# WORKING4TALENT Human capital and innovation



 **RIGA** 

Report

Riga City Council City Development Department • 2012





## **Table of contents**

1 European Union regional policy for smart growth	3
1.1 Smart specialisation	3
1.2 Stronger regional innovation governance	3
1.3 Competitive clusters	4
1.4 Policy instrument: Innovation voucher	4
1.5 Education institutes	4
2 Institutional background: partner organisation and region. Regional and local innovation sys	stem 6
2.1 Partner organisation – Riga City Council City Development Department	6
2.2 Partner Region – Riga (NUTS 3)	6
2.3 Regional and local innovation system	8
3 Statistics on regional innovation and highly qualified human capital	11
3.1 Statistics on regional innovation	11
3.2 Statistics on highly qualified human capital	12
4 Main strengths / challenges in attracting and retaining highly qualified human capital partner region	
4.1 Strengths and challenges	15
4.2 Structured interviews	17
5 SWOT analysis	25
6 Conclusions and proposals	27



### 1 European Union regional policy for smart growth

### 1.1 Smart specialisation

Investment in research, innovation and human capital is crucial for all regions, but regions start with different endowments and capabilities. While regions are differentially placed to contribute to the Europe 2020 goal of smart growth through innovation, regional diversity is seen as an asset since it advocates different routes to growth through innovation. Thus European Commission Directorate-General for Regional Policy is proposing regional policy for smart growth. It is based on perspective that there are potentially large gains from strategies that exploit an original, globally competitive specialisation niche based on regional assets and strengths relative to other regions, as well as capability to learn what specialisation can be developed in relation to those of other regions<sup>1</sup>.

Smart specialisation strategies (S3) can help regions to concentrate resources on a few key R&D&I priorities and ensure that research and innovation resources reach a critical mass. While leading regions can invest in advancing a generic technology or service innovation, for others, investing in its application within a particular sector or related sectors is often more fruitful. More generally, smart specialisation involves a process of developing a vision, identifying competitive advantage, setting strategic priorities and making use of smart policies to maximise the knowledge-based development potential of any region, strong or weak, high-tech or low-tech<sup>2</sup>.

### 1.2 Stronger regional innovation governance

Regions can actively intervene by supporting the switch in demand towards sustainable goods and services. Regional policy is, therefore, vital for mobilising the full innovation potential of EU regions. Horizon 2020 is the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness<sup>3</sup>. The closed innovation systems of the past are giving way to more open systems centred on collaborative networks and communities, which are changing the nature not only of science and innovation but also of societies and economies. This creates opportunities for regions. Due to their expert knowledge and proximity to local actors, regional authorities can play the role of facilitator and broker to ensure fluidity of relationships and can invest in supporting collaboration between actors within and outside the region<sup>4</sup>.

The capacity of regions to innovate depends on regional innovation system developed on triple or quadruple models. Regional innovation system relays on a set of institutions, including regional innovation agencies, municipalities, regional development agencies, clusters, universities, R&D centres, technology transfer organisations, financial and knowledge dissemination agencies, which work together and play the major role in influencing the innovative performance of companies. The above cooperation produces systemic effects that encourage firms within the region to develop specific forms of culture and practice, which reinforce their innovative capability and competitiveness<sup>5</sup>. Quality of regional innovation governance relays on municipalities and regional development agencies abilities to establish, develop, maintain, and coordinate cooperative links among universities, research institutes, businesses, support institutions towards smart growth.

<sup>&</sup>lt;sup>1</sup>European Commission. (2011). REGIONAL POLICY FOR SMART GROWTH IN EUROPE 2020. European Union Regional Policy. Directorate-General for Regional Policy.

<sup>&</sup>lt;sup>2</sup>European Commission. (2012). Smart Specialisation Platform. http://s3platform.jrc.ec.europa.eu/home;jsessionid=q8L8QLnL4d21QLH9dZy5DCp1p48rjPQtN32DZy8Qk XjDMfnVRPwZ!116563854!1355491176629

<sup>&</sup>lt;sup>3</sup> European Commission.(2012). The EU Framework Programme for Research and Innovation. http://ec.europa.eu/research/horizon2020/index\_en.cfm?pg=h2020

<sup>&</sup>lt;sup>4</sup> Ibid

<sup>&</sup>lt;sup>5</sup> Komninos, Nicos. (2005). Regional Systems of Innovation. Urban and Regional Innovation Research. http://www.urenio.org/2005/08/12/regional-systems-of-innovation

### 1.3 Competitive clusters

The economic prosperity of regions is related to the strength of clusters<sup>6</sup>. Thus clusters are located at the heart of regional innovation system. Clusters, by European Commission, are seen as important means for regional and modern industrial policy to achieve smart and sustainable growth, in particular by improving the local business environment, notably for SMEs<sup>7</sup>. Clusters can be used by regional governments as existing industry-led platforms bringing together and mobilising local actors to design and successfully implement smart specialisation strategies, attracting innovative companies and creating more jobs at local level.

There is a need to develop more globally competitive clusters and networks for innovation clusters. Here the role of state and municipal institutions as facilitators, coordinators and supporters are crucial. Through local clusters that are connected Europe-wide, a critical mass can be achieved for R&D and innovation, skills, funding, the cross-fertilisation of ideas and entrepreneurial initiatives. Regional cluster policy needs to be focused on areas of actual or potential regional comparative advantage, investing in knowledge infrastructure, in particular in science parks and business incubators, as well as in creating the necessary knowledge flows between businesses, universities and regional authorities<sup>8</sup>.

### 1.4 Policy instrument: Innovation voucher

A number of new innovation voucher schemes have been established by regional and national innovation support organisations. These schemes are generally aimed at small and medium-sized enterprises to start new, or accelerate innovative activities and enhance their competitiveness in collaboration with R&D institutions or other service providers. Innovation voucher schemes aim to

- to support SMEs to purchase services (R&D, IPR, testing, innovation management etc.)
- to be 'lighter' and 'faster' both in application and reporting than standard grant programs; typically open for applications until the exhaustion of funds the voucher is issued by a regional/national agency by making a commitment to pay the service provider (occasionally, to reimburse the SME the paymentmade)
- they are limited in scope and amount committed (maximum 20 000 EUR)

Research shows that too generous and open voucher schemes run the risk of misallocating public funds<sup>9</sup>.

### 1.5 Education institutes

The main focus on promoting the active engagement of universities and research institutes in regions has been in terms of their contribution to Regional Innovation Systems (RIS). Higher education institutions and research centres need to work together with enterprises to bring

<sup>&</sup>lt;sup>9</sup> DG ENTR-Unit D2 "Support for innovation". (2009). Availability and Focus on Innovation Voucher Schemes in European Regions.



<sup>&</sup>lt;sup>6</sup> European Commission. (2009).COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Reviewing Community innovation policy in a changing world. Brussels, 2.9.2009 COM(2009) 442 final

<sup>7</sup> European Commission. (2010). COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS An Integrated Industrial Policy for the Globalisation Era Putting Competitiveness and Sustainability at Centre Stage. {SEC(2010) 1272} {SEC(2010) 1276}

<sup>&</sup>lt;sup>8</sup> European Commission. (2011). REGIONAL POLICY FOR SMART GROWTH IN EUROPE 2020. European Union Regional Policy. Directorate-General for Regional Policy.

### Zinojums • Rīga

innovation to the market<sup>10</sup>. Many universities in the EU are helping to commercialise research by increasing the entrepreneurial mind-set of students and by collaborating with firms in their region in innovation, so becoming more strongly involved in regional economic development.

Innovation depends on people who are able to generate and apply knowledge and ideas in the workplace and in society at large. As the demand for knowledge sharing and learning increases, "soft" skills such as communication and teamwork may gain in importance. Nevertheless, technical skills will remain an essential part of many types of work. Continuing globalisation may lead to greater emphasis on adaptability and skills that facilitate collaboration across firms and countries. Many OECD countries are concerned to ensure that the supply of highly skilled people keeps pace with the demands of knowledge-based economic activity. Vocational education and training systems can be made more responsive through increased involvement of the business sector and unions in curriculum development and staff exchanges<sup>11</sup>.

The capacity of Riga planning region to create innovations and internationally valuable knowledge is very low. Human resources involved in science and technology is relatively large – approximately 484 thousand employees in Latvia were employed in science and technology in 2011, thus Latvia ranks in the 16<sup>th</sup> place in human resource concentration from 40 Baltic Sea regions. The capacity of companies to create innovations is low and human resources involved in science and technology has low productivity to create internationally valuable knowledge. This can been observed both from Latvia's low position in innovation index (where Latvia ranks in the 25<sup>th</sup> position among Baltic Sea regions in innovation, and in the 201<sup>st</sup> position among all EU regions <sup>13</sup> (by NUTS 2)) and low number of patents and international scientific publications. Comparing number of patent applications to the EPO (European Patent Office) per one million inhabitants in 2008, Latvia accounts only for 2.6% of capabilities of the leading region – Stockholm <sup>14</sup>(see Annex 5).

