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Executive Summary

Despite well performing economy and rising employment the public R&I funding was not conductive to the knowledge and innovation-based economic growth. Slovakia's share of project funding in total GBAORD was one of the lowest in the EU28 and the public research system received relatively low funding from the Horizon 2020.

Business research is mostly done by few companies in automotive and ICT sectors and the BERD remains significantly lower than the EU28 average. SMEs continue to compete with low costs of production inputs and innovate less than the average in EU28.

Slovak higher education institutes face low rankings in international scoreboards and the country suffers from the persistent emigration of young, particularly educated people abroad.

R&I challenges and policy responses

Improve the R&I Governance: Insufficient coordination and co-operation between ministries and their agencies and also fragmentation of resources for building R&I infrastructures are seen as major challenges for Slovakia.

In 2017 the governance challenge is addressed in the National Reform Programme and in new legislation for public research institutions. Also a government council (SGCSTI) has assigned a task for an international audit of the Slovak R&I system and has approved documents to target competitive finance in R&I and improvements in the efficiency and output of the R&I system.

Improve the quality of the science base: Slovakia ranks among the modest R&D performers within the EU28 in terms of R&D expenditure, and commercial and non-commercial R&D outputs. The incumbent system of HEIs' institutional finance favours mass education and is not conductive to high-quality research.

The '*Learning Slovakia*' document proposes many significant changes for e.g. university accreditations, financing, and international student mobility. If implemented in full, the quality of university research will improve in the coming years. Also a recently proposed law on public research institutions should increase flexibility in terms of PRI research funding and management.

Increase private innovation outputs and R&D investments: The dual structure of the Slovak economy impacts patterns of productivity, innovation outputs and R&D spending. The Slovak SMEs invest little in R&D intensive innovations and generate below-average R&D based commercial outputs. Slovakia's BERD intensity was one-fourth of the EU28 level in 2015 and Slovak companies produced low numbers of patents and industrial designs.

Since 2015 there is a law introducing new tax deductions for private companies investing in R&D. The impact of this legislation, however, is still a lot smaller than anticipated probably due to too complicated application procedures for SMEs. Also the OPRI schemes supporting the competitiveness of SMEs are way behind the schedule: only 1.2% of the total budget was spent by end of March 2017.

Strengthen synergies between science and industry: Co-operation between the industry and academia is the 'Achilles heel' of the Slovak R&I system and these two sectors still remain largely isolated.

A national programme exists for the co-operation between the academia and industry in the period 2016-2020, but its budget is rather low. First results may be expected in 2018-19. A Smart Industry Concept (Ministry of Economy, 2016) provides guidance for interconnecting academia and industry sectors, but lacks an action plan with concrete tasks, dates, milestones and financial resources. Slovakia accounted for only modest progress by 2017 with the resources stemming from the Horizon 2020.

Smart specialisation strategies

The Slovak Republic was one of the first EU Member States to develop the Smart Specialisation Strategy in 2013. The implementation of the RIS3 document faced administrative delays and in December 2016 the Ministry of Economy, Science, Research and Sports superseded the Action Plan by the *'Strategic document for passing the ex-ante conditionality in Thematic objective 1'*. The EC expressed concerns related to the strategic document, which were acknowledged by the MESRS. The MESRS superseded the strategic document with the '*Implementation Plan for the RIS3 Strategy*', which was finally approved in the summer of 2017. This delay is likely to slow down the implementation of the RIS3 document in Slovakia even further.

The Slovak research and innovation system is highly centralised and the smart specialisation strategy is at the national level. No explicit regional R&I programmes and/or policy measures have been developed in Slovakia. The eight regional governments have limited powers in support to innovation and no competences in support to R&D.

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