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Researchers' Report 2013

Country Profile: Latvia



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1. Key data

National R&D intensity target

“By the mid-2000s Latvia was faced with the realisation that it had to upgrade its Science and Technology infrastructure in order to become internationally competitive, to accumulate new knowledge and technology and to find high value added niches. In terms of research, Latvia had increased its government budget for R&D fivefold in absolute terms between 2000 and 2008. The financial crisis of 2008 had a major impact on the government budget for R&D, resulting in a 49% decrease between 2008 and 2009. Due to the country's rapid economic recovery, the public R&D budget has partially recovered in 2010 (with 27.3% increase compared to 2009). Moreover, in 2011 the public R&D funds have reached a level close to 2008, increasing by 48% compared to 2010 (HERD increased by 57.8%). Regarding innovation policy, Latvia does not have plans in the field of innovation procurement, is mostly supply led rather than demand-side led, and there are no tax incentives to support business R&D and innovation activities.

In strategic terms, Latvia has set a national R&D intensity target of 1.5%. In 2011, Latvia had an R&D intensity of 0.70%, with public R&D intensity amounting to 0.50% and business R&D intensity amounting to 0.19%. Latvia needs to increase the R&D intensity in both the public and the business sectors as a prerequisite to maintaining a performing R&I infrastructure and to boosting innovation in firms. Over the period 2000-2011, Latvia's R&D intensity has grown at an average annual growth rate of 4.2%. This growth rate is significantly higher than the EU average but still needs to be further increased if the country's 2020 R&D intensity target is to be achieved (in fact an average annual growth rate of 8.9% is required over the period 2011-2020 if the target of 1.5% is to be reached). The average annual growth rates of public sector R&D intensity and business sector R&D intensity over the period 2000-2011 are 5.97% and 0.69%, respectively. Latvia's participant success rate in the EC Seventh Framework Programme was 21.9%. The successful participants received a total EC financial contribution of EUR 26.4 million.

Structural Funds play a major role in the financing of R&I in Latvia (10% of the total ERDF–Cohesion Funds allocations for the 2007-2013 period). In 2010, R&I financing from the Structural Funds far exceeded national public funding for R&D and currently represents a third of total R&D expenditure in Latvia. The low level of business expenditure on R&D is seen as a critical challenge for Latvia. Business expenditure on R&D increased by 27% between 2009 and 2011. This increase is due in large part to the activities funded under Structural Funds programmes designed to improve the innovative capacity of industry. The growing share of Structural Funds in R&D funding is affecting the previous balance between institutional and competitive funding which is now inclining more towards project-based, competitive funding. A major issue for Latvia is the funding of R&D post 2013, in the period before the new round of Structural Funds becomes operational”¹.