The poor educational and scientific competitiveness slows the progress of Riga planning region towards development of innovation based economy. One of the reasons for the weak competitiveness is the notable fragmentation of the higher education and research institutions. Specialization in education and research is a way how to achieve international excellence in conditions of scarce resources. A certain amount of specialization can be observed by looking at the data which reflect the distribution of the PhD degrees according to branches of science. In 2009 the highest rate or 9.8% PhD degrees were awarded scientific degree in chemistry <sup>15</sup>. Chemistry is also a leader in terms of international scientific publications and EPO patents <sup>16</sup>. 10 out of 11 EPO patents granted to scientists from Latvia in 2011 by EPO were registered in chemistry <sup>17</sup>.

<sup>&</sup>lt;sup>10</sup> European Commission. (2011). REGIONAL POLICY FOR SMART GROWTH IN EUROPE 2020. European Union Regional Policy. Directorate-General for Regional Policy.

<sup>&</sup>lt;sup>11</sup> OECD (2011). Skills for Innovation and Research.

<sup>&</sup>lt;sup>12</sup> Eurostat. (2011). Annual data on HRST and sub-groups by NUTS 2 regions.

<sup>&</sup>lt;sup>13</sup> Joint Research Centre Institute for the Protection and Security of the Citizen (2010). EU regional competitiveness index 2010.

<sup>&</sup>lt;sup>14</sup> Eurostat. (2008). Patent applications to the EPO by priority year and NUTS 3 regions

<sup>&</sup>lt;sup>15</sup> Centrālais statistikas birojs. (2009). Zinātņu doktori sadalījumā pēc jomas, kurā iegūts zinātniskais grāds

<sup>&</sup>lt;sup>16</sup> Technopolis, (2010). Policy Mix Peer Review: Latvia Peer Review Outcome Report

<sup>&</sup>lt;sup>17</sup> European patent office. (2012). 2011 granted patents by field of technology

# 2 Institutional background: partner organisation and region. Regional and local innovation system.

### 2.1 Partner organisation - Riga City Council City Development Department

The Riga City Council City Development Department (hereinafter - Department) is the leading institution in the area of strategic development, fostering of economic competitiveness and planning of sustainable development of Riga City.

The Department's **vision** – to assume the role of the leading institution in the area of city development and act as a role model in strengthening professional cooperation in developing Riga into a competitive and attractive metropolis of the Baltic Sea region.

The Department's **mission** is to creatively promote and steer the development of Riga City in the interests of its residents and to shape the city into a pleasant, convenient and harmonious environment.

In order to ensure a lawful development process and efficient governance in Riga, as well as to perform appropriate control thereof, whilst fostering continuous growth and attracting investment to Riga City, the Department has defined the following **strategic courses of action**:

- Strategic management of Riga City Development;
- Promotion of the city's competitiveness;
- Ensuring of a balanced development of the city;
- Involvement of the society in the city's development processes;
- Dissemination of information and communication about the city development;
- Monitoring and ensuring of a lawful implementation of construction works;
- Streamlining of the Department's work.

The Department is responsible for territorial planning, detail planning, as well as elaborating and implementing amendments thereof, monitoring of lawful implementation of construction works, promotion of economic and social development of Riga City, running of the monitoring system for the Riga City Long-term Development Strategy 2015 and Riga City Development Programme 2006-2012, performing and improving the function of naming and renaming streets, parks, squares and other elements of urban environment. The Department is also responsible for preparation and managing of projects financed from external sources. The Department reports to the City Development Committee.

The Department's principal work is subordinated to the following objectives defined in the Riga City Development Programme 2006-2012:

- To become an innovative, Europe-oriented city with high quality cultural life;
- To ensure economic development with a focus on international cooperation;
- To develop high-quality city neighbourhoods;
- To promote a competitive high value-added economy;
- To foster a growing, diverse and partnership-based economy;
- To ensure fast and efficient connections to and from the city;
- To develop an efficiently governed city with a close involvement of its residents.

### 2.2 Partner Region - Riga (NUTS 3)

According to the data from the Central Statistical Bureau, under NUTS 1 and NUTS 2 Latvia is viewed as the whole territory, while under NUTS 3 Latvia is divided into six statistical regions:

<sup>&</sup>lt;sup>18</sup> Unpublished materials of Riga City Council City Development Department



### Ziņojums • Rīga

Kurzeme, Latgale, Riga, Pieriga <sup>19</sup>, Vidzeme and Zemgale. The planning regions in Latvia are divided into sub-regions. The Riga Planning Region includes Riga, Jurmala, Tukums, Riga District, Limbazi District and Ogre District with total area of 10435 km<sup>2</sup>. <sup>20</sup> The municipal breakdown by population as at early 2009 indicates that Riga accounts for the highest concentration of population (see Fig. 1.1.).

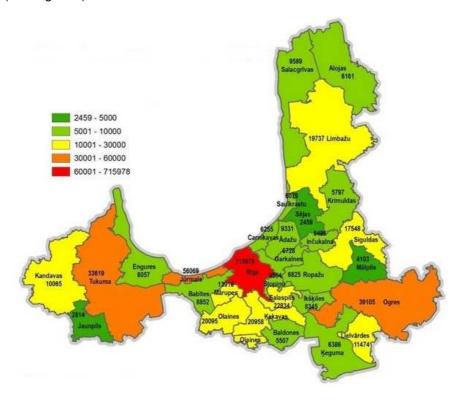


Fig.1.1. Riga Planning Region: Municipal breakdown by population (2009)<sup>21</sup>

Riga Planning Region (RPR) is located in the very centre of the country on the Baltic Sea coast, which is a geopolitically advantageous position. In early 2012 the population of RPR reached 1.09 million, which is approximately one half of Latvia's total population. RPR is home to the principal infrastructure – Riga Sea Port, International airport, railway lines, gas pipelines, energy networks, most of higher education establishments and research centres, as well as the highest concentration of qualified human capital.

The total area of Riga City is 304 km<sup>2</sup>. At the beginning of 2012 the population of Riga City was 650478 with a density of 2139.7 residents per 1 km<sup>2</sup>. While the rest of Pieriga as at the beginning of 2012 included 19 towns and 28 amalgamated municipalities with the total area of 10133 km<sup>2</sup>, population of 368179 with a density of 36.3 residents per 1 km<sup>2</sup>.<sup>24</sup>

<sup>&</sup>lt;sup>19</sup> Riga neighbouring municipalities.

<sup>&</sup>lt;sup>20</sup> http://www.rpr.gov.lv/uploads/filedir/RPR%20Att%20programmas%20update/Ekon%20profils/Profila%20materials/RPR%20Ekonomikas%20profils.pdf, (25.10.2012.)

<sup>&</sup>lt;sup>21</sup> http://www.rpr.gov.lv/pub/index.php?id=269, (25.10.2012.)

<sup>&</sup>lt;sup>22</sup> Regional Development in Latvia 2011. Ministry of Environmental Protection and Regional Development. State Regional Development Agency: 2012, p. 23

<sup>&</sup>lt;sup>23</sup> http://rpr.gov.lv/pub/index.php?id=271, (25.11.2012.)

<sup>&</sup>lt;sup>24</sup> http://www.csb.gov.lv/category/tagi/iedzivotaju-skaits, (25.11.2012.)

### 2.3 Regional and local innovation system

The Law on the Development Planning System was adopted in 2009, with a view to prescribe implementation of a development planning system, promote sustainable and stable development of the country and improve general quality of life. The law also provides for several types of planning documents – policy planning, institutional management planning and territorial planning.<sup>25</sup>

The National Development Plan 2014-2020 (NDP 2020) is currently being elaborated in Latvia. It is the action plan for implementing the Sustainable Development Strategy of Latvia 2030. <sup>26</sup> The draft NDP 2020 describes innovation development as a process that covers all the territory of Latvia and does not provide for specific activities. It defines the area of innovation and science as a priority that has to be promoted immediately. However the draft document does not prescribe specific activities or sources of financing that could be used to establish a closer link between science and entrepreneurship. The draft NDP 2020 does not specify how innovation is planned to be developed across sectors with a view to promote innovative production. At the same time, the NDP 2020 mentions Riga City as a potential North-European business, science and culture hub:

"[338] Interaction and cooperation between development centres of different scale shapes the foundations of a diverse and complementary infrastructure network and scope of services. As the capital of Latvia and the largest city in the Baltic States, Riga holds the largest potential of Latvia's scientific and business development. This potential coupled with forming of science, research, development and innovation clusters, as well as promotion of innovative and technology-based enterprises may contribute to the development of Riga City as the North-European business, science, culture and tourism hub."

