



## PSF action plan to help boost Latvia's S&T 'human capital'

**Despite evidence of progress and strong political will, Latvia's research, innovation and higher education system remains wedded to EU funding cycles, making longer-term planning difficult, according to the latest study by the Policy Support Facility (PSF) under Horizon 2020. To boost overall investment and career prospects, and increase innovation capacity in the private sector, the PSF experts called on the Latvian government to explore a strategic yet practical course of action.**

A thriving higher education, research and innovation (R&I) ecosystem revolves around several key connections, with the ability to attract and retain young PhD graduates as a top priority. Closer collaboration between academic, research and business sectors is tied to this; as, too, the need to encourage more private-sector investment in R&I. Latvia is fully aware of these fundamentals – and its overall policy mix is geared towards meeting them – but a disconnect remains between current funding mechanisms and long-term goals, according to PSF experts.

"In a globalised environment, Latvia can reinforce its human capital by increasing mobility and internationalisation," says PSF Chair Mariam Camarero, Professor of Economics at the University Jaume I (Castellón, Spain). To encourage PhD graduates to stay in the country, she adds, academic careers need to be stable and clear: "Understanding their valuable contribution to innovation and productivity in Latvian society would provide additional opportunities outside the academic world."

Yet as it is today, programmes in Latvia remain overly reliant on European Structural and Investment Funds, which offer an initial injection of funds that should act as a kick-starter for more sustainable programmes and resources to develop in the longer run. Moreover, action is needed to reverse Latvia's declining rate of PhD students and graduates. Policies should be geared to making a research career in Latvia more attractive to foreign talent, but also more desirable to Latvians – discouraging them from seeking better opportunities abroad. A major barrier, according to the study, is the Latvian language requirements imposed on foreign academics.

Latvia's stagnant job creation for researchers in the private sector does not help matters. There are positive signs of a tech start-up scene emerging in Riga, but R&D investment is mainly focused on the wood and ICT sectors. According to the study, business funding of public R&D in Latvia also needs a boost. It is at the lower-middle range among EU countries. A large proportion (about 30%) of Latvia's GDP comes from state-owned enterprises, but these companies' contribution to research and development are only moderate compared with their potential. Overall, the innovation capacity and absorptive capacity of R&I human resources in the Latvian business sector is rather limited.

Against this backdrop, the Latvian government's target is to increase full-time equivalent researchers from 6,000 to 8,000 by 2027, which the panel believes is quite ambitious given the stated challenges.

### **Bring in the experts!**

Between June 2019 and February 2020, the PSF's R&I policy experts carried out the study at the request of Latvia's Ministry of Education and Science to help it develop strategic policies and initiatives aimed at boosting the country's R&I system and meeting the 2027 targets.

The panel conducted background research, reviewed previous PSF Specific Support findings on Latvia, and interviewed diverse research and higher education stakeholders during two country visits. The findings were collated, analysed and packaged into a set of **five strategic yet practical recommendations**, underpinned by more detailed guidance on how to achieve them in the short, medium and longer terms.

### **Planning ahead...**

Competitive and stable salaries from a single employment contract are a basic precondition for a **robust and attractive research career system (recommendation 1)**. Insecure funding and uncertain tenures undermine confidence. This, coupled with high teaching workloads, leaves little time for research in the Latvian system. Academic staff and researchers should work and be paid on a full-time basis in a single institution, the experts note. A transparent and predictable career system that ensures coherence between teaching and research tracks is vital to achieving this objective, as well as tackling the fragmented study programmes and institutional landscape.

But the panel cautions against simply boosting the numbers of PhD students, whether domestic or foreign: "We found that a significant share of PhD students have full-time work outside universities, which results in low completion rates," says panel expert Žilvinas Martinaitis, Associate Professor at Vilnius University and Research Manager at Visionary Analytics in Lithuania. To achieve the sort of results Latvia is looking for, he calls for practices like this to be changed.

