

2 THE HISTORY OF PUBLIC/PRIVATE PARTNERSHIPS

The development of science, technology, and economic growth in the United States was greatly influenced by the scientific discoveries and university infrastructure within Europe during its colonial period. While it is difficult to pinpoint how or which specific elements of scientific and technical knowledge diffused across the Atlantic, certain milestone events can be dated and key individuals can be identified.

The background in this chapter, which draws on Unesco (1968) and National Science Board (2000), gives not only an appreciation for the role that science and technology resources have played in the development of the Nation, but also historical insights into the evolution of public/private partnerships in the United States.¹

THE COLONIAL PERIOD

The first member of the Royal Society of London to immigrate to the Massachusetts Bay Colony was John Winthrop, Jr. in 1631, just a few years after the founding of the Colony. As a scientist, he is credited with establishing druggist shops and chemistry laboratories in the surrounding villages to meet the demand for medicine. According to Unesco (1968, p. 9), these ventures were “perhaps the first science based commercial enterprise of the New World.”

Before the turn of the eighteenth century, colonists made noticeable advances toward what may be called a scientific society, organizing

¹ The original version of this chapter was set forth in Link (1999b), later expanded in Audretsch et al. (2002a), and then reproduced in book form as Feldman, Link, and Siegel (2002).

scientists who came from England and other European countries into communities that promoted scientific inquiry. In 1683, the Boston Philosophical Society was formed to advance knowledge in philosophy and natural history.

Benjamin Franklin formed the American Philosophical Society of Philadelphia in 1742 for the purpose of encouraging correspondence with colonists in all areas of science. This Society later merged with the Franklin-created American Society to promote what Franklin called “useful knowledge,” and it still exists today. The combined society focused on making available advancements in agriculture and medicine to all individuals by sponsoring the first medical school in America (also supported by the Pennsylvania House of Representatives). Thus, Franklin’s combined society was a hallmark of how public and private sector interests could work together for the common weal.

Influenced by the actions of Pennsylvania and later Massachusetts with regard to sponsorship of scientific institutions, the establishment of national universities for the promotion of science was first discussed at the Constitutional Convention in 1787. However, at that time, the founders of the Constitution believed educational and scientific activities should be independent of direct national governmental control. But, they felt that the national government should remain an influential force exerting its influence through indirect rather than direct means.

For example, Article I, Section 8, of the Constitution states:

The Congress shall have the power ... To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.

Soon thereafter, in 1790, Congress passed the first patent act.

Alexander Hamilton, in his role as Secretary of the Treasury, released on December 5, 1791 A Report on Manufacturers. Therein he advocated a direct role of the government in support of the Nation’s manufacturing:

The expediency of encouraging manufacturers in the United States, which was not long since deemed very questionable, appears at this time to be pretty generally admitted. The embarrassments, which have obstructed the progress of our external trade, have led to serious reflections on the necessity of enlarging the sphere of our domestic commerce; the restrictive regulations, which in