Technology | Academics | Policy TAP

FACT SHEET

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Innovation

Innovation. Innovation is a word used to describe new ideas and inventions that have impact – impact to consumers, to markets, to industries, to the economy as a whole, and even to society and culture. The best innovative ideas are ones that not only fuel productivity gains and economic growth, but that change people's lives for the better. Often, innovation entails the introduction of a new technology to consumers, such as new hardware, software, or new chemical or biological inventions (e.g., headphones; Internet browsers; plastics; vaccines). Other times, innovation may come about from the adoption of a new feature or approach within an existing product (e.g., noise-cancelling or wireless headphones; multi-tab web browsing; recyclable plastics; orally administered vaccines). There can also be innovation in institutions and the rules and practices governing them, such as new management techniques, financial instruments, organizational structures, business methods, and so on.

Overview

These issues arise in discussions of innovation:

- The relationship of innovation to efficiency and productivity gains.
- The link between innovation and economic growth in the developed and developing world.
- How to incentivize innovation and the role of institutions and public policies, including intellectual property policies.
- How innovation affects employment: for example, by changing the demand for unskilled as opposed to skilled labor, or by growing or shrinking the number of workers needed to support an industrial sector.
- How innovation may impact worker migration and immigration policies, when the domestic workforce is not adequate to support a growing industrial sector.
- How innovation can reduce costs and improve results in sectors of the economy of particular interest to policymakers, such as health care, energy, the environment, and education.
- The impact of education and education policy on innovation and entrepreneurship.
- The role and impact of financial support of innovation by both public and private sectors.
- Efforts by individual states to encourage the development of technology and innovation-intensive industries within their borders.
- Whether reform of the U.S. patent office and/or patent policies may be needed to provide the optimal environment for innovation and maximize its economic impact.
- The relationship between antitrust (competition) policy and innovation: particularly, whether antitrust doctrines should be revised to anticipate and better support innovation.
- How the Internet and other software and hardware platforms support innovation, including the issue of whether the platforms are comparatively "closed" (proprietary) or "open."
- How e-government and other innovation-related reforms may improve public institutions.

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Media Contact

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Innovation Sources

These sources are a good place to start in understanding innovation issues: Suzanne Scotchmer "Innovation and Incentives" (*MIT Press*, 2004) is a great textbook introduction to various institutions and policies promoting innovation. Josh Lerner, Adam B. Jaffe, and Scott Stern compile research on the interactions between public policy and the innovation process in the annual series, "Innovation Policy and the Economy." "Innovation, Reallocation and Growth" by Daron Acemoglu, Ufuk Akcigit, Nick Bloom and William Kerr studies the interactions between innovation and reallocation of resources between firms and industries and shows that the high tech industry is a real driver of innovation. Nicholas Bloom considers evidence that management methods affect productivity gains from innovation in "Americans Do I.T. Better: US Multinationals and the Productivity Miracle." In "Wired for Innovation: How Information Technology is Reshaping the Economy," Erik Brynjolfsson and Adam Saunders describe how information technology has created a wave of business innovation that is driving the productivity resurgence in the U.S. economy.

Scotchmer and colleague Nancy Gallini look at different ways of rewarding innovation in "Intellectual Property: When is it the Best Incentive Mechanism?" A paper by Ilya Segal and Michael Whinston, "Antitrust in Innovative Industries," looks at the interplay between competition (antitrust) policy and innovation; Richard Gilbert's paper "Competition and Innovation" examines issues in competition policy and research and development. In "Nurturing the Accumulation of Innovations: Lessons from the Internet," Shane Greenstein explains that the foundation for the Internet originated from two eras that illustrate two distinct models for accumulating innovations over the long haul. While Jonathan Zittrain's paper, "The Internet is Closing to Innovation," warns that the Internet is becoming less open to innovation.

Please note that all links on this fact sheet are accessible from the online version at www.techpolicy.com/innovation.aspx.

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