The following institutions contribute to the development of innovation and innovative entrepreneurship: the Investment and Development Agency of Latvia, Latvian Technology Park, Ventspils High Technology Park Business Incubator, Livani Centre of Engineering Technologies and Innovation, Jelgava Business Incubator, Rezekne Higher Education Institution Innovation Centre, Riga Biomaterial Innovation and Development Centre Business Incubator and other entrepreneurship support centres throughout the territory of Latvia.<sup>27</sup>

The Investment and Development Agency of Latvia is implementing the Innovative Entrepreneurship Promotion Programme 2009-2014, co-financed from the ERDF and other EU sources. The aim of the programme is to raise public awareness and to encourage broader society to engage in entrepreneurship, to raise the prestige of entrepreneurship, inform the society about the role of innovation in strengthening competitiveness, as well as to disseminate information about innovation-related topical issues and future potential thereof, thus promoting development and implementation of innovative solutions. The following activities are being implemented nationwide as a part of the Innovative Entrepreneurship Promotion Programme:

- The Idea Cup innovative business idea competition;
- How to become an entrepreneur in 5 days a training course for senior university students:
- Technical Innovation Days events organised in Latvia's regions with an aim to involve the youths in engineering science related practical activities;
- *Mentoring programme* aimed at strengthening the capacity of Latvian start-ups and promoting sustainable entrepreneurship opportunities in Latvia;
- Student Innovation Days a competition of innovation projects among the Latvian university students;

<sup>&</sup>lt;sup>27</sup> http://liaa.gov.lv/lv/biznesa-abc/biznesa-inkubatori/biznesa-inkubatoru-kontaktinformacija, (25.11.2012.)



<sup>&</sup>lt;sup>25</sup> Regional Development in Latvia 2011. Ministry of Environmental Protection and Regional Development. State Regional Development Agency: 2012, p. 8-10

<sup>&</sup>lt;sup>26</sup> http://nap.lv/par-nap2020, (01.11.2012.)

- Promotion of Technological Creativity and Innovation among the Youths "Mobile Exhibition" – aimed at involving creative, active and innovation-oriented human resources in entrepreneurship;
- Training of educators and youth counsellors practical workshops on innovative entrepreneurship, think-tanks and exchange of inspirational success-stories;
- Activities aimed at promoting innovative enterprises among schoolchildren site visits of secondary school students to enterprises;
- Training courses for the authors of innovative business ideas aimed at improving of business models, promoting of further development of business ideas and enhancing of presentation skills when presenting the ideas to potential investors;
- Workshops on promotion of commercialisation of technologies practical training sessions among Latvian scientists and technology transfer contact points;
- Workshops on the basics of entrepreneurship and the available support for innovation aimed at encouraging schoolchildren to engage in entrepreneurship after graduation;<sup>28</sup>
- Commercial secret TV competition show aimed at promoting new and competitive startups.<sup>29</sup>

Concerning the regional innovation system, considerations of the Latvian Member of the European Parliament Inese Vaidere should be taken into account: "There is a reason why small and medium-sized enterprises (SMEs) are regarded as the backbone of economy. Between 2002 and 2010 SMEs had created 85% of the total new jobs in the European Union (EU)." She emphasised the need to significantly reduce the administrative burden and to improve accessibility to financing that has been problematic since the economic crisis. Inese Vaidere has also argued that financing should be channelled to the risky projects, start-ups and innovative products, since they have the highest growth potential. She noted that in order for Latvian enterprises to grow and develop, to increase their innovation capacity and exportability, it is necessary to improve accessibility to the capital market. "As of 2013 the Baltic Innovation will launch investments in SMEs that already operate at pan-Baltic scale or have the potential of growing into the Baltic scale enterprises," said Inese Vaidere, pointing out that currently at the European level the main problem is associated with the fact that currently the support measures for SMEs are fragmented between various EU programmes and they lack appropriate coordination. In other words, the support is provided, but it lacks coordination and needs further simplification of the bureaucratic requirements. "

The following development planning documents area currently applicable to the Riga Planning Region:

- Riga Planning Region Development Strategy 2000 2020;
- Riga Planning Region Development Programme 2009 2013;
- Riga Region Territorial Planning 2005 2025.<sup>31</sup>

One of the tasks included in the Riga Planning Region Development Programme 2009 – 2013 is to elaborate long-term priorities of regional development. The programme defines the following objectives:

- High quality and constant development of human resources;
- Convenient accessibility of the region both locally and internationally;
- Competitive economy, diverse and active entrepreneurship;
- High quality living environment;

<sup>&</sup>lt;sup>28</sup> http://www.liaa.gov.lv/lv/uznemejdarbibas-abc/inovativas-uznemejdarbibas-motivacijas-programma, (25.11.2012.)

<sup>&</sup>lt;sup>29</sup> http://liaa.gov.lv/lv/sakas-pieteiksanas-jauno-uznemeju-tv-sacensibam-firmas-noslepums, (25.11.2012.)

<sup>&</sup>lt;sup>30</sup> http://www.diena.lv/latvija/viedokli/vaidere-lielaks-atbalsts-mazajiem-un-videjiem-uznemumiem-13972998, (25.10.2012.)

<sup>&</sup>lt;sup>31</sup> Regional Development in Latvia 2011. Ministry of Environmental Protection and Regional Development. State Regional Development Agency: 2012, p. 8-10

Increased role and influence of Riga region on both national and international scale.<sup>32</sup>

Riga City is bound to implement the **Riga City Long-term Development Strategy 2025** (the document is currently being updated) which sets 13 objectives, with special emphasis on the following priorities:

- Creation of an educated and skilled society;
- Shaping of a creative and Europe-oriented city;
- Promotion of international cooperation-oriented development of the city's economy;
- Ensuring high living standards in a city with quality neighbourhoods;
- Strengthening of a competitive and high value-added economy.

The Riga City Council City Development Department Investment Division is responsible for development of entrepreneurship and innovation in Riga City and Riga region. In its work it covers the following areas:

- Support for new entrepreneurship ideas implementation of the grant programme "Atspēriens" ("Take-off"), which supports only entrepreneurs registered in Riga, as well as dissemination of information about free training and other types of support available in Riga;
- Support for sectors with the greatest potential for competitiveness and exportability

   establishing and maintaining of a dialogue with potentially most competitive sectoral associations, support measures targeted at metalworking, machinery, chemical and pharmaceutical sectors, as well as support for higher education, electronics and electrics sectors. Continuous surveying of sectoral associations aimed at gathering opinions;
- Attracting of foreign entrepreneurs representative offices, cooperation with the Investment and Development Agency of Latvia, analysis of the *Financial Times* business database aimed at identifying potential investors, processing of investors' inquiries and drafting of reports on the city's and country's economic environment;
- Other areas dissemination of information about the possibilities of involvement in elaboration of Riga City planning documents, presentations and meetings aimed at fostering B2B cooperation, as well as implementation of other local and international projects.<sup>33</sup>

<sup>&</sup>lt;sup>33</sup> Unpublished materials of Riga City Council City Development Department, Investment Division



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<sup>&</sup>lt;sup>32</sup> http://www.rpr.gov.lv/uploads/filedir/Uzraudziba/RPR\_Uzraudziba\_2011.pdf, (25.10.2012.)

# 3 Statistics on regional innovation and highly qualified human capital 3.1 Statistics on regional innovation

A comprehensive innovation level analysis among the EU member state has been included in the Innovation Progress Report 2013, which characterises Latvia's strengths and weaknesses in the area of innovation and growth of innovation indicators (see Appendix I). Among all the EU member states Latvia has the third lowest place in innovation performance, ranking in a group of countries identified as modest innovators (see 1.2. Fig.)