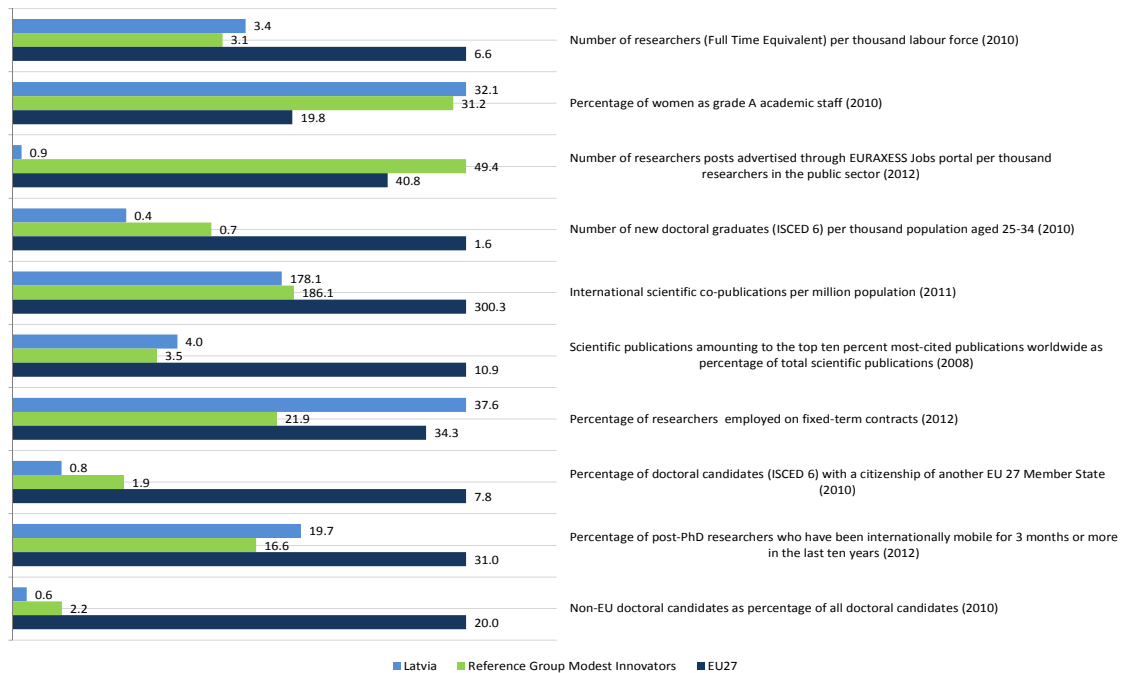
Key indicators measuring the country's research performance

The figure below presents key indicators measuring Latvia's performance on aspects of an open labour market for researchers against a reference group and the EU-27 average².

¹ European Commission (2013), “Research and Innovation performance in EU Member States and Associated countries. Innovation Union progress at country level 2013”

² The values refer to 2012 or the latest year available

Figure 1: Key indicators – Latvia



Source: Deloitte

Data: Eurostat, SHE Figures, EURAXESS Jobs Portal, UNESCO OECD Eurostat education survey, Innovation Union Scoreboard 2013, MORE2

Notes: Based on their average innovation performance across 25 indicators, Bulgaria, Latvia, Poland and Romania show a performance well below that of the EU27. These countries are the Modest Innovators³.

Stock of researchers

The table below presents the stock of researchers by Head Count (HC) and Full Time Equivalent (FTE) and in relation to the active labour force.

Table 1: Human resources – Stock of researchers

| Indicator | Latvia | EU Average/Total |
|---|--------|------------------|
| Head Count per 1 000 active labour force (2010) | 5.70 | 10.17 |
| Head Count (2010) | 6 517 | 2 435 487 |
| FTE per 1 000 active labour force (2010) | 3.41 | 6.64 |
| Full time equivalent (FTE) (2010) | 3 896 | 1 589 140 |

Source: Deloitte

Data: Eurostat

2. National strategies

The European Social Fund (ESF) is one of the key instruments for the development of R&D in Latvia, including support for doctoral studies, post-doctoral research, development of human resources in R&D, partnerships between businesses and academia, and the development of research infrastructure. Better education and training is at the heart of Latvia’s ESF Programme. Providing high-quality education for all, attracting more young people into graduate-level and post graduate science and technology studies, and promoting the country’s R&D and innovation system are part of a key national strategy to shift the economy to more hi-tech industrial sectors.

Table 2: European Social Fund Activities

| European Social Fund Activities | Description |
|--|---|
| Indicative activity 1.1.1.2. – Attraction of Human Resources to | This activity aims to further attract human resources to science by establishing new research groups and cooperation among higher education institutions, |

