentiation of the higher education institutions (HEIs) and the changes in the model for financing public research organizations (PROs) constitute positive developments in this direction. However, the differentiation needs to be additionally improved, so that research-performing universities and other PROs are rewarded for R&D performance, while the other universities and colleges are funded for labour market contributions and workforce training results. The forthcoming Centres of Excellence (CoE) and Competence Centres (CC) in 2018 can play the key role in this process.

**Capitalizing on smart specialization, EU-level research infrastructures and initiatives.** There is a strong need to further support the integration and Europeanization of the Bulgarian science, research and innovation. The system deficiencies so far stem from both insufficient national public resources allocated to R&I and inadequate participation and success of national actors in EU framework and other programmes and

<sup>1</sup> European Economic Forecast, Winter 2018

<sup>2</sup> [http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards\\_en](http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_en)

<sup>3</sup> [http://www.wipo.int/edocs/pubdocs/en/wipo\\_pub\\_gii\\_2017.pdf](http://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2017.pdf)

initiatives. Although evaluating the impact of RIS3 and ESFRI participation of Bulgaria cannot be currently substantiated by quantitative evidence, it has become clear that those have led to improved coordination and cooperation in three important ways: among different levels of governance and also among administrative spheres; among government, industry, education and research institutions, as well as citizens; and among national and EU players. The Presidency of the EU of Bulgaria in 2018, as part of the Troika with Estonia and Austria, provides an additional stimulus for increased EU visibility of the Bulgarian R&D&I system.

### **Main R&I developments in 2017**

- **[Mapping of Research Infrastructures and Research Equipment in Bulgaria](#)**: In 2017 the Mapping of Research Infrastructures and Research Equipment in Bulgaria classifies the leading 161 research infrastructures, facilities and equipment into: physical, material science and engineering (57); medical and agro-bio sciences field (61); social science and humanities (29); and e-infrastructure for multidisciplinary research field (14).
- **[National Research Infrastructure Roadmap 2017-2023 \(update\)](#)**: On the basis of the mapping exercise and in line with the ESFRI process, the updated Roadmap is approved by Decision 354/29.06.2017 of the Council of Ministers.
- **[National Strategy for Development of Scientific Research 2017-2030 "Better Science for a Better Bulgaria"](#)**: Following consultations with relevant stakeholders at national and regional levels, long-term vision for science and R&D has been elaborated. The Strategy covers priority themes, institutional and performance-based funding, infrastructure, international partnerships, as well as the improvement of human resources. The Strategy, approved by the Parliament in June 2017 is supported by a multi-annual financial framework that combines EU and national resources.
- **[Strategy for Smart Specialization \(update\)](#)**: The Innovation Strategy for Smart Specialization 2014-2020 is revised by Decision 384/13.07.2017 of the Council of Ministers to reflect the new strategic developments and the results from the continuous Entrepreneurship Discovery Process (EDP).

### **Smart specialisation**

The Innovation Strategy for Smart Specialization 2014-2020<sup>4</sup> stipulates a qualitative leap for Bulgaria by 2020 in its innovation performance. This vision is expressed in practical terms in the strategic goal: by 2020, Bulgaria to move from the group of "modest innovators" into the group of "moderate innovators" by focusing on the 'smart' thematic areas (ICT, Mechatronics and CleanTech, Industry for Healthy Lifestyle and BioTech and CCI)<sup>5</sup>, and horizontal support improving resource efficiency and application of ICT in the industry (EU Digital Agenda<sup>6</sup>). As per the RIS3 Action Plan, further EDP events in the period April-June 2017 were organized: two regional discussions in each NUTS II region and four thematic stakeholder events focusing on the priority themes.

Following the adoption by Council of Ministers of the updated National Research Infrastructure Roadmap 2017-2023, on 28 June 2017, and of the revised Strategy for Smart Specialization for Bulgaria on 12 July 2017, the Commission assessed the ex-ante conditionality 1.1 (Research and Innovation) and 1.2 (Research and Innovation Infrastructure) as fulfilled on 31 July 2017.

---

<sup>4</sup> Directly concerning two Operational Programmes, OP "Innovation and Competitiveness" (OPIC) 2014-2020 and OP "Science and Education for Intelligent Growth" (OPSEIG) 2014-2020, Priority Axis 1

<sup>5</sup> [http://ec.europa.eu/regional\\_policy/sources/docgener/guides/smart\\_spec/strength\\_innov\\_bg\\_en.pdf](http://ec.europa.eu/regional_policy/sources/docgener/guides/smart_spec/strength_innov_bg_en.pdf)

<sup>6</sup> <https://ec.europa.eu/digital-single-market/en>



## JRC Mission

As the science and knowledge service of the European Commission, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle.



**EU Science Hub**  
[ec.europa.eu/jrc](https://ec.europa.eu/jrc)



@EU\_ScienceHub



EU Science Hub - Joint Research Centre



Joint Research Centre



EU Science Hub