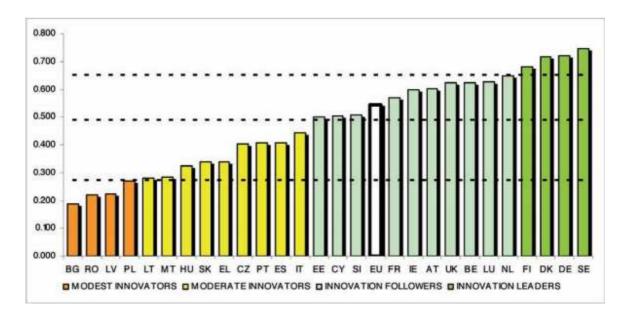


Fig 1.2. Comparison of EU member states in the area of innovation<sup>34</sup>

According to the Information Technology and Innovation Foundation survey conducted among 40 countries worldwide, Latvia takes the 31st position in terms of creating, implementing and developing innovations.<sup>35</sup> However, according to the World Bank Knowledge Economy Index, in 2012 Latvia takes the 37th position out of 146 countries, just as 12 years ago.<sup>36</sup>

Data from EUROSTAT show that in 2010 Latvia was among the poorest performers in terms of economic development among the 27 EU member states. Latvia's economy is dominated by industries that generate low added value, e.g. processing of natural resources. Besides, most of the work is performed by labour force with low qualifications. Advanced technologies account only for 3-4% of total economy with export rate not exceeding 6%, while in the majority of highly developed states this indicator is around 30%.<sup>37</sup>

According to the calculations of the Central Statistical Bureau the number of innovative enterprises in Latvia in the period after 2009 has decreased, namely, if there were 707 enterprises in the sector of industry in 2006-2008, then in 2008-2010 the number had reduced to 364, which constitutes only 19.2% of the total number of enterprises in industry in Latvia. An innovative

<sup>&</sup>lt;sup>37</sup> Shatrevich V., Zvanitajs J. Intellectual Economics. Innovation Implementations Problems in Latvia. Vol. 6: 2012, p. 730 – 731



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<sup>&</sup>lt;sup>34</sup> European Commission. Innovation Union Scoreboard 2013, p. 7

<sup>&</sup>lt;sup>35</sup> Social Sciences Journal. Innovation during economic growth and recession: a sectoral approach as viewed from two extremes. Daugavpils University, 2012, p. 49

<sup>&</sup>lt;sup>36</sup> http://siteresources.worldbank.org/INTUNIKAM/Resources/2012.pdf, (25.10.2012.)

company can be defined as the one that has introduced at least one innovation: technological (product and process), marketing or organizational innovation within a certain period of time. Likewise, the total turnover of innovative enterprises has reduced from 68.9 to 62.3 million lats. Total expenditure on innovation has decreased significantly between 2008 and 2010, i.e. from 210.3 to 47.0 million lats respectively, which shows a trend to save on machinery and equipment. The number of workforce employed at innovative enterprises in Latvia has decreased from 54.1% in 2008 to 47.3% in 2010. <sup>38</sup> In 2010 only 4.4% of employees worked at advanced technology enterprises, while in other EU member states the number was around 11%. <sup>39</sup>

Riga Planning Region generates the highest proportion of GPD if compared with other regions of Latvia, mainly because of the service sector, which in recent years accounted for up to 80%. In 2009 the yearly GDP per capita in Riga Planning Region was 7867 lats, while in the rest of Latvia it was in average 5797 lats. In 2009 Riga Planning region generated 66% of total GDP. In 2011 the largest proportion of VAT was levied from the trade sector, followed by processing, transport and storage sectors. 40

Latvia has the lowest research and development activity in the EU (0.22% of total GDP in 2010); also income from licensing and patents is relatively low.<sup>41</sup> The EU funding is not being used to full potential, because of the shortcomings in organisational matters and shortage of innovation activities. The same applies to the funds allocated to the higher education in Latvia, namely, in 2008 budget allocations reached just 0.3%, while the European average is 1.93%.<sup>42</sup>

Studies show that in general Latvia is an underdog in the area of innovation. However, there are certain indicators that put Latvia among the leading countries worldwide. For instance, according to *NetIndex* Latvia is one of the world leaders in terms of broadband internet connection speed. *The most recent data (9 October 2012 – 7 November 2012) show that* Latvia ranks 12<sup>th</sup> globally with the average download speed of 28.19 Mbps (28.9 Mbps in Riga). According to the Internet Quality Index, Latvia ranks 2<sup>nd 43</sup> The quality of broadband services plays a crucial role and offers significant advantages for development of innovation.

In terms of the EU fund distribution between Latvia's regions, in the period between 2007 and 2011 Riga Planning Region had received the largest portion or of the envelope (total of 291.4 million lats distributed between 1301 project). Also in terms of EU funds' contribution to innovation and entrepreneurship, Riga Planning Region takes the leading position with 62.5 million lats.<sup>44</sup>

Latvia is recognised as one of the "greenest" countries (2<sup>nd</sup> to Switzerland in 2012)<sup>45</sup>, which opens a broad scope of opportunities for such eco-businesses as agriculture, tourism and SPA. It holds a great potential for attracting investment from the EU funds and creating jobs for highly qualified human capital.

### 3.2 Statistics on highly qualified human capital

<sup>45</sup> http://bnn-news.com/epi-latvia-greenest-country-world-47902, (26.11.2012.)



<sup>&</sup>lt;sup>38</sup> http://www.csb.gov.lv/statistikas-temas/inovacijas-galvenie-raditaji-30336.html, (25.11.2012.)

<sup>&</sup>lt;sup>39</sup> Shatrevich V., Zvanitajs J. Intellectual Economics. Innovation Implementations Problems in Latvia. Vol. 6: 2012, p. 730 – 731

<sup>&</sup>lt;sup>40</sup> Regional Development in Latvia 2011. Ministry of Environmental Protection and Regional Development. State Regional Development Agency: 2012, p. 28-29

<sup>41</sup> http://ec.europa.eu/europe2020/pdf/nd/swd2012 latvia lv.pdf, (26.10.2012.)

<sup>&</sup>lt;sup>42</sup> Shatrevich V., Zvanitais J. Innovation Implementations Problems in Latvia, Vol. 6, p. 732

<sup>43</sup> http://www.netindex.com/download/2,39/Latvia, (08.11.2012.)

<sup>&</sup>lt;sup>44</sup> Regional Development in Latvia 2011. Ministry of Environmental Protection and Regional Development. State Regional Development Agency: 2012, p. 112

According to the Cabinet of Ministers ordinance "On the concept of scientific and technological development 2009-2013" Latvia has defined its science and technology development policy, where the main objective is to turn science and technologies into the cornerstones of long-term development of civic society, economy and culture, ensuring a successful functioning of knowledge-based economy and growth. However, development of innovation is hurdled by the following problems in the area of science and technology: shortage of investment and experts involved in science and research, underdeveloped science and research infrastructure, small number of registered patents (with no patents in the area of advanced technologies), as well as limited opportunities and skills in the area of commercialisation of knowledge. 46

The dynamics of competitiveness in the Baltic States, specifically in the area of innovation in the period from 2006 to 2009, shows that Latvia is lagging behind its neighbours (see Fig. 2.2.)

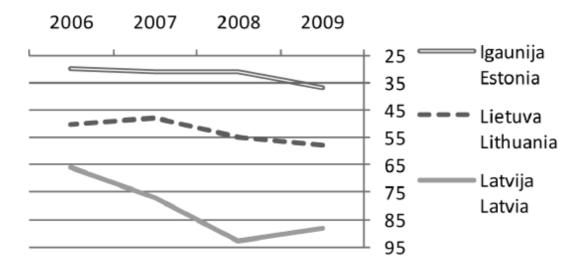


Fig. 2.2. Comparison of competitiveness in the area of innovation between the Baltic Sates 47

One of the factors contributing to the relatively low level of competitiveness in the area of innovation is the difference in the number of doctorate students in natural sciences, mathematics, IT, engineering, production and construction. In 2010 In Latvia, Lithuania and Estonia students in the aforementioned areas comprised respectively 0.19%, 0.23% and 0.56% of the total number of population in the age group 20-29.<sup>48</sup>

There are more than 60 higher education establishments in Latvia, offering more than 800 study programmes. Among them there are innovation-related programmes available for the first level professional higher education students, bachelor and master students. <sup>49</sup> However, shortage of funding allocated to education and science prevents further development of competitiveness of these study programmes and causes draining of human capital from Latvia.

Along with the draining of human capital, there is a positive trend of attracting an increasing number of foreign students (see Table 2.1.), due to the fact that in spite of an insufficient funding, certain higher education programmes offer a relatively high quality.

<sup>&</sup>lt;sup>46</sup> Social Sciences Journal. Innovation during economic growth and recession: a sectoral approach as viewed from two extremes. Daugavpils University, 2012, p. 49 – 50

<sup>&</sup>lt;sup>47</sup> UNIVERSITY OF LATVIA WORKS. Volume 754 ECONOMICS AND MANAGEMENT, 2010, p. 102

http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsc00028&plugin=0, (28.11.2012.)

<sup>&</sup>lt;sup>49</sup> http://www.aiknc.lv/lv/prog\_aip\_virziens.php, (25.10.2012.)

Table 2.1. Total number of local and foreign students in Latvia <sup>50</sup>

	2007/08	2008/09	2009/10	2010/11	2011/12
Total number of students	127760	125360	112567	103856	97041
Foreign students	1475	1591	1760	1979	2716

Due to the demographic situation in Latvia, the number of students is decreasing even faster than general population, thus causing threats of disrupting the structure of locally available highly qualified human capital. Although the total number of students is decreasing, the proportion of foreign students tends to grow. Foreign students not only facilitate attraction of investment but also contribute to shaping of a multinational academic environment.