³ European Commission (2013), “Innovation Union Scoreboard 2013”

| European Social Fund Activities | Description |
|---|--|
| Science (ongoing) | research centres and enterprises. It is also designed to attract Latvian scientists from outside the country and foreign scientists, as well as to foster new scientists' involvement in projects and their management, particularly in the areas of interdisciplinary research. Between 2009 and 2012, 35 research projects with a total budget of approximately EUR 40.3 million were funded. The second stage of this activity will be over the period 2013-2015, with a budget of approximately EUR 7.6 million. |
| Indicative activity 1.1.2.1. Support to Doctor's and Master's study programmes (ongoing) | This activity aims to increase the number of well-educated and skilled specialists of the highest level in all areas of education, in particular in natural sciences, mathematics, information technologies, engineering sciences, medicine, environmental sciences and creative industries. The target audience might be able to plan and develop high-technology products and high added value products and services, and to help them go into production, thus, contributing to the innovation-based development of the national economy, innovative industries and education. Sub-activity 1.1.2.1.1. offers support for Master's studies: the first stage is taking place from 2009-2015 and involves 13 Higher Education Institutions with a budget of approximately EUR 8.7 million; the second stage involves 11 HEIs, in the period 2011-2015, and with a total budget of approximately EUR 3.8 million. Sub-activity 1.1.2.1.2. offers support for doctoral studies: the first stage involves 18 HEIs during the period 2009-2015 and has a total budget of EUR 49.9 million and the second stage involves 11 HEIs from 2011-2015, with a total budget of EUR 2.9 million. |

Source: Deloitte

3. Women in the research profession

Measures supporting women researchers in top-level positions

In 2010, the percentage of women grade A academic staff was 32.1% in Latvia compared with 31.2% among the Innovation Union reference group and an EU average of 19.8%⁴.

As of 2011, the Latvian Government had not introduced any new measures aimed at supporting women in top-level positions.

The ESF co-funded activities (see chapter 2 "National strategies") aim at promoting gender equality in the research profession. For example, promotion of gender equality is one of the criteria for the evaluation of grant proposals in the context of the ESF activities within the field of higher education and science.

Measures to ensure a representative gender balance

The Latvian government has not introduced any measures aimed at ensuring a representative gender balance in the researcher profession. In fact, the proportion of women working in science is among the highest in the European Union (see above).

Maternity leave

Provisions for maternity leave and child care leave depend on the status of the employee.

For employees, the situation is covered by regulation of labour and social security terms and conditions, but national grants given on the basis of research contracts between funding agencies and research institutions or universities do not carry any special provisions on maternity or child care leave.

Employees with permanent employment contracts may return to their previous work after pregnancy and/or maternity and child care leave.

For fellows, including those receiving ESF fellowships for Doctor's and Master's study programmes, there are no special provisions on maternity or child care leave.

If a student works as an employee, she has the same rights as any other employee in Latvia.

⁴ See Figure 1 "Key indicators – Latvia"

4. Open, transparent and merit-based recruitment

Recruitment system

Vacancies for academic positions and top-level positions (e.g. directors) in publicly-funded scientific institutions and publicly-funded higher education institutions are advertised in the official newspaper *Latvijas Vestnesis* (Latvian Herald) (online newspaper since 01.01.2013). The EURAXESS Jobs portal provides a link to the official newspaper. Institutions can take additional measures in order to advertise job vacancies.

Open recruitment in institutions

The table below presents information on open recruitment in higher education and public research institutions.

