

raw materials and products of chemical industry as well as life sciences are in the scope of foreign investors in Estonia as well³⁰⁵. The similar distribution of FDI is observable in Latvia; however, foreign projects are quite modest in the fields of chemicals, electronics or life sciences³⁰⁶.

Notably, the tendency of growing of FDI into the R&D sector of the Baltic countries is clearly visible; however, the numbers of such investment in view of general FDI made are still modest³⁰⁷. Moreover, it should be mentioned that general FDI in the local regions of the Baltic countries is much less than in the capitals³⁰⁸ which allows forming a view that the regional politics in relation with promoting innovations and research should be better implemented.

IV. Factors promoting the local research and innovation

1. Promoting activities in the Baltic universities

As rightly pointed out in the *Vilnius University Report on Applied Sciences and IP*, the most important factors inducing activities on innovative research on the level of educational institutions would be:

- (1) strategic management in the field of technological science³⁰⁹;
- (2) reorganization of scientific forces;
- (3) guaranties of priorities of applied research;
- (4) country-wide coordination of innovative activities.

Such factors can be likewise applicable to the educational research institutions of other two Baltic countries. It is also important to have a frequent co-operation among the Baltic universities and research institutes and private enterprises³¹⁰. The

305 See *Statistics Department of Estonia (2008)*.

306 Since 2002 the part of investments in the chemicals sectors in LV amount to 5 % and in life sciences sector – to 1 % only, see *FDI Information (WB Group) (2008)*.

307 For instance, FDI in the field of R&D, computers and related activities grew 175 % from 2003 until 2006 in LT, see *Statistics Department of Lithuania (2008)*.

308 E.g., the investments in Vilnius County are almost five times and bigger than in other regions of LT, see *Ibid.* Comparably, the highest number of registered IP rights in 2007 in Lithuania (patents, trademarks, etc.) also refers to Vilnius County, as provided in *Lithuanian Patent Office Information (2008)*.

309 One of the main reasons of the weak management is the fact that universities are not holders, but trustees of their IP rights in Lithuania. Main part of university inventions are sold to foreign partners or published without patenting, as referred by *Mizaras, Current Key Aspects of Intellectual Property in Lithuania (ATRIP Congress (2008))*, p. 2.

310 One of the highest innovation cooperation levels within the EU in 2002-2004 was found in LT (56 % of all innovative enterprises), however, one of the lowest – in LV (18 % only). Private-public co-operation on innovation was most frequent in, *inter alia*, LV and LT as well, see *Eurostat Information (2008)*.

activities of the Lithuanian company “Fermentas” can serve as the example of such cooperation in the field of biotechnology³¹¹.

As far as IP rights are concerned, certain legislative improvements in the field of innovative research on the level of educational institutions have been suggested as well. It is worth while mentioning the incentives pursued by the Vilnius University to adopt more precise rules by changing the substantive provisions in the national IP laws regarding, for instance, the transfer of economic rights of employees of the university to the university with the consideration of work functions of the employees³¹².

Other way of promoting local research, science and innovations is a creation of science and technology parks and incubators which development is important for both private companies, universities and public institutions. “Sunrise Valley” project in Lithuania, which started in 2002, can be seen as an example of a rapidly developing public company which stimulates the local forces working in technological, physical and biomedical sciences³¹³. The project also promotes the networking between the universities and business, by encouraging technology transfer and the commercialisation of publicly funded research, by creating new employment and wealth creation opportunities and by attracting new FDI in high value added activity areas.

Similar examples can be also found in Estonia in which, amongst a few others, the Tartu Biotechnology Park provides services to biotechnology, medicine, etc. and R&D institutions, develops new service packages to start-up companies, coordinates various national and international projects³¹⁴. Business incubators, specialized consultations and information for technology orientated business and provision of advisory services are also key functions of the Latvian Technology Centre³¹⁵. Along with the objectives to promote innovative research, science and technologies, the establishment and activities of such technology parks play an important role in promoting the protection of IP rights as the special activities regarding IP rights development are foreseen.

311 More about the company and its produced products see in *Fermentas: Life Sciences (2008)*.

312 See *Vilnius University Report on Applied Sciences and IP (2006)*, pp. 10, 11. This is also due to the fact that Art. 8 of the Lithuanian Patent Law embodies the protection of so-called *service inventions*, i.e. inventions made by an employee during the execution of a commission or an employment contract.

313 The first Science and Technology Park was established in 1993 in Vilnius, other 5 parks were established in July–October 2002 throughout Lithuania; more information see in *Sunrise Valley: Key Facts and Figures (2008)*.

314 Since September 2005 TBP runs the BioMed incubator for biotechnology, medical and veterinary businesses; more information on the projects run by the park, also other Estonian biotechnology projects such as Estonian Genome Project see in *Tartu Biotechnology Park Information (2008)*.

315 See more information in *Latvian Research Landscape (2008)*.

2. IP strategy in the local business sector

In view of the general growth of R&D sector³¹⁶, the need and utility of IP strategy³¹⁷ within the IT companies is obvious. It partially depends on the fact that it is not always possible to enforce certain IP enforcement provisions, in particular, when “on-line infringements”³¹⁸ are concerned, and to prevent consumers from infringing IP rights.