According to the statistics, in 2010-2011 the number of scientific institutions and scientific personnel had increased (from 319 in 2010 to 468 in 2011). Funding allocated to science and research has almost doubled since 2009, namely, increased from 59.9 million lats to 99.4 million lats in 2011. Although funding earmarked for the entrepreneurship has reduced, the general trend is positive. <sup>51</sup> However, it should be taken into account that in comparison with other European countries funding in Latvia is insufficient to ensure higher competitiveness. Innovations can only be generated through developing education, science and research, which, of course, require appropriate investments.

<sup>&</sup>lt;sup>51</sup> http://www.csb.gov.lv/statistikas-temas/inovacijas-galvenie-raditaji-30336.html, (20.10.2012.)



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 $<sup>^{50}</sup>$ http://data.csb.gov.lv/DATABASE/Iedzsoc/Ikgad%C4%93jie%20statistikas%20dati/Izgl%C4%ABt%C4%ABba%20un%20zin%C4%81tne/Izgl%C4%ABt%C4%ABba%20un%20zin%C4%81tne.asp, (20.10.2012.)

# 4 Main strengths / challenges in attracting and retaining highly qualified human capital in the partner region

### 4.1 Strengths and challenges

Improvement of the demographic situation in Latvia ranks high among the government's most topical issues, since the aging of population is constantly increasing the demographic pressure. Birth rate is still outweighed by death rate and also the migration balance is negative, which means that more people leave the country than enter it. Due to these factors the human capital needed for future development is being depleted. In the following years the number of students will drop dramatically at all levels of education. According to the data from the Central Statistical Bureau, in early 2012 the population of Latvia was 2042371, with 1297715 (63.6%) persons of working age. 22.1% were above and 14.3% were below working age. Also the level of demographic burden has increased, namely, at the beginning of this year there were 573 persons above or below working age per 1000 persons of working age.

Long-term statistics on migration in Latvia (see Fig. 3.1.) reveals the high number of emigrants, with peak numbers in 2009 and 2010.

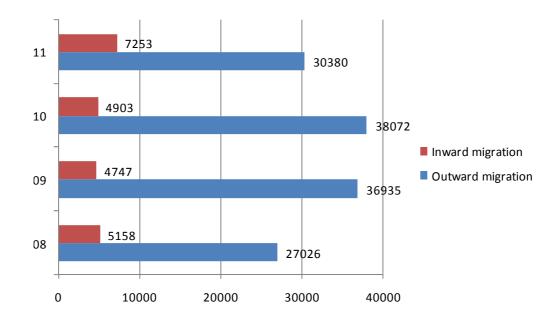


Fig. 3.1. Long-term migration in Latvia<sup>53</sup>

One of the main reasons for outward migration is the low level of income and the relatively high tax burden. According to the data from the Central Statistical Bureau, in 2011 the average monthly gross salary was 464 lats<sup>54</sup>, which on many occasions equals a week's pay for Latvian guestworkers in the United Kingdom. Therefore many people have little or no motivation to seek

<sup>&</sup>lt;sup>54</sup> http://data.csb.gov.lv/DATABASE/Iedzsoc/%C4%AAstermi%C5%86a%20statistikas%20dati/Darba%20samaksa/Darba%20samaksa.asp, (25.10.2012.)



<sup>&</sup>lt;sup>52</sup> http://data.csb.gov.lv/DATABASE/Iedzsoc/Ikgad%C4%93jie%20statistikas%20dati/Iedz%C4%ABvot%C4%81ji/Iedz%C4%ABvot%C4%81ji.asp, (25.10.2012.)

 $<sup>^{53}</sup>$ http://data.csb.gov.lv/DATABASE/Iedzsoc/Ikgad%C4%93jie%20statistikas%20dati/Iedz%C4%ABvot%C4%81ji%20E%20Migr%C4%81cija/Iedz%C4%ABvot%C4%81ji%20E%20Migr%C4%81cija.as p, (25.10.2012.)

employment opportunities in Latvia or return from their respective countries of residence. In the period between 2008 and 2011, the number of outward migrants increased on yearly basis until 2010, reaching almost 40 000 a year. In 2011 the number started to decrease and dropped to approximately 30 000, still remaining quite high.  $^{55}$ 

The high level of unemployment that rapidly increased during the economic recession poses the most serious challenge in attracting and retaining of highly qualified human capital. Young people are the most vulnerable age group with the highest level of exposure to the unemployment risk. In 2011 the highest level of youth unemployment among the EU member states was in Spain (46.4%), Greece (44.4%) and Slovakia (33.2%). In the Baltics the highest youth unemployment level was in Lithuania (32.9%) followed by Latvia with 29.1% and Estonia with 22.3%. <sup>56</sup> According to the data from the State Employment Agency the unemployment tends to decrease – in August 2012 the registered unemployment rate was 11.3%. The nationwide lowest unemployment rate was registered in Riga at 7.2%. Another positive factor which puts Riga in a better position than the rest of Latvia's regions is the fact that in 2012 it has the highest proportion of persons of working age. However, the number is of people below working age in Riga is relatively low, which could lead to an even higher level of demographic burden in the future. <sup>57</sup>

The situation in Riga and throughout Latvia is not sufficiently favourable in terms of attracting foreigners, mainly due to the language barrier. A survey on the use of foreign languages conducted by the daily newspaper "Diena" shows that it is quite difficult for a foreigner to get around Riga due to the lack of information and signs in English. With the exception of downtown Riga, most districts of the city have little or no information in English. Therefore it is difficult for foreigners to get around the city outside the city centre. The problems associated with the public transportation system in Riga have been specifically highlighted, since all the information is made available only in Latvian, thus making it extremely difficult for foreigners to use it efficiently. The problem is equally shared by foreign students, tourists and potential foreign investors. Foreign students have pointed out that it is virtually impossible to get a job without a good command of Latvian language. This means that Latvia is failing in implementing the EU principles of free movement and openness. Also the availability of various services, such as health-care, is poor. It is difficult for foreigners to freely communicate, since most people of older age, including civil servants, doctors, shop assistants etc. have little or no command of English. The survey of the surv

Another challenge is constituted by the situation in the higher education establishments, as a result of which students increasingly tend to prefer studying abroad. Currently heated discussions are taking place about the future accreditation of the accredited study programmes offered by Latvia's higher education establishments, since the Ministry of Education and Science is using all the available methods to mechanically reduce the number of study programmes. Therefore the credibility of Latvia's education system and its quality has been compromised, and many students opt for alternatives abroad. Although there are study programmes in Latvia that are related to innovative entrepreneurship, the offer is insufficient and the quality is questionable.

Almost one third (32%) of Latvia's population reside in Riga City. In early 2009 Riga's population was around 713 000. In the last decade the number has decreased by 63 000 or 8.1%. Besides, the drop in Riga's population exceeded the national average. Nevertheless, in recent years the situation has somewhat stabilised. Nationwide the population has dropped by 5.7% during the aforementioned period, which means that Riga accounted for 45.7% of the total population drop in Latvia. However, the population of Riga District has increased by 29 000 since 1999. Riga, not unlike many other larger cities, follows the trend of decentralisation, i.e. people tend to move from the city centre to the rapidly developing outskirts, agglomerations and easily commutable towns in

<sup>&</sup>lt;sup>58</sup> Diena // Es neunderstand\* p. 6-7 No. 214 (31.10.2012.)



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 $<sup>^{55}</sup>$  http://data.csb.gov.lv/DATABASE/Iedzsoc/Ikgad%C4%93jie%20statistikas%20dati/Iedz%C4%ABvot%C4%81ji%20E%20Migr%C4%81cija/Iedz%C4%ABvot%C4%81ji%20E%20Migr%C4%81cija.asp, (25.10.2012.)

<sup>&</sup>lt;sup>56</sup> http://www.em.gov.lv/images/modules/items/tsdep/darba\_tirgus/EMZino\_260612\_full.pdf, (26.11.2012.)

<sup>&</sup>lt;sup>57</sup> http://www.sus.lv/lv/32-nodarbinatiba-un-bezdarbs (25.11.2012.)

the vicinity. Therefore Riga is changing from a residential city to a place of work, business, education, leisure and entertainment.<sup>59</sup>

The demographic forecasts for Riga and Pieriga 2030 (according to the Institute of Economics, Latvian Academy of Sciences) are not overly optimistic. However, in comparison with the overall situation in Latvia, these regions are expected to maintain a relative stability in terms of population. It is expected that by 2030 the population will drop significantly both in Riga City and nationwide. 60

### 4.2 Structured interviews

In order to obtain expert opinions about the attraction of highly qualified human capital and the innovation system in Riga 12 structured interviews were carried out with four representatives of the education and research sector, four businesspeople and four policy-makers. The study uses the expert opinions anonymously, citing only the sector represented.

### Business innovation and business environment in Riga

With the aim of characterising business innovation and the business environment in Riga experts were asked to assess the regional innovation ecosystem, the availability of business premises and broadband services, financial and educational support for new entrepreneurs, availability of banking services and venture capital, as well as the business and innovation environment as a whole (see Fig. 3.1.).

