GLOBAL EDITION
The New York Times
WITH THE International Herald Tribune

I.H.T. SPECIAL REPORT: CENTRAL EUROPE

Central and Eastern Europe Lag in Innovation

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Published: May 22, 2011

PRAGUE — In 2010, the European Union introduced the Innovation Union, an economic policy focused on promoting a world-class science base through public-private partnerships and the removal of bottlenecks that prevent ideas from reaching the marketplace.

“The only viable road to sustainable growth and jobs is through research and innovation,” Mark English, spokesman for Maire Geoghegan-Quinn, the European commissioner for research, innovation and science, said in an interview.

To find out where the Union stands today, an Innovation Union Scoreboard — an improved version of an annual survey carried out since 2001 — was released in February, assessing innovation performance across the bloc.

“In the most recent scoreboard, the main findings are that the E.U. is failing to close the innovation performance gap with its main international competitors, the U.S. and Japan,” Mr. English said. “Although the trends in most E.U. member states are promising despite the economic crisis, progress is not fast enough.”

Denmark, Finland, Germany and Sweden came out as the top scorers, while Central and Eastern Europe lagged. Slovenia scored highest in the region, joining countries like France, the Netherlands and Britain with grades close to the 27-member E.U. average. But the Czech Republic, Poland, Hungary and Slovakia scored below average, while Bulgaria and Romania joined Lithuania and Latvia on the bottom rung of the scale, well below average.

“The main reason for this is that these countries had an enormous amount of catching up to do post-1990,” Mr. English said. “Many have had considerable successes since then, but there is much more work to be done.”

In Slovenia, the government established the Slovenian Technology Agency in 2006 to speed up the process.

“Slovenia has been developing its innovation system very actively in the last few years,” said Franc Gider, the agency’s director general. In the past three years, the country’s

investment in research and development has risen despite the global economic crisis, and now exceeds the European average, he said.

Research and development investment is now running at close to 2 percent of gross domestic product, one-third financed publicly and two-thirds privately. “The goal is to have investment for R.&D. be 3.6 percent of gross domestic product by 2020,” Mr. Gider said.

One factor that the scoreboard highlighted across the E.U. was a failure to effectively leverage public-private partnerships. Europe’s research and innovation shortfall is primarily in the private sector, its indicators showed.

The Slovenian agency focuses on improving the research base in companies and strengthening cooperation between company labs and public research institutions. One of its most effective programs, Mr. Gider said, co-finances more than 300 postgraduates in corporate research facilities.

“The program has two main objectives: to increase the number of researchers employed by companies and thereby strengthen their innovation capabilities, and to improve the cooperation between companies and public R.&D. institutions,” he said.

In the Czech Republic, the Industry and Trade Ministry created a unit in September, the Section of E.U. Funds, Research and Development, to deal with the shortcomings highlighted by the scoreboard. Petr Ocko heads the section, and he too sees a gap to be bridged between researchers and businesses.

“We have a gap in technology transfers,” Mr. Ocko said. “We are taking steps, but it is a world of scientists and a world of businessmen, and we have to get them together.”

One program introduced by Mr. Ocko’s department, known as the Knowledge Transfer Project, aims to support small and midsize companies that are interested in cooperating with universities. The program provides financing to allow the companies to pay for research capacity at a university.

The ministry also finances other initiatives, including “cluster development” programs, in which companies and institutions from the same sector serve as drivers of innovation; product development and marketing that transform prototypes into saleable goods; and industrial R.&D. support.

Mr. Ocko said his team was drafting an innovation strategy that it hoped to present to the government next month.

“It will be a new economic approach for pulling the Czech Republic to the global market by reducing bureaucratic constraints and raising R.&D. potential and our academic capacities for business development,” he said. The government’s commitment to maintaining research and development spending despite the difficult economic environment “is one of the Czech Republic’s strengths.”

In Hungary, the challenge for would-be innovators is harder.

“First, the country needs a forum where all aspects of innovation policy can be discussed and harmonized,” said Gabor Szabo, a professor at the University of Szeged and president of the Hungarian Association for Innovation. “Second, R.&D. and innovation have to be one the main priorities of the country based on full political consensus.”

Mr. Szabo said the country still had a way to go.

The main problem, he said, is the lack of innovation by small and midsize enterprises. “We have to find ways and incentives to strengthen the human resource base, increase collaboration between companies and research institutions and last but not least, facilitate networking” among small and midsize businesses, he added.

More than 80 percent of innovation in Hungary comes from a few large companies, Mr. Szabo said. “We have a few hundred intensively innovative companies — some of which are real success stories — and a large number of companies with practically no innovation,” he said.

He cited Mediso Medical Imaging Systems as a good example of an innovative smaller business. “They focus on innovation and have an extremely strong human resource base — 75 percent of Mediso employees hold higher academic degrees,” he said. “The company has found market niches where they are recognized worldwide.”

Mr. English, the European Commission spokesman, said that “by better pooling our efforts and focusing on excellence, and by creating a true European Research Area, the E.U. can enhance the quality of research and Europe’s potential for major breakthroughs.”

A version of this special report appeared in print on May 23, 2011, in The International Herald Tribune with the headline: Central and Eastern Europe Lag in Innovation.