Some of the local IT industries, considering their liability as internet service providers, as foreseen in the national copyright legislation³¹⁹, forced the processes in relation with the protection of intellectual property rights in order to tackle infringements of IP rights in the internet, for instance, by signing the agreements on administration of the infringing content on the ftp servers³²⁰ which are considered to be one of the most popular contemporary sources of the pirated products³²¹. Such model of IP strategy inside the companies requires, though, more effective practical application³²².

3. Level of the national governments’ regulation and their support in the field of research and development

The percentage of the Government support for R&D sector and its funding could indicate actual state-level attitude to innovations and the continuity of the politics on their constant promotion. In a view of general European tendencies, the national Governments of the Baltic countries tend to fund innovative activities³²³.

In comparison with the business enterprises or external funds in R&D sector, the Lithuanian Government seems not being very lavish towards this sector. However,

316 *E.g.*, from 2003 to 2006 the investments in R&D sector grew 175 % in LT, as referred in *Statistics, FDI in LT (2006)*, p. 21.

317 “IP strategy” is meant as inner company rules and requirements in regard with protection of company’s IP assets as well as compliance with IP laws herein.

318 P2P services (*e.g.* local ftp servers) are particularly meant on this point.

319 *E.g.*, by virtue of Art. 11 of the Enforcement Directive, it should be mentioned that Art. 77(3) of the Lithuanian Copyright Law provides a civil liability of ISPs. See examination regarding the implementing provisions on injunctions against intermediaries in *infra* § 5E.I.3.

320 *E.g.*, the Memorandum of Understanding signed in 2003 among the leading national IT companies and right holder associations in Lithuania embodied important measures and procedures that were to be applied by the companies in order to control infringing content, mainly protected by copyright laws, in ftp servers (BSA information).

321 As referred in *2008 Special 301 Report*, also *2008 Special 301 Report IIPA Special Mention: Lithuania*.

322 eBay practices on the issue can be followed as an example, see more in *Osthaus, Fighting Piracy and Counterfeiting in the Light of European Principles of eCommerce*, pp. 645-646.

323 As indicated, the percentage of GERD financed by the Government in 2000 – 2005 grew in LT (from 61,7 % to 62,7 %). In LV this percentage in 1995 – 2005 decreased from 53 % to 46 %, and in EST in 1998 – 2004 it reduced from 63,3 % to 44,1 %. In comparison with the estimated GERD financed by the national Governments in the EU (27), (the rate decreased from 39 % to 34,8 % in 1995 – 2005), the mentioned percentages from the East-Baltic are relatively high, see more in *Eurostat Information (2008)*.

those funds are basically committed to the sectors of the institutions of higher education, universities and the Government itself³²⁴. As follows from the statistical data, from the total expenditure on R&D³²⁵ the main percentage is spent for applied research and basic research, whereas experimental development receives less foundation³²⁶. In Latvia the Government funds spent for financing R&D make the biggest part among other sources of finance³²⁷. Additionally, the Governments also support projects which are related to increasing better conditions to innovative activities³²⁸.

While talking about the national governments' support in the field of R&D in the Baltic countries, it should be noted that by virtue of the procedure set out in the national legislations, interested parties have a right to participate in the preparation of the national IP laws³²⁹. Such participation is deemed to be important in terms of a possibility to make a better link between the legislators and "IP players" in practice, in terms that the local as well as foreign companies can express their views, actual needs important for legislative improvements and also provide constructive proposals to amend the laws. "Sunrise Valley" project in Lithuania is again a good example of certain cooperation between the national "IP players", the leading IT companies, and the national Government.

V. Concluding remarks

In the recent years the social transformation of "IP mentality" from Soviet "IP-thinking" to "think-western" in the Baltic countries is observed. The national legislators and government institutions strongly advocate for the adequate and effective protection of IP rights by applying the European as well as worldwide standards of such protection. The changing attitude of local businesses, consumers and general public towards the use of legal IP products also plays an enormous role in the process of bringing the application of the provisions of such protection into practice.

Alongside with changing social factors, the ideas and concrete local projects related to innovative and creative activities such as technology parks and centres, for instance, deemed to promote local research, innovation, technology transfer and industry are being implemented. This is also supported by the data regarding the

324 In 2007 the biggest share of expenditure on R&D was comprised of the government sector funds (47,9 %), whereas business enterprise sector funds made up 24,5 %, and foreign funds 19,6 %, as indicated in *Statistics Department of Lithuania (2008)*.

325 In 2007 distribution of expenditure on R&D mostly belonged to high education sector (50,6 %), business enterprise sector (28,5 %) and government sector (20,9 %). The percentages remained similar since 2004, as observed in information provided by *Statistics Department of Lithuania (2008)*.

326 Statistically, the percentages of basic, applied research and experimental development in 2002 – 2005 did not change, see also more in *Research Activities in LT (2006)*, p. 22.

327 See *Latvian Research Landscape (2008)*.

328 E.g., the project supported by the Ministry of Economy of Lithuania to identify main drawbacks of innovation system in Lithuania, as indicated in *Mizaras, Current Key Aspects of Intellectual Property in Lithuania (ATRIP Congress (2008))*, p. 2.

329 See overview about adoption of national IP legislation in *supra* § 3C.I.