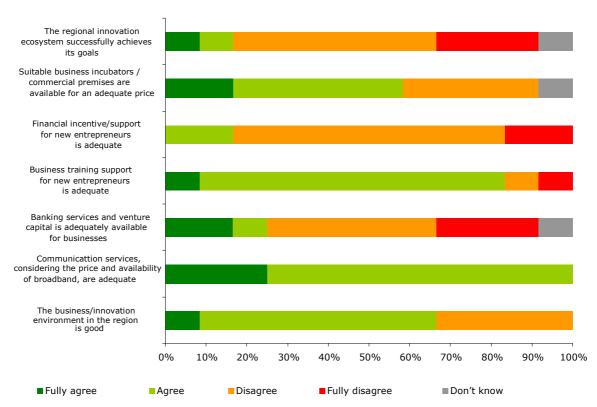


Fig. 3.1 Assessment of business innovation and the business environment in Riga

<sup>&</sup>lt;sup>59</sup> http://www.rdpad.lv/uploads/rpap/programma\_2.dala\_esosa%20situacija.pdf (28.11.2012.)

 $<sup>^{60}</sup>$  Institute of Economics, Latvian Academy of Sciences. Demographic forecasts for Riga and Pieriga. Riga, 2012, p. 9

More than half of the experts (67%) agreed or fully agreed that Riga has a good business/innovation environment. However, only 17% agreed or fully agreed that the innovation ecosystem successfully achieves its goals, 50% disagreed and 25% fully disagreed with this statement, thus indicating a crucial difference between the business environment and that of innovation, and pointing to the prerequisites of the innovation environment and the results achieved. A little over half (58%) of the experts agreed or fully agreed that business premises are available for adequate prices. In turn, 75% agreed and 25% fully agreed that communication services, considering the price and availability of broadband, are adequate, thus acknowledging this as the region's strongest aspect of those assessed. 83% of the experts agreed or fully agreed that business training support for new entrepreneurs is adequate (8% disagreed and another 8% fully disagreed with this statement). However, the experts had the opposite opinion regarding financial support for new entrepreneurs – 83% thought that it is inadequate and only 17% thought it sufficient. The experts' assessment of the availability of banking services and venture capital for businesses was ambiguous. The experts pointed out those banking services are more readily available than venture capital.

# Attractiveness of Riga as a place of employment and residence for highly qualified human capital

In order to determine the attractiveness of Riga as a place of employment and residence for highly qualified human capital, experts were asked to assess transport and accessibility, education and research opportunities, as well as culture and entertainment options. The experts described protection and personal safety, opportunities for families, living costs, quality of life and environment (see fig. 3.2).

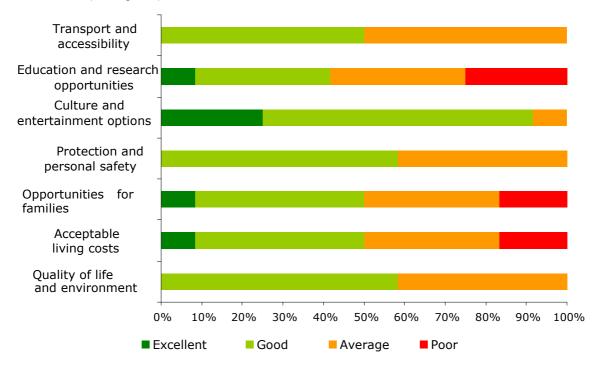


Fig. 3.2 Assessment of the attractiveness of Riga as a place of employment and residence for highly qualified human capital

Of the given factors that affect the attractiveness of Riga as a place if employment and residence for highly qualified human capital only the culture and entertainment options can be considered as a clear strong-point – 25% of the experts assessed this factor as excellent, 67% thought it good and 8% viewed it as average. Other strong-points include transport and accessibility (half of the experts rated it as good and the other half – as average), protection and personal safety, as well



as quality of life and environment which were rated similarly (58% - good, 42% - average). Opinions differ regarding opportunities for families and living costs. However, education and research opportunities may be considered a weak spot – only 42% assessed this factor as good or excellent, while 58% thought it to be average or poor.

In answering the question about Riga's attractiveness, experts highlighted several problems hindering the attraction of highly qualified human capital to Riga and to Latvia as a whole, although compared to the overall situation in the country Riga received a rather positive rating. Insufficient social guarantees, relatively high prices of goods and low quality of health care were stated as the weak points.

"Education and research opportunities are good, but there is no information about it in the mass media/society. Foreigners cannot understand the price of local public transportation, nor which public transport goes where. Social guarantees are poor."

/Business sector/

Riga is highlighted as the country's cultural, educational and scientific centre which has relatively more chances of attracting highly qualified human capital. In the European context Riga is described as a city of culture. Established infrastructure, higher wages and more chances of finding work are the factors stated in favour of Riga in comparison to other regions of the country. However, Pieriga is a significant threat to Riga's standing.

"Many inhabitants move to Pieriga, where kindergartens and other facilities are available. Opportunities for families also depend on what each family wants – there are various segments. Wages are higher in Riga compared to other regions in Latvia, which makes it more attractive. Also it is easier to find work in Riga, if one wants to. "There is too little information about opportunities for families and there is also an imbalance in the level of costs of living and other expenses. For example, education should be made available for a lower price so that the educational level of society could be capitalised upon to achieve a better earning capacity."

/Policy-maker/

### Highly qualified human capital that would move to Riga

The experts identified regions from which highly qualified human capital would most likely move to Riga (see Fig. 3.3).

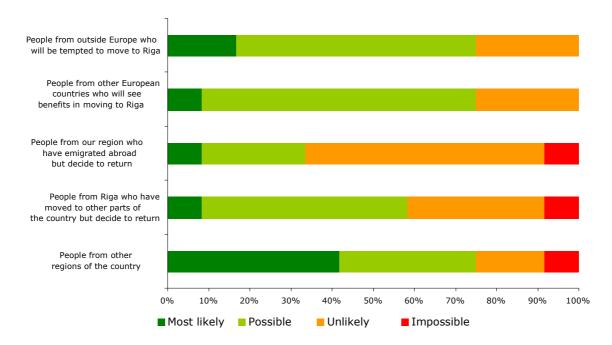


Fig. 3.3 Expert opinions on regions from which highly qualified human capital would most likely move to Riga

The experts were of the opinion that it is most likely that highly qualified human capital will move to Riga from other regions of Latvia (42% thought it is *most likely*, 33% - *possible*), other European countries and from non-European countries. The possibility that people who have moved to other parts of the country will decide to return to Riga was rated as low by the experts – 33% said that it is unlikely and 8% thought that is impossible. However, the possibility that emigrants will return was rated even lower – 58% thought it unlikely and 8% said it is impossible.

The experts pointed out that already now there are people from Belarus and Ukraine working in the regions of Latvia. Migration is potentially possible also from Russia, Lithuania and Estonia. By spotlighting Riga's good image it would also be possible to attract human capital from more developed member states of the European Union.

"Overall Riga is very attractive and it has a better image than Latvia, that is why under the right conditions Riga could be chosen by people not only from neighbouring countries, but also from Germany, the United Kingdom."

/Education and research sector/

During the interviews an idea was expressed that there would be more of a chance to attract highly qualified human capital from non-EU countries because EU citizens would not be motivated to learn Latvian, whereas for immigrants from third countries working in an EU country would offer various opportunities. The experts highlighted Riga as a centre for highly qualified human capital that probably has not even moved to other regions of Latvia. The experts emphasised the need to retain the existing human capital and achieve economic growth which would facilitate the return of human capital to the country.

"In general the highly qualified workforce originates in Riga and stays in Riga. It is unlikely that people have moved away from Riga to other regions of the country. Moving also depends upon tax policy."

/Policy-maker/

New employment opportunities for highly qualified and talented individuals



The experts assessed new employment opportunities for highly qualified and talented individuals in government and state administration, education/scientific institutions, as well as in local and multinational enterprises (see Fig. 3.4).

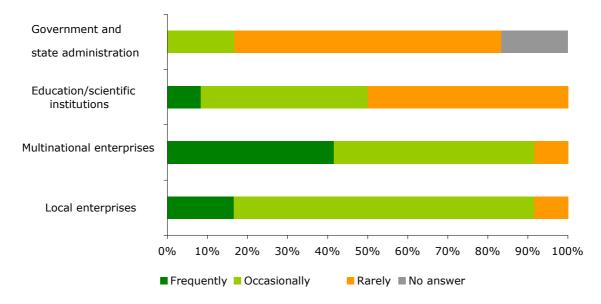


Fig. 3.4 Expert opinion on new employment opportunities for highly qualified and talented individuals

92% of the experts were of the opinion that new employment opportunities for highly qualified and talented individuals are more often available at multinational enterprises (frequently - 42%, occasionally - 50%) and at local enterprises frequently - 17%, occasionally - 75%), rather than in education/scientific institutions (frequently and occasionally - 50%, rarely - 50%) and in government and state administration (occasionally - 17%, rarely - 67%). Overall the expert assessment shows that new employment opportunities for highly qualified and talented individuals are offered relatively rarely.

