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## Productivity Gains from R&D Investment: Are High-Tech Sectors Still Ahead?

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### Abstract:

The purpose of this study is to investigate the relationship between a firm's R&D expenditures considered as an investment in knowledge, and its productivity, looking at sectoral peculiarities which may emerge; to this end, we use a large unique longitudinal database consisting of 1,809 US and European manufacturing and service firms over the period 1990-2008, for a total of 16,079 observations. Our main findings can be summarised as follows: knowledge stock has a significant positive impact on a firm's productivity, with an overall elasticity of about 0.10; this general result is largely consistent with findings presented in previous literature in terms of the sign, the significance and the estimated magnitude of the relevant coefficient. More interestingly, the coefficient turns out to be significantly larger in the service and high-tech sectors than in the non-high-tech manufacturing sectors. These outcomes suggest that firms in high-tech sectors are still ahead in terms of the impact on productivity of their R&D investments; moreover, a shift in favour of the service sectors seems to emerge.

**Text:** See [Discussion Paper No. 5975](#)



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