*"Numerous studies have shown in the long term that clear and well-structured career advancement pathways produce better results than short-term financial incentives. This is why we recommend that Latvia adopt transparent and predictable career systems."* Žilvinas Martinaitis

Grants and stipends for PhDs must be perceptibly higher than average monthly incomes in Latvia and any teaching and administrative work should not eat into valuable research time, the study urges. The costs of international mobility should also be factored into the PhD studies. The panel echoes a recent World Bank call for doctorate schools to be overhauled, with clear guidelines on their scale, purpose, focus and overall operations. These measures are all key to **improving graduation rates and the quality of PhD studies (recommendation 2)**.

Mobility is an important feature of a strong research career. Latvia needs targeted measures to bring home-grown talent back and to attract researchers and scientists from abroad, as part of a wider approach to making its research and innovation system more international. So-called 'islands of excellence' exist (e.g. wood and ICT) in the country that can be built on with the attraction of young talent from abroad. New islands can also be created by securing contributions from well-established researchers and much greater business buy-in, the study points out.

There are a lot of 'seed activities' that can serve as a basis for Latvia to build innovation ecosystems around key smart specialisation areas, according to the panel. By engaging all key stakeholders in the development and creation of a shared vision, and by strengthening the entrepreneurial culture within higher education institutions and scientific institutes, the next steps can be made towards **creating favourable conditions for entrepreneurial and innovative ecosystems (recommendation 3)**.

"We found that most of the Latvian SMEs have low or non-existent absorptive capacity, so measures are clearly needed to change that," notes panel-member Anne-Mari Järvelin, a regional innovation expert and senior consultant at 4Front, a Finnish R&I consultancy. "Bigger, mostly state-owned companies in Latvia do have the absorptive capacity but need to increase their investment in RDI to redeem their key role in the country's innovation ecosystems."

Graduates need a robust job market in their speciality. The ability of organisations to absorb or employ S&T graduates is thus key to making these fields more appealing to Latvian youth (and foreign talent). Efforts should **focus not only on existing stakeholders but also on attracting new ones (recommendation 4)**. The panel believes mechanisms are needed to help SMEs modernise, and to 'activate' early-stage and later-stage venture capital funding, as well as a stimulus package to boost the R&I performance of state-owned enterprises. A practical strategy to attract potential foreign investors (FDI) who are prepared to carry out R&D in Latvia is another key element in achieving progress.

Existing cooperation and communication between stakeholders are too fragmented in Latvia. The experts identify a clear need to **foster more joined-up collaboration and mobility among centres of higher education, scientific institutes, businesses, and local/regional stakeholders (recommendation 5)**. A more strategic approach is thus needed to break down remaining barriers. The government can support this by creating clearly structured and targeted schemes that foster such cooperation, including incentives for SMEs to collaborate with HEIs, and showing that collaboration with companies and society is an integral part of education and research.

"We know Latvia is facing important challenges to improve the overall attractiveness of research careers and increase the total number of research workers in the system," says Dmitrijs Stepanovs, Latvia's Deputy State Secretary and Director of the Department of Higher Education, Science and Innovation at the Ministry of Education and Science.

Developing sufficient human capital for R&I, he confirms, is a major dimension of the structural changes in Latvia's economy towards more knowledge-intensive activities, strengthened national R&I capacity and significantly higher productivity: "We are looking forward to implementing ambitious policy reforms which aim to boost our R&I performance over the coming years."

The panel's findings benefit from illustrative international examples that highlight how other countries implemented such changes to their systems, programmes and incentives. Details of the PSF recommendations and action plan to help Latvia reach its goals are spelt out in the full report, entitled 'Development of the Human Capital for Research and Innovation in Latvia'.

**For further information:**

[The Final Report of the PSF Specific Support to Latvia](#)

[The PSF Specific Support to Latvia](#)

[The PSF Specific Supports](#)

Seeking to improve the design, implementation and evaluation of research and innovation policies, the PSF provides expertise and practical support to Member States in a number of ways: Peer Reviews of national R&I systems, Specific Support to policy reforms, and project-based Mutual Learning Exercises to improve policy-making and implementation. It is funded under Horizon 2020 the EU's research and innovation programme with up to €20 million.