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SIX QUESTIONS TO HEIKE BELITZ

»Publicly Funded Research Gaining Ground«

1. Dr. Belitz, how has investment in research and development, or R&D, in Germany developed in recent years? We analyzed investment in research and development over the past few decades and observed particularly strong growth after 2007. In fact, Germany has now almost met its target of investing three percent of its GDP in R&D. Also in comparison with other countries, this is a relatively rapid growth rate. In recent years, only South Korea saw faster growth in investment in research than Germany.
2. What is the impact of investment in research and development on economic growth? Our study examined the correlation between R&D spending and economic growth, applying various econometric methods, such as panel and time series models. We used the time series models to analyze the correlation in Germany and the panel models to determine the correlation in 19 other OECD countries. In sum, a one-percent increase in R&D investment results in additional GDP growth of between 0.05 and 0.15 percentage points. The corresponding figure for Germany is at the upper end of the range.
3. What sectors benefit most from R&D investment? In Germany, more so than in other countries, investment in research is heavily concentrated in the manufacturing industries which account for as much as 85 percent of R&D spending. Within this sector, automotive engineering occupies a particularly prominent position with almost one-third of the private economy's research funding being invested in the automobile construction industry. This is followed by the German computers and electronics industry. Mechanical engineering is also a highly research-intensive sector.
4. What are the differences between public and private investment in R&D? In Germany, around two-thirds of R&D investment is private sector and one-third public sector, primarily public research institutes and universities. Our study sought to determine in which of these two sectors research investment had more impact on economic growth and came to the conclusion that solid investment is essential in both. Investment in R&D is crucial in both the public sector, which tends to be focused on basic research, and the more application- and market-oriented private sector. The innovation system as a whole, that is the interplay between private- and public-sector R&D, ultimately plays the decisive role.
5. How has the research system changed in recent years? In Germany, as early as the end of the 1990s, R&D spending was growing faster than GDP which, in turn, led to an increase in research intensity. At the time, however, the private economy was the sole driving force behind this development. Since around 2007, we have observed renewed growth in research activities in relation to GDP. This time, however, the public sector has played a role since growth in investment in the public research sector has been considerably stronger. To some extent, this is evidence of a change in policy which has undeniably made a significant contribution to the strong position Germany enjoys today.
6. Should Germany invest more in R&D? In recent years, Germany has steadily increased its investment in R&D and we believe this should continue. Given the growing significance of research for the development of productivity, competitiveness, and growth, we would also expect to see a sustained increase in research intensity in Germany.

Interview by Erich Wittenberg



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