

**THE CONCEPT OF SUSTAINABLE DEVELOPMENT OF  
ENTERPRISES IN INNOVATIVE WEAK REGIONS IN THE  
CONTEXT OF EUROPE 2020  
(FOR EXAMPLE, THE LITHUANIAN COMPANY GINTARO  
BALDAI)**

**Nikolajus Markevičius**

---

**Abstract**

Europe, as one of key regions in the field of development of technologies throughout long time, recently has started to lose the positions in world technological division of labor. The designers of the European Union are concern about this development, therefore the main targets Europe 2020 is the strengthening competitiveness of the European Economic Union in the world, especially of R&D, and it embodiment in the accepted strategy. For this purpose, the aim is to raise the level of investment in innovation, research and development to 3,0% of GDP in the EU and in Lithuania up to 1,9%. Article on an example of a company „Gintaro baldai“, with 100% Lithuanian capital, manufacturing upholstered furniture, is to examine the dependence of competitiveness ranking of its products on Lithuanian and foreign markets from the level of expenditure on research, modification and applications of both traditional and new products.

Considered the link between the production unity and universities as the main factor of competitiveness on a national and regional level.

**Keywords:** EU 2020, GERD (gross domestic expenditure on R&D), R&D (research and development), competitiveness, Lithuania, Gintaro baldai.

**JEL Code:** M0, O0.

---

**Introduction**

Europe, as one of key regions in the field of development of technologies throughout long time, recently has started to lose the positions in world technological division of labor. The designers of the European Union are concern about this development, therefore one of the main target Europe 2020 is the strengthening of R&D and it embodiment in the accepted strategy.

Here however it is necessary to notice that some companies spend considerable means to the production market promotion besides R&D. To such expenditures belong creation, reputation

maintenance and advertising as well. Training, presentation promotion to dealers new business models and providing to them the complete set of services in sphere of the intellectual property, basically using the trademark&patent protection and information support as well. Investments of the companies into such productive expenses or, in so-called, non-material assessments especially quickly grow in economies with high level of added value and are comparable or even already exceed investments into material or physical assets, such as, investments goods - buildings, equipment and etc. The investment into non-material assets define ultimately a considerable part of growth of labour productivity in such countries as Austria, Finland, Sweden, the United Kingdom, i.e. in those countries where the research and development expenditure share by 2020 will make 4 % from GDP. So for example, investments into intangible non-material assets make for Sweden 9,1 % of GDP (World Intellectual Property Organization, 2011). This percent is considerably higher of the investment in scientific R&D which make now only 2,5 % of GDP. The rise of Europe's competitiveness ranking in the world as united geographical concept and heterogeneity of degree of the same competitiveness ranking inside Europe – is the basic challenge to the EU 2020 objectives. Dividing line of so-called "two speeds" Europe is not only in the economic field and in GDP per capita, but in innovative field as well.

The aim of the paper is to explore the trends of expenditure on R&D in EU and Lithuania now and in 2020, to identify the main causes affecting the competitiveness of high-tech products, to submit conclusions and proposals to improve the business activities of the company Gintaro baldai.

The subject of research is expenditure on R&D in EU, Lithuania and company Gintaro baldai.

Research method – the comparative analysis of intangible investments on sales volumes.

## **1 Research and Development Review Expenditures for Europe**

Extensive growth of the European market passed ahead for many years the intensive technological growth. In far 1983 the expenditures on R&D in Germany (Blick durch die Wirtschaft, 1984) made 2,8 % from GDP, having lost since then taken rate when the expenditures on R&D has made in 2005 only 1,83 %, in 2010 – 2,0 % and the long run target in far 2020 will be 3,0 % (Eurostat, 2011) from GDP. These are enough ambitious objectives meaning economic and technological heterogeneity of Europe. So, for Austria, Sweden and Finland GERD share should make by 2020 4,0 % (Eurostat, 2011). In the most technologically „backward countries“, to which belong all joined in 2004 to the EU new

countries, except for Estonia, R&D expenditure share will make from 1,5 to 2,0 %. For almost all other countries R&D expenditure share should make about 3,0 % of GDP. Absolute backward countries are Cyprus (0,5 %), Malta (0,67 %) and Slovakia with only 1,0 % from the GDP. Old EU members backward countries are Italy (1,53 %), Ireland (2,0 % of GDP and 2,5 % of GNP), and also the Netherlands and Luxembourg (each 2,5 %) (Eurostat, 2011). Globalization and rigid technological competition and emerging in the world new technological centers put out in front of the traditional development centers, raising expenditures on R&D, new targets and objectives run up to 2020.

First, this increase of rates of creation of new companies in technologically progressive and perspective branches, and also a pace of liquidation of old companies in a number of common „low-technological” branches or their carrying over to other regions. Most accurately this process throughout last 20 years has been swept up in the USA, Japan, Germany and France.