### Mobility of personnel between research and manufacturing in Riga

The experts assessed mobility from the manufacturing to the research sector and vice versa (see Fig. 3.5).

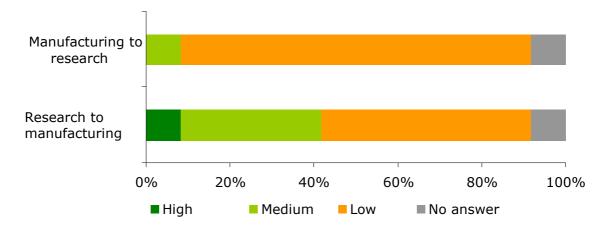


Fig. 3.5 Assessment of mobility between research and manufacturing sectors in Riga

As regards personnel mobility the experts were of the opinion that it mostly takes place in the direction from research to manufacturing and not the other way round. Mobility from the manufacturing sector to research was rated as low by 83% of the experts, as medium by 8% and not a single expert thought it to be high. In turn, mobility from research to the manufacturing sector was rated as low by 50% of the experts, as medium by 33% and 8% thought it to be high. Overall the experts assessed that mobility between the research and manufacturing sectors is rather low. Only some individual examples were mentioned as successful (for example, manufacturer of eco cosmetics *Madara Cosmetics*).

The experts recognised that financing is a serious obstacle to the development of research in business – at the moment foreign investors are investing in specific areas and accordingly gaining a share of the market. Wages are higher in manufacturing than in research, therefore insufficient remuneration in research is cited as a factor hindering development.

"Unfortunately we are losing out in research because mobility is going only one way. The more solvent players dominate the market in areas were research should be supported. The research sector is functioning on the basis of self-initiative. The profits are gleaned by the investors who uncover the market."

/Policy-maker/

The experts pointed out that it is necessary to promote the linking of research and higher education, encouraging the inclusion of real-life activities that unite research and manufacturing in the education process. Closer cooperation should be formed between higher education institutions and businesses because currently there are few manufacturers that are ready to also do research. A joint national system must be developed to facilitate cooperation between the scientific base of higher education institutions and businesses.

"Research institutions mostly work on the basis of grants. At the same time, businesses lack research capabilities. In order to be accepted to a research institute one needs a doctoral degree, an appropriate track-record and a range of contacts – the system is not open."

/Education and research sector/

### Strengths and weaknesses of attracting highly qualified human capital to Riga

Regarding the attraction of highly qualified human capital to Riga as a place of employment and residence, the experts assessed the possibilities to obtain visas or work permits, language skills (how an immigrant will be able to learn the local languages), support and physical considerations, quality of employment, salary and working conditions, as well as future career prospects as the strengths and weaknesses of the region (see Fig. 3.6).



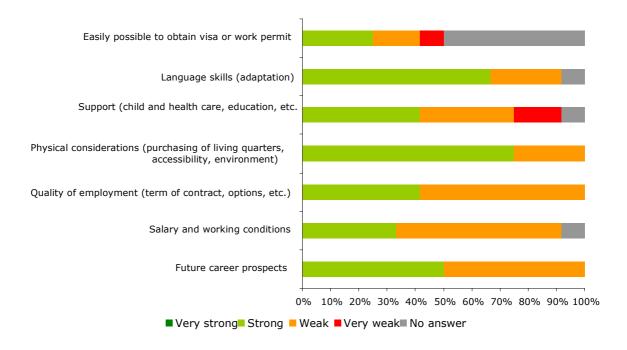


Fig. 3.6 Assessment of Riga's strengths and weaknesses in attracting highly qualified human capital

The expert assessment shows that there are no factors that can be considered clear strengths or weaknesses of the region. Relative strengths are physical considerations (strong - 75%) and language skills (strong - 67%), whereas relative weaknesses are salary and working conditions (weak - 58%), support and quality of employment (weak and very weak - 50%), and the possibility to easily obtain a visa or work permit (50% of those who rated this factor rated it as weak or very weak). The rating of future career prospects was the most ambiguous -50% thought it to be a strength and 50% - a weakness.

### Riga's innovation policy: sufficiency, achievements and suggestions

The respondents pointed out that various theoretical documents and development plans have been elaborated, for example, NDP 2020; however, they do not envision specific action plans with allocated funds and set deadlines. Economic benefits for businesses, such as reducing taxes and the bureaucratic burden, are crucial. This must be a long-term policy. Information on innovation policy has to be clear and accessible to both local and foreign investors and businesses.

"There is no information about the region's innovation policy (specific documents). Innovations ought to be implemented as economic decisions, not political standpoints. There should be tax allowances for businesses that invest in research and development. Profitable businesses should be given the chance to develop; Ventspils can be taken as a good example. Possibilities for education/research institutions to attract highly qualified employees are directly related to external financing, for example, EU funds. Where there is external financing, there are such possibilities."

/ Education and research sector /

It is necessary to increase focus on the creative industries that generate goods and services with higher added value and strengthen their competitiveness abroad.

"Young talent alone does not ensure growth; the region has to understand how it can benefit from the attraction of talented individuals. There is a lack of sector-specific focus; it is necessary to focus on attracting talent to specific areas, for example, transport/logistics, tourism and manufacturing. Potentially the most competitive sectors are the ones focused on export –

chemicals, pharmaceuticals, electronics, ICT, engineering/metalworking, higher education, professional scientific services. It must be noted that providers of professional scientific services are the only ones that do not have a representative association for the sector."

/Policy-maker/

The experts emphasised closer cooperation among higher education institutions, science centres and businesses as a means to promote the development of research and innovation.

"The link between studies and innovation/business is insufficient. Businesses should define what the most important issues are for them and push forward in the market because it is difficult for higher education institutions to do so. Mutual cooperation could be increased if businesses voiced their problems, desires, vision of the market and necessities."

/ Education and research sector /

It was suggested that social guarantees ought to be ensured for highly qualified human capital as this would work as an incentive and increase the potential of innovative business in all regions of the country. It is necessary to have quality health care and higher education, accessible kindergartens.

Several experts pointed out that innovation policy is seldom discussed publicly – information is insufficient and fragmented. They suggested that a national innovation policy should be elaborated instead of one just for the Riga region; however, Riga was seen as having the greatest potential. The focus should be put on businesses not only at national, but also local level by offering them favourable conditions, for example, to lease property.

"It is necessary to elaborate Riga's innovation policy by taking examples from neighbouring cities, such as Tallinn and Copenhagen, and from neighbouring countries in general. Afterwards it is necessary to implement this policy in practice. The technological business is complicated; at least a year is needed to set it up. New entrepreneurs, regardless of their age, must be given the faith/conviction that it is possible to start a business. Due to the lack of conviction, faith and support instruments many people are afraid and sell their ideas to foreigners or go abroad themselves. [..] Money from EU funds in Riga is not being earmarked and only a little in the rest of Latvia. [..] Riga plays a very small role within the National Development Plan that is currently being elaborated, and that is a mistake because Riga will be the main player in future economic development. Riga's innovation policy must comply with the Europe 2020 Innovation Union which envisions a clear policy up to 2020."

/Business sector/



### **5 SWOT analysis**

A SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis for attracting highly qualified human capital has been conducted based on the innovation system, statistical data and the results of the interviews (see Table 4.1.). The SWOT analysis includes both national and international factors.

Table 4.1.

SWOT analysis for attracting highly qualified human capital

Strengths	Weaknesses			
Geopolitical position of Riga both in the national and international context	Low level of international competitiveness in the area of innovation			
Culture and entertainment opportunities in Riga in the international context	Insufficient funding allocated for improving of competitiveness in such areas as higher			
Nationwide support programmes implemented in Riga	education, science, research, business and innovation			
Infrastructure of Riga Planning Region in the context of Latvia	<ul> <li>Insufficiently developed environment to attract foreign human capital and investors in the international context</li> </ul>			
Human capital in Riga in the context of Latvia	Bureaucracy and administrative burden			
Education services in Riga in the context of Latvia	Weak links between higher education, research and entrepreneurship			
Contribution of the EU funds in Riga     Planning Region	<ul> <li>Poor employment opportunities for highly qualified and talented human capital</li> </ul>			
Latvia – one of the greenest countries				
Opportunities	Threats			
<ul> <li>Absorption of the EU funding in the next programming periods</li> <li>Attracting of highly qualified human capital</li> </ul>	<ul><li>Demographic situation in Latvia and Riga</li><li>Competing regions</li></ul>			

### **Strengths**

Geopolitical position of Riga – located in the centre of Latvia and Riga Planning region on the coast of the Baltic Sea.