Table 3: Open recruitment in higher education and public research institutions

| Do institutions in the country currently have policies to ...? | Yes/No | Description |
|---|--------|---|
| – publish job vacancies on relevant national online platforms | Yes | - |
| – publish job vacancies on relevant Europe-wide online platforms (e.g. EURAXESS) | No | It is up to the autonomous institutions. |
| – publish job vacancies in English | No | It is up to the autonomous institutions. |
| – systematically establish selection panels | Yes | The establishment of selection panels is regulated by the “Law on Institutions of Higher Education” (1995) and the “Law on Scientific Activity” (2005). |
| – establish clear rules for the composition of selection panels (e.g. number and role of members, inclusion of foreign experts, gender balance, etc.) | Yes | The composition of selection panels is regulated by the “Law on Institutions of Higher Education” (1995) and the “Law on Scientific Activity” (2005). |
| – publish the composition of a selection panel (obliging the recruiting institution) | Yes | - |
| – publish the selection criteria together with job advert | Yes | The job advert is published together with the selection criteria (or with a link or notice to these criteria). |
| – regulate a minimum time period between vacancy publication and the deadline for applying | Yes | The minimum time periods are regulated by the “Law on Institutions of Higher Education” (1995) and the “Law on Scientific Activity” (2005) |
| – place the burden of proof on the employer to prove that the recruitment procedure was open and transparent | No | - |
| – offer applicants the right to receive adequate feedback | No | - |
| – offer applicants the right to appeal | Yes | Such rights are granted by the “Law on Institutions of Higher Education” (1995) and the common regulation in “Administrative Procedure Law” (2001). |

Source: Deloitte

EURAXESS Services Network

In 2012, the number of researchers posts advertised through the EURAXESS Jobs portal per thousand researchers in the public sector was 0.9 in Latvia compared with 49.4 among the Innovation Union reference group and an EU average of 40.8⁵.

The EURAXESS Latvia Service Centre provides information on entry conditions, transfer of social security and pension contributions, finding accommodation, administrative assistance, etc.

5. Education and training

Measures to attract and train people to become researchers

The Latvian education system performs relatively well in relation to European quantitative benchmarks. However, there is a general challenge in improving the quality at all levels of education, increasing

⁵ See Figure 1 “Key indicators – Latvia”

participation in life-long learning and improve the currently very low number of mathematics, technology, computing and science graduates⁶.

The ESF Programmes (see chapter 2 “National strategies”) play an important role in Latvia’s structural reforms of the education sector. Their aim is to modernise the universities and retain academic staff, and to attract more Master’s and PhD students, especially in science, technology and engineering.

Despite the availability of the EU’s Structural Funds for Master’s and doctoral studies in recent years, the number of staff employed in the science sector is insufficient to ensure full implementation of the country’s economic strategy and sustainable growth. Fluctuations in R&D funding, an unstable economic situation, low pay levels and limited career opportunities have a negative impact on attracting young people into the researcher profession⁷.

Doctoral graduates by gender

The Guidelines for the Development of Science and Technology for 2009-2013⁸ state that the number of PhDs awarded annually should be increased from 230 in 2010 to at least 425 by 2013. The number of doctoral candidates has, in fact, increased in the last couple of years, with a 7.5% average annual growth percentage in the number of new doctoral graduates (ISCED 6) in the last five years per 1 000 inhabitants aged 25-34. This can be considered a good average achievement relative to the other EU-27 Member States. However, given the ratio of new doctoral graduates per 1 000 in the population cohort, as reflected in the table below, there is still some way to go even, though funding for scientific work in Latvia has gradually been increasing since 2005 when doctoral students had the opportunity of receiving scholarships within the context of EU structural funding⁹.

The table below shows doctoral graduates in Latvia by gender as a ratio of the total population.

Table 4: Doctoral graduates by gender

| Indicator | Latvia | EU Average |
|--|--------|------------|
| New doctoral graduates (ISCED 6) per 1 000 population aged 25-34 (2010) | 0.4 | 1.5 |
| Graduates (ISCED 6) per 1 000 of the female population aged 25-34 (2010) | 0.5 | 1.4 |
| Graduates (ISCED 6) per 1 000 of the male population aged 25-34 (2010) | 0.3 | 1.6 |

Source: Deloitte

Data: Eurostat

Funding of doctoral candidates

The ESF co-funded activity “Support for the implementation of doctoral study programmes (2007-2013)” offers doctoral studies free of charge on a competitive basis. There is no formal bar on foreign students applying for state-funded PhDs in Latvia; in practice, language barriers are a disincentive.

Measures to increase the quality of doctoral training

In 2009/2010, the University of Latvia and the Riga Technical University set up doctoral schools. The ESF-supported activities (see chapter 2 “National strategies”) also aim to increase the quality of doctoral training.