Secondly, strengthening of an innovative role of small and moderate-sized companies which are basic „founders“ of new workplaces owing to narrow technological specialization and necessity of adjustment of a wide network of cooperation communications. An interesting item is noticed in this connection namely that one workplace created in the field of high technology, involves appearance from 6 to 8, and in some areas till 12-15 (OECD, 2011), and in a number of high-tech regions up to 50-60 (Eurostat regional yearbook, 2010) new workplaces as in „low technology“ branches as in specialization in business services.

For example, if the German specialization in business services (NACE division K72 and K 74) EU-27 and Norway by NUTS 2 regions (% share of non-financial business economy employment) is on average about 21% in either percentage of fluctuation of 12,5% for district Niederbayern to 52% for district Darmstadt, then to Poland these variations ranged from 8% for the region Lubelskie to 25% for the Mazowieckie region the average values for the country at 11%. For Lithuania, the figure is around 8%, which is the worst average along with Cyprus among all EU countries. In certain territories have worse performance in Romania only the region Nord-Est, in the Slovak Republic the region Zapadne-Slovensko and Greece the region Notio Aigaio (Eurostat regional yearbook, 2010).

Table 1: Link of GERD (%) & Share of persons employed in business services (%)

Year	Poland	Germany	Lithuania	EU
2005	0,83	1,83	0,75	1,83
2010	0,74 & 11	2,0 & 21	0,79 & 8	2,0
2020	1,7	3,0	1,9	3,0

Source: Composed by athor. Eurostat regional yearbook

## 2 R&D expenditures in Lithuania

Despite continuous declaring of the Lithuanian authorities of importance of creation of conditions for development of high innovations and medium-high innovations, objective indexes while fix in creation of GDP of Lithuania involvements only 6% of productions from total quantity with high innovations and medium-high innovations that is twice less than average value on EU (Knowledge Economy Forum, 2012). Lithuania on advance of innovations is in the 4th basket from 5 with the medium-low innovation parameters (Europa Press-release, 2012).

The most important condition of innovative development is appropriate preparation and involvement of experts, i.e. interaction between universities and the enterprises, and receiving by the enterprises of the qualified management and professional workers from the sphere of the higher and special education.

Hence the creation of products, including innovation, not only in terms of technology, but also the design, with a large surplus come as a rule from traditional regions - North America, Western and Northern Europe, Japan, South Korea, with a strong technical background of experts and appropriate production standards.

Therefore to feed great expectations that such country as Lithuania will pass in large quantities from medium-low innovation stage to a stage of medium innovation it would be too optimistical.

It confirm, both statistical data on GERD, and the developed traditional structure of the Lithuanian production after 1990. The main part in formation of the Lithuanian production gross domestic product, except for oil refinery in Mazheykyay and 5-6 other large enterprises, is made by the enterprises for production of furniture and a woodworking, food and clothing industry. These enterprises as a rule have not a high surplus value of the final product.

From here the concept of attraction of means in GERD can be essentially another. In difference from the developed countries when investments into GERD create a big surplus value and creation of additional workplaces including spheres connected to specialization in business services, accumulation of means at the expense of increase in sales in the presence of an appropriate financial surrounding can be redirected to GERD for creation of new products with a larger surplus value.

### 3. Influence of investments on Gintaro baldai company sales volume

We chose „Gintaro baldai”, to have a look how investment in equipment and advertising (i.e. in intangible assets) affect sales growth. These investments aren't investments into GERD, however they can be tied to investments typical for the countries, being on classification of indicators of the second development stage (Bogdanova, 2011). The choice of the company was caused by the following factors. First, it is the company from 100% the Lithuanian capital. Secondly, it works in traditional area of the Lithuanian business – productions of upholstered furniture. Thirdly, more than 70% of sales are carried out in the Lithuanian market. Fourthly, sales of production of the company show steady growth within the rigid competition in the traditional Lithuanian and export markets.

However, such an extensive growth in a certain prospect will reach the limit of its efficiency and then on the agenda will be the growth of innovation, which in this specific case may be to create a new collection of furniture by using new materials for specific markets. In this way the return on invested funds in GERD will be more effective

Table 2: The dynamics of investment in equipment and intangible assets (advertising). Revenue dynamics. Dynamics of investment in equipment and intangible assets (advertising) to the dynamics of revenues.

Year	Equipment (E) in %	Advertising (Adv) in %	Sales Revenues (SR) in %	E&Adv in %	Ratio of E to SR in %	Ratio of Adv to SR in %	Ratio of E&Adv to SR in %
2006	100	100	100	100	0,41	1,04	1,45
2007	127	173	142	160	0,37	1,3	1,63
2008	606	389	177	450	1,40	2,28	3,69
2009	3	117	135	84	0,01	0,90	0,89
2010	25	119	138	93	0,08	0,90	1,00
2011	116	237	193	202	0,25	1,28	1,52

Source: Composed by author. Financial Department of Gintaro baldai

through the production of the final product with a larger surplus value. Growth of export sales in Estonia and Latvia and the stagnation or even recession in other countries once again confirms the fact that the company needed to increase added value of the final product through an innovative approach, and reduce the relatively high transport costs in the final price of products that reduce the profitability of deliveries to longer distances. Such approach

will allow to increase sales in more solvent markets and to increase profitability of the enterprise.

