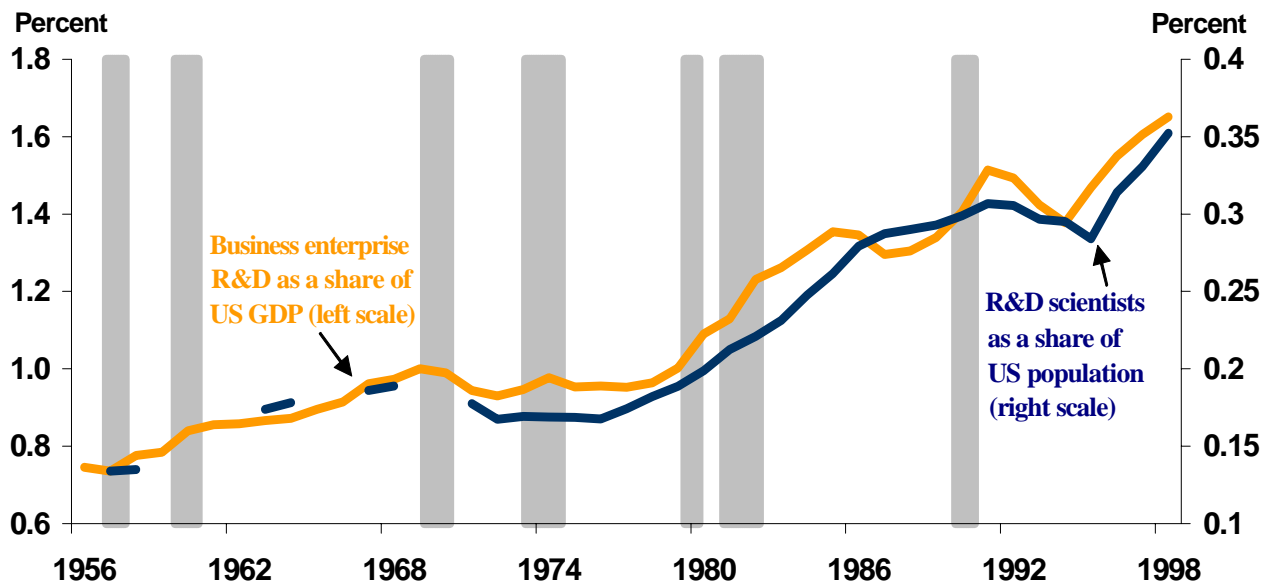


## Ideas and Technological Progress

The recent acceleration in productivity growth can be traced to innovations affecting capital equipment and software as well as to improvements in business practices. These gains, however, have not come from thin air. The intriguing stories of fortuitous inventions such as the microwave oven, Velcro®, and the Post-It® aside, innovation and productivity gains have been the result of investment. This includes spending on research and development and investments in the education and training of those involved in research as well as those implementing new technologies in the workplace. Fortunately, an increasing share of U.S. resources, both in terms of money and personnel, has been devoted to research and development over the last fifty years. Looking forward, improvements in our standard of living as well as our capacity to deal with change will depend importantly on the extent to which we continue to make such investments in the search for new ideas.

**Greater Share of Resources Devoted to Searching for Ideas**  
Shares of R&D Spending and Scientists



Source: National Science Foundation and FRBSF.

For more information see [Shaping the Economy: Innovation and Productivity](#), FRBSF Annual Report 2004.