

## CHAPTER 13 KEY CONCEPTS AND SUMMARY

### **13.1 Why the Private Sector Underinvests in Innovation**

Competition creates pressure to innovate. However, if one can easily copy new inventions, then the original inventor loses the incentive to invest further in research and development. New technology often has positive externalities; that is, there are often spillovers from the invention of new technology that benefit firms other than the innovator. The social benefit of an invention, once the firm accounts for these spillovers, typically exceeds the private benefit to the inventor. If inventors could receive a greater share of the broader social benefits for their work, they would have a greater incentive to seek out new inventions.

### **13.2 How Governments Can Encourage Innovation**

Public policy with regard to technology must often strike a balance. For example, patents provide an incentive for inventors, but they should be limited to genuinely new inventions and not extend forever.

Government has a variety of policy tools for increasing the rate of return for new technology and encouraging its development, including: direct government funding of R&D, tax incentives for R&D, protection of intellectual property, and forming cooperative relationships between universities and the private sector.

### **13.3 Public Goods**

A public good has two key characteristics: it is nonexcludable and non-rival. Nonexcludable means that it is costly or impossible for one user to exclude others from using the good. Non-rival means that when one person uses the good, it does not prevent others from using it. Markets often have a difficult time producing public goods because free riders will attempt to use the public good without paying for it. One can overcome the free rider problem through measures to assure that users of the public good pay for it. Such measures include government actions, social pressures, and specific situations where markets have discovered a way to collect payments.