Rich culture and entertainment opportunities in Riga in the international context, including the internationally favourable image of Riga and Latvia renown for being one of the greenest countries in the world.

Nationwide support programmes implemented in Riga (managed by the Investment and Development Agency of Latvia, Riga City Council etc.) in the context of Latvia is a definite strength.

Well developed infrastructure and connections in Riga. Also the physical considerations (availability of residential property and environment) related to living in Riga are assessed as relatively good. Also the availability and quality (including connection speed) of broadband services is relatively good (even at the international level).

Human capital in Riga in the context of Latvia – the highest concentration of human resources in the country, the highest proportion of people of working age, and the lowest unemployment rate with a trend to further decrease. Riga also has the highest GDP per capita among Latvia's regions.

Education services in Riga in the context of Latvia - Riga has the highest concentration of higher



education establishments.

Riga Planning Region attracts the largest amount of the EU funds in comparison with other Latvia's regions (2007 – 2011).

Latvia is one of the greenest countries in the world, offering opportunities for ecological entrepreneurship, which is a considerable advantage in terms of the capacity to create new products.

### Weaknesses

Latvia lags behind in terms of international competitiveness in the area of innovation, The number of innovative enterprises and workforce employed in them is decreasing. Also the numbers of people employed in advanced technology enterprises is dropping. Riga's innovation policy is vague; it lacks specific action plans with financial allocations and deadlines. Entrepreneurship in Latvia insufficiently relies on research and development.

Insufficient funding allocated for improving of competitiveness in such areas as higher education, science and research. Insufficient financial support for business and innovation, including accessibility to venture capital.

Insufficiently developed environment to attract foreign human capital and investors – poor social guarantees, high product prices, low quality of health-care services, shortage of education and research opportunities that would attract human capital in the international context. Lack of public information and signs in English language – it is difficult for foreigners to get around Riga, especially by means of public transportation.

Relatively high level of bureaucracy and administrative burden that hinders the development of innovative activities in Latvia and Riga.

Weak links between higher education, research and entrepreneurship in Latvia and Riga – producers are reluctant to engage in research. The mobility between research and manufacturing sectors is very low, especially from manufacturing to research.

Poor employment opportunities for highly qualified and talented human capital, especially in government and public administration sectors.

### **Opportunities**

Municipalities, education and scientific institutions, enterprises and other organisations have the opportunity to absorb the EU funds in the next programming periods.

In Latvia's context Riga has the largest potential of attracting highly qualified human capital as a part of the urbanisation process. In the international context Riga plays the role of bridging third countries with Europe. There are also opportunities to attract more foreign students. New employment opportunities for highly qualified human capital are mostly offered by multinational enterprises with representative offices in Riga.

### **Threats**

Demographic situation in Latvia and Riga – drop in population, ageing, decrease in the number of students and draining of human capital, including highly qualified workforce. Riga is especially exposed to the threat of an increasingly heavy demographic burden due to the fact that the number of people below the working age is worryingly low.

Competing regions – for instance, Pieriga (residents of Pieriga working in Riga), Ventspils and other cities in the vicinity, as well as the competition in the neighbouring countries.



### 6 Conclusions and proposals

Riga has an advantageous geopolitical position in the very centre of Latvia and on the coast of the Baltic Sea. According to the NUTS 3 division into regions, Riga has the highest concentration of population. However, considerable threats are posed by Pieriga – a popular residential area for those who work in Riga. The trend of residing outside Riga reduces the municipal income from personal income tax.

Although the draft NDP 2020 refers to Riga as a potential North-European business, science, culture and tourism hub and it also defines innovation and science as one of the priorities that have to be developed as soon as possible, the draft document does not provide for specific actions of financial allocations aimed at strengthening links between science and entrepreneurship with a view to promote innovative production.

Risky projects, start-ups and innovative products have a great growth potential; however, the availability of financing has been limited since the beginning of economic recession. Small and medium-sized enterprises are leaders in terms of creation of new jobs, and in order to facilitate their development and innovation capacity it is necessary to reduce the administrative and bureaucratic burden, while broadening accessibility to venture capital. Riga City Council is practically involved in promoting entrepreneurship and innovation in Riga and Riga region; however, it is necessary to improve the dissemination of comprehensive information on various activities. Riga's innovation policy should become an integral part of the national policy, while ensuring easy accessibility and availability not only for locals but also foreigners.

Riga is the capital of a country that ranks relatively low in terms of various indicators pertaining to creating, implementing and developing of innovations. Latvia's economy is dominated by industries that generate low added value, where most of the work is performed by labour force with low qualifications. Also the application and export of advanced technologies is underdeveloped. Current situation may be attributed to the following problems: shortage of doctorate students and experts involved in science and research, underdeveloped science and research infrastructure, small number of registered patents (with no patents in the area of advanced technologies), as well as limited opportunities and skills in the area of commercialisation of research results. Therefore a strategic approach is required to resolve these challenges.

Riga clearly has its strong sides, such as broadband services, international image and successful absorption of the EU funds aimed at developing the regions. On one hand Riga can be regarded as an environment that is favourable for entrepreneurship and innovation; however, the innovation ecosystem still has not attained its objectives, which reveals the wide gap between the entrepreneurship environment and innovation environment, as well as the relations between the preconditions for innovation and the actual results. In order to attain the objectives of the innovation ecosystem, it is necessary to elaborate clear policy and define specific actions with appropriate sources of financing and other necessary resources. The policy has to provide for a diverse scope of activities, for there is a wide range or preconditions to be met if Riga wants to attract highly qualified human resources from other regions of Latvia, Europe and worldwide, including those who have emigrated from Latvia. It is equally important to provide for activities aimed at retaining the existing human capital in the region. It is most likely that highly qualified human capital can be attracted to Riga from other regions of Latvia, European and non-European countries, therefore activities should be planned with these target regions in mind.

Banking services and accessibility to venture capital should be studied separately, since the differences are overwhelming, i.e. banking services are much more accessible than venture capital. Culture, entertainment, transport system and accessibility are the main factors that should be highlighted in order to attract highly qualified human capital for living and working in Riga. Substantial improvements are needed in such areas as opportunities for families, living costs, opportunities of education and research, social guarantees, product prices and quality of health-care. New work employment opportunities for highly qualified and talented human capital are mostly offered by multinational companies rather than local enterprises. Highly qualified and



talented individuals are rarely offered employment opportunities in educational/scientific institutions, government and public administration. Support measures are required to improve the situation.

Personnel mobility between research and manufacturing sectors with the exception of a handful of cases is low. It is required to strengthen the links between research and higher education, by means of supplementing study programmes with practical exercises aimed at creating synergies between research and manufacturing. Likewise, closer cooperation should be established between the higher education establishments and businesses, by means of creating a framework for bringing together the scientific capacities of higher education establishments and the business sector.

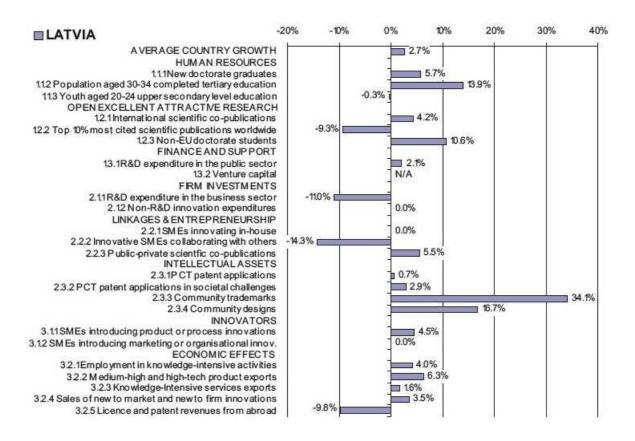
Riga suffers from shortage of business pre-incubators aimed at developing new products. It is necessary to promote emerging of clusters with the capacity to create new products, thus contributing to the competitiveness of the small and medium-sized enterprises.

It is necessary to increase focus on the creative industries that generate goods and services with higher added value and strengthen their competitiveness abroad. To release the potential of the creative industries in Riga, it is necessary to promote creative and innovative thinking among the population. Enterprises and organisations should be urged to engage in a closer cooperation with the higher education establishments and students, e.g. through commissioning of diploma papers dedicated to topics that are of interest for them. Also cooperation between enterprises and scientific institutions should be strengthened in the area of research and development and through participation in international research projects. Tangible benefits, such as tax incentives, should be introduced to support enterprises that invest in research and innovation.



Appendix I

Latvia's strengths and weaknesses in the area of innovation and the dynamics of relevant indicators<sup>61</sup>



<sup>61</sup> European Commission. Innovation Union Scoreboard, 2011, p. 37



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# **WORKING4TALENT PROJECT**

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