



Hungary is the 26th most innovative country in the world

According to Bloomberg's latest innovation ranking, Hungary is placed as the 26th most innovative world-wide. Regarding manufacturing industry performance, Hungary is ranked as the 16th as a result of the high share of value added as percentage of GDP in this sector (high proportion in the economy) as well as the significant share of high-tech products within manufacturing exports. In addition, as far as R&D expenditures in the percentage of GDP concerned, among the regional peers Hungary is ahead of Poland and Slovakia.

Bloomberg analyzed the innovation performance of more than 200 countries and sovereign regions which number was reduced to 96 on the basis of available data. The released report lists the top 50 contenders on the global innovation index thus set up. Bloomberg's innovation index ranks the countries on a scale of 0 to 100% by considering seven factors. Factors and their weightings are the following:

- **R&D intensity (20%):** Research and development as a percentage of gross domestic product;
- **Productivity (20%):** GDP per employed person, per hour worked;
- **High-tech density (20%):** High-tech public companies -- such as aerospace and defence, biotechnology, hardware, software, semiconductors, Internet software & services and renewable energy companies -- as a percentage of publicly listed companies;
- **Researcher concentration (20%):** R&D researchers per one million people;
- **Manufacturing capability (10%):** Manufacturing value-added as a percentage of GDP; products with high R&D intensity (aerospace, computers pharmaceuticals, scientific instruments and electrical machinery) as a percentage of total manufactured exports;
- **Tertiary efficiency (5%):** Enrolment ratio in all subjects for post-secondary students; tertiary graduation ratio of students who majored in science, engineering, manufacturing and construction; annual new graduates and total tertiary-degree holders as percentages of labour force;



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- **Patent activity (5%):** Resident patent filings per million population and per \$1 million R&D spent.

In the TOP 50 ranking of the global innovation index the **United States of America came as first, followed by South Korea, Germany, Finland and Sweden. At the bottom five places were South Africa, Belarus, Macedonia, Iran and Romania.** On the basis of the ranking, **Hungary stands as the 26th most innovative country**, directly preceded by Portugal and followed by Spain. From regional peers, the Czech Republic beats Hungary, while **Poland and Slovakia -- at rank 30 and 34 -- trail the country on the list.** Hungary scored better than, among others, the Baltic states, New-Zealand or China.

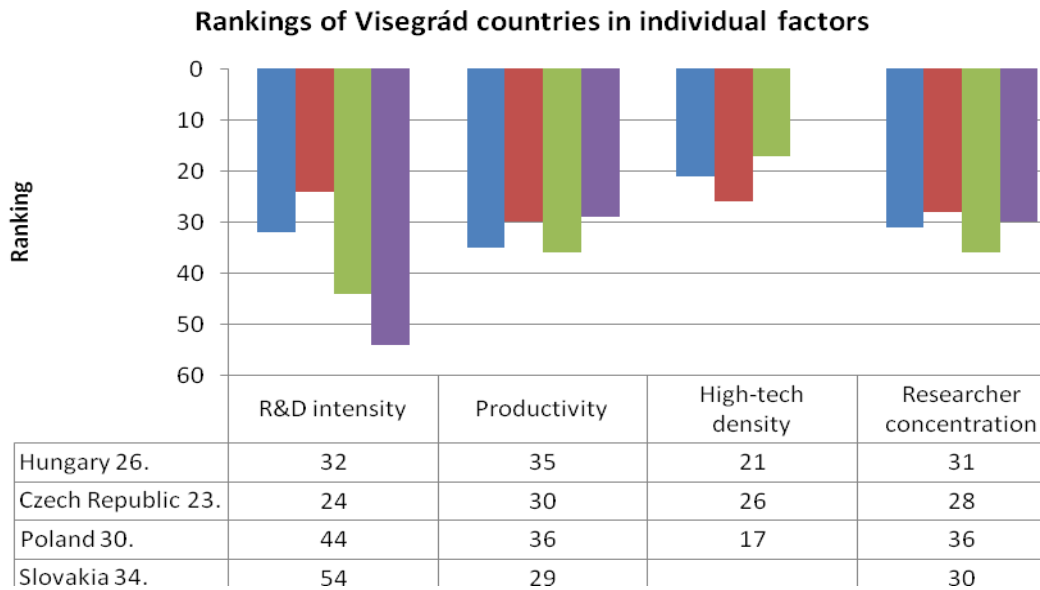
Country	Ranking
USA	1.
South-Korea	2.
Germany	3.
Finland	4.
Sweden	5.
Czech Republic	23.
Portugal	25.
Hungary	26.
Spain	27.
Poland	30.
Slovakia	34.
Romania	46.
Iran	47.
Macedonia	48.
Belarus	49.
South Africa	50.

