

Stagnation of R&D intensity a major threat to the European knowledge-based economy

Today the European Commission presents a new publication on Europe's position in research and innovation. The "Key figures 2005 for science, technology and innovation" show worrying trends in R&D investment and innovation in Europe. The growth rate of R&D intensity (R&D expenditure as % of GDP) has been declining since 2000 and is now close to zero. Europe is on track to miss the objective it set itself to boost spending on R&D from 1,9 to 3% by 2010.

European Commissioner for Science and Research Janez Potočnik said: "We must heed this wake-up call. If the current trends continue, Europe will lose the opportunity to become a leading global knowledge-based economy."

The 2005 key figures show that EU R&D intensity is close to stagnation. Growth of R&D investment as a % of GDP has been slowing down since 2000 and only grew 0.2% between 2002 and 2003. Europe devotes a much lower share of its wealth to R&D than the US and Japan (1.93% of GDP in the EU in 2003, as compared to 2.59% in the US and 3.15% in Japan). While China has lower R&D intensity (1.31% of GDP in 2003) it grew at about 10% per year between 1997 and 2002. If these trends in the EU and China continue, China will be spending the same amount of GDP on research as the EU in 2010 – about 2.2%.

One of the reasons for this has been a slow-down in business funding of R&D. In 2002 business funding grew at a slower rate than GDP, though this was compensated for by a slightly higher growth of government funding, as well as growth in R&D financed from abroad. In 2002, business financed 55.6% of domestic R&D expenditure in the EU, compared to 63.1% in the US and 73.9% in Japan, and this share is decreasing. If the trend is not reversed, not only will the EU miss the overall target of two-thirds of R&D expenditure financed by the private sector in 2010, but the situation will have worsened.

The most worrying conclusion of the key figures is that Europe is becoming a less attractive place to carry out research. Between 1997 and 2002, R&D expenditure by EU companies in the US increased much faster than R&D expenditure by US firms in the EU (by 54% compared to 38%). The net imbalance in favour of the US increased five-fold between 1997 and 2002, from about €300m in 1997 to almost €2b in 2002. Additionally, US investment has been growing at a much greater rate in areas outside the EU – about 8% per year in the EU and 25% per year in China.

These trends are worrying in the context of Europe's intention to becoming a leading knowledge-based economy. A recent impact assessment by the European Commission showed that investment in R&D at European level has a positive effect on productivity and economic growth. The study also showed that funds spent at European level were successful in mobilising additional business spending. If Europe is to become an integrated research area where the best research can be carried out, able to attract investment from all over the world, there must be a substantial and wide-ranging European level programme, as proposed by the Commission in April 2005. Otherwise, Europe will remain a series of national programmes, with little coherence. Enterprises will keep relocating their research and innovation activities to other continents offering attractive public support and larger research, innovation and commercial markets. A recent public opinion survey showed that EU citizens support spending more on research at both national and European level.

The full document can be found at: www.cordis.lu/indicators/