Skills agenda for researchers

The report “Development of Science and Technology in Latvia, 2011”¹⁰ calls for measures to improve researchers’ employment skills and competencies.

6. Working conditions

Measures to improve researchers’ funding opportunities

The “National Reform Programme of Latvia for the Implementation of the “Europe 2020” Strategy” predicts an increase in the share of R&D investments in Latvia from 0.45% of GDP in 2009 to 1.0% in 2015 and 1.5% in

⁶ European Commission (2011), “European Social Fund, Latvia”, available at: <http://ec.europa.eu/esf/main.jsp?catId=389&langId=en>

⁷ Ministry of Education and Science (2010), “Development of Science and Technology in Latvia, 2011”

⁸ Available at: http://erawatch.jrc.ec.europa.eu/erawatch/opencms/information/country_pages/lv/policydocument/policydoc_mig_0004

⁹ Ministry of Education and Science (2010), “Development of Science and Technology in Latvia, 2011”

¹⁰ Ministry of Education and Science (2010), “Development of Science and Technology in Latvia, 2011”, available at: http://izm.izm.gov.lv/upload_file/Zinatne/zinatnes-un-tehnologiju-attistiba-Latvija-2011.pdf

2020. The programme also aims to attract human resources in science as well as foster competitiveness of scientists.

Remuneration

The programmes implemented under the European Social Fund (ESF) and the European Regional Development Fund (ERDF) set researchers' maximum pay levels. Universities and research institutions can fix researchers' salary brackets based on the levels defined by the ESF/ERDF programmes. They enjoy a high degree of flexibility in defining the salary levels for their academic staff. The researchers' income can vary considerably depending on the research project and the source of funding.

For further information, see the new country profile on remuneration of researchers from the MORE2 study (forthcoming, on the EURAXESS website).

Researchers' Statute

The Law on Scientific Activity¹¹ and the Law on Institutions of Higher Education¹² defines the statute of scientists, other research and academic staff.

'European Charter for Researchers' & 'Code of Conduct for the Recruitment of Researchers'

The implementation of the 'European Charter for Researchers' and the 'Code of Conduct for the Recruitment of Researchers' is not directly promoted at national level.

In 2011, Riga University was the first institution in Latvia to sign the 'Charter & Code'.

Autonomy of institutions

The Law on Scientific Activity and the Law on Institutions of Higher Education grant autonomy to Higher Education Institutions (HEI). As autonomous institutions of education and science with the right to self-governance, HEIs can decide on the overall administrative structure and develop their own academic profiles.

Career development

A number of Latvian universities have implemented dedicated study programmes (Master and doctoral studies) aimed at promoting researchers' skills sets and career prospects, including inter-sectoral cooperation and mobility.

Shift from core to project-based funding

The majority of ESF/ERDF funding programmes are project-based (short-term). Hence, there is no measurable impact on researchers' working conditions resulting from a shift from core to project-based funding.

Social security benefits (sickness, unemployment, old-age)

Generally, researchers employed under permanent or temporary contracts (publicly or privately funded) receive a salary, pay mandatory social security contributions, and are entitled to social security benefits (including sickness, unemployment and old-age benefits).

7. Collaboration between academia and industry

The table below summarises key programmes designed to boost collaboration between academia and industry, and to foster doctoral training in cooperation with industry.