According to Eurostat data, **R&D expenditures amounted to the 1.21 percent of GDP in 2011.** This figure in the Czech Republic was 1.84 percent, whereas Poland and Slovakia spend much less on this field (around 0.70 percent). **On the basis of data, in the R&D intensity category Hungary was placed as the 32nd, ahead of Poland and Slovakia. Rank 35 attained in the field of productivity puts Hungary into a position which is better only than Poland's among the regional peers.** In Hungary GDP per hour worked was 11.2 EUR in 2011, 9.8 EUR in Poland and about 13 EUR in the Czech Republic and Slovakia. **Hungary's GDP per employed person amounted to 71.1 percent of EU 27 average in 2011.**

Regarding the share of high-tech companies as percentage of listed enterprises, Hungary's position as the 21st is impressive. This ranking puts the country ahead of the Czech Republic, but behind Poland. According to OECD data for 2010 (OECD Factbook 2013), in Hungary there are 5.3 researchers per 1000 population, which figure is lower in Poland but higher in the Czech Republic and Slovakia.



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Source: Bloomberg

With regard to manufacturing industry performance, Hungary's ranking (16th) is prestigious considering the entire list, however the score of the Czech Republic is better even in this aspect. On the basis of World Bank data, in 2010 manufacturing industry value added was 23 percent of GDP in Hungary, which indicator was 24 percent, 18 percent and 21 percent, respectively, in the Czech Republic, Poland and Slovakia. High-tech products constituted the 24 percent of total manufacturing export goods in Hungary and this indicator is considerably lower in the other Visegrád countries.

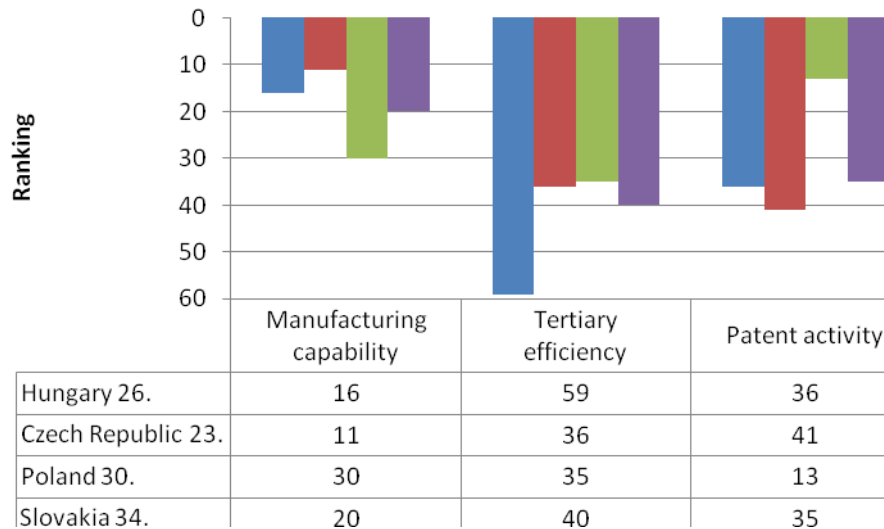
The indicator signalling tertiary education efficiency is composed by various individual indicators. The final score for Hungary derived from individual indicators sufficed for rank 59 which placed the country well behind regional peers. One negative factor contributing to this unfavourable score was the low number in Hungary of tertiary education graduates in natural sciences and engineering. It has been a priority for the Government to increase this number. In the category of patent activity (in absolute numbers) Poland comes well ahead of other Visegrád countries. On the other hand, based on Eurostat data, the number of Hungarian patent applications per million population submitted to the European Patent Office (EPO) was 20.27, while this figure was more than 25 in the Czech



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Republic, however it was much lower in Poland and Slovakia in 2010. This piece of data slightly contradicts the rankings shown below, which is a consequence of a mismatch in applied statistics.

Rankings of Visegrád countries in individual factors



Source: Bloomberg

As a whole, Hungary’s placing as the 26th on the global innovation ranking can be considered as favourable. In comparison to its regional peers and relative to the entire ranking, Hungary has an excellent ranking in the category assessing manufacturing value added as percentage of GDP and the share of R&D expenditures as percentage of GDP is also quite good in the region, but in any case this figure shall be improved in line with EU 2020 objectives. The tax relief for R&D employees introduced by the Government as of January 2013 is expected to increase the number of researchers: employers can apply tax relief for employing researchers with at least a PhD title at a research facility, up to a monthly wage of 500 000HUF. The applicable amount of tax incentive equals the total amount of social contribution tax meaning that enterprises pay 0 tax rate, without contributions, instead of the former 27 percent. In addition, they are not obliged to pay training contribution of 1.5 percent, either. This measure may impact about 1300 PhD researchers.