Table 3: Domestic sales, export + reexport geography of company „Gintaro baldai“ (%)

Year	2006	2007	2008	2009	2010	2011
LT	92,4	91,9	86,1	77,0	68,5	72,2
PL	0	0,1	5,5	7,6	4,1	1,1
LV	7,4	7,8	6,6	8,6	16,0	14,6
EE	0,2	0,2	0,2	3,7	5,7	9,0
CZ	0	0	0,7	1,0	1,0	0,4
RUS	0	0	0,9	2,1	1,8	1,0
KZ	0	0	0	0	0,6	0,1
SF	0	0	0	0	2,2	1,5
GEO	0	0	0	0	0,1	0
%	100	142	173	132	135	192
R of Ex to Reexport *	76	63	65	76	73	65

Source: Composed by author. Financial Department of Gintaro baldai

\* Ratio of export to reexport

## Conclusions

1. The analyzes of traditional industries in Lithuania shows that low –innovative companies with 100% of the Lithuanian capital, such as the „Gintaro baldai”, are able to increase their sales both at local and foreign markets.
2. The major goals for such traditional enterprises should search are to increase profitability through greater investment in GERD and deepen cooperation with the Lithuanian universities, primarily with University of Klaipeda, Vilnius College of technologies and design, Vilnius design college and Academy Arts, Vilnius.
3. One of the most important activators of innovation improvement in such traditional industries could be tax incentives for businesses to invest in GERD, such as investment amount of "A" in the R & D to allow to carry in expenditures the amount on "Nx A".
4. The investments in R&D do new products less elastic in the markets with the big incomes and so more competitive.
5. The investments increase to R&D will lead to products creation with larger added value. That will open the export possibilities to more remote markets, and not only to the nearby countries.
6. The presence of such investment-oriented enterprises in the region will raise it's economic attraction.

## Acknowledgment

The author is grateful to the Financial Department of Gintaro baldai for the data.

## References

1. Blick durch die Wirtschaft, 25.09.1984
2. Bogdanova, O. Evaluation methodology of the development stage of a country. *Intellectual Economics*, 2011, Vol.5, No.2(10), p.189-199
3. Eurostat regional yearbook 2010. <[http://epp.eurostat.ec.europa.eu/cache/ity\\_offpub/ks-ha-10-001/en/ks-ha-10-001-en.pdf](http://epp.eurostat.ec.europa.eu/cache/ity_offpub/ks-ha-10-001/en/ks-ha-10-001-en.pdf)>
4. Eurostat. 2011. *GERD (Gross domestic expenditure on R&D) indicator*. <[http://epp.eurostat.ec.europa.eu/europa\\_2020/index\\_en.htm](http://epp.eurostat.ec.europa.eu/europa_2020/index_en.htm)>.
5. Eurostat. 2011. *National gross domestic expenditure on R&D*. <<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init>>
6. European Commission. 2012. *The Regional Innovation Scoreboard 2012*. <[http://ec.europa.eu/enterprise/policies/innovation/policy/regional-innovation/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/policy/regional-innovation/index_en.htm)>
7. Gintaro baldai. 2013. Financial Department of Gintaro baldai.
8. Innovation performance of 190 European regions compared. 2012. <[http://europa.eu/rapid/press-release\\_MEMO-12-834\\_en.htm](http://europa.eu/rapid/press-release_MEMO-12-834_en.htm)>
9. OECD. 2010. *OECD Science, Technology and Industry Outlook*. <[http://www.oecd-ilibrary.org/science-and-technology/oecd-science-technology-and-industry-outlook-2010\\_sti\\_outlook-2010-en](http://www.oecd-ilibrary.org/science-and-technology/oecd-science-technology-and-industry-outlook-2010_sti_outlook-2010-en)>
10. Žinių ekonomikos forumas (Knowledge Economy Forum). 2012. <<http://www.zef.lt/zef/index.php>>
11. World Intellectual Property Organization (WIPO). 2012, *World intellectual property report 2011: The changing face of innovation*. P.25 <[http://www.wipo.int/export/sites/www/econ\\_stat/en/economics/wipr/pdf/wipr\\_2011\\_intro.pdf](http://www.wipo.int/export/sites/www/econ_stat/en/economics/wipr/pdf/wipr_2011_intro.pdf)>

## Contact

Nikolajus Markevičius

Mykolas Romeris University

Faculty of Economics and Finance Management

Institute of Economics and Business

Ateities str.20, LT-08303, Vilnius, Lithuania

E-mail: bochakolita@gmail.com