Table 5: Collaboration between academia and industry

| Measure | Description |
|--|--|
| Indicative activity 1.3.1.9. Attraction of highly qualified employees (ESF) (2009-2010) | This activity aimed to strengthen businesses' competitiveness and promote research activities in enterprises by attracting qualified employees – both doctorate students and graduates, research personnel of academic institutions and institutes, as well as highly qualified specialists from abroad - for the development of specific technologies and new products. Three projects were realized between 2000 and |

¹¹ Law on Scientific Activity (with amending laws up to 21 June 2007), available at: http://www.vvc.gov.lv/export/sites/default/docs/LRTA/Likumi/Law_on_Scientific_Activity.doc

¹² Law on Institutions of Higher Education (with amending laws up to 2 March 2006), available at: http://www.vvc.gov.lv/export/sites/default/docs/LRTA/Likumi/Law_On_Institutions_of_Higher_Education.doc

| Measure | Description |
|--|--|
| | 2010. |
| Indicative activity 2.1.1.1. Support to science and research (ERDF) (2009-2013) | This activity facilitates the integration of science and industry in areas such as agrobiotechnology, informatics, biomedicine, pharmaceuticals, energy, material science, forest science, medical science and environmental science. It ensures public access to the research results. The number of projects currently under way is 122. |
| Indicative activity 2.1.2.1. Commercialisation of science and transfer of technologies (ERDF) (2010-2013) | This activity aims to boost the exploitation of science and transfer of technologies by promoting cooperation between research and industry in the implementation of industrial research projects (applied research) and the development of new products and technologies. |

Source: Deloitte

8. Mobility and international attractiveness

In 2010, the percentage of doctoral candidates (ISCED 6) who were citizens of another EU-27 Member State was 0.8% in Latvia compared to 1.9% among the Innovation Union reference group and an EU average of 7.8%¹³. In the same year, non-EU doctoral candidates were 0.6% of all doctoral candidates in Latvia compared with 2.2% among the Innovation Union reference group and an EU average of 20.0%¹⁴.

Measures aimed at attracting and retaining 'leading' national, EU and third country researchers

The Law on Immigration and Research Activity regulates the employment of foreign researchers in Latvia. In addition, the Law on Research Activity (2010) and the Cabinet Regulations (2008)¹⁵ include legal norms for admitting third-country researchers for the purposes of scientific research. Scientific institutions are entitled to recruit third-country nationals to participate in scientific research projects.

Foreign job seekers, irrespective of the duration of their stay, are required to have a temporary residence permit. EU researchers and third-country nationals with a permanent residence permit and/or the status of a long-term EU resident may apply for any research position in Latvia. The recruitment of non-national applicants is limited in practice, however, by the requirements on knowledge of the Latvian language contained in the Official Language Law (1999) and the related regulations¹⁶.

Inward mobility (funding)

The ESF co-funded activities (see chapter 2 "National strategies") promote the return of Latvian researchers and involvement of foreign researchers (incoming mobility). For example, the involvement of mobile researchers is one of the criteria for the evaluation of grant proposals in the context of the ESF activities within the field of higher education and science.

Outbound mobility

At present, there are no special measures (including the provision of funding) encouraging researchers to spend some time as a researcher in another country.

Promotion of 'dual careers'

Currently, there are no concrete measures to support researchers' dual-careers.

Portability of national grants

While research grants are portable to another national research institution, the current law does not regulate the portability of grants to another country.

Access to cross-border grants

Contracts on publicly-financed research activities are concluded between the funding agencies and the research institutions or higher education institutions. Therefore, national grants are also open to non-residents provided that these people are employees of a contracting institution.

¹³ See Figure 1 "Key indicators – Latvia"

¹⁴ Ibid

¹⁵ Regulations of the Cabinet of Ministers of 21.07.2008 No. 568 on the procedure to be followed by scientific institutions at signing and ending employment contracts with foreign researchers

¹⁶ European Commission (2010), "Erawatch Country Reports 2010: Latvia"

National fellowships are also open to non-residents providing they people are students of the same study programme that provides the fellowship.

A limited number of Latvian scholarships¹⁷ are open to non-residents to study in Latvian Higher Education Institutions, for research work in Latvian Higher Education Institutions and to participate in summer schools in Latvia.

¹⁷ Available at: http://www.viaa.gov.lv/eng/international_cooperation/scholarships_gov/latvian_scholarships/