

CHAPTER 9

AN ATTEMPT TO MEASURE THE CONTRIBUTIONS OF THE RIVAL INSTITUTIONS FOR SUPPORTING INVENTION

[376] We estimated in ¶ 139, by loose methods, that around one-fifth of current American inventing and invention-oriented research is motivated by the patent system, and about four-fifths by the dozen or more rival institutions. Now to approach a related question expressed somewhat differently, better using the fairly accurate statistics which are sometimes available in our field. We shall ask in Part A how much of American inventive effort, measured in dollars spent in the year 1953-54, was paid for, and how much was performed by the various sources (governments, firms, trade associations, etc.). The latest available figure will also be added. In part B (¶ 421 ff.) we shall endeavor to eliminate duplications and to sum up, according to criteria that cut across those categories, how much of invention and research in 1953 used patents, secrecy, or monopoly, and how much came from the three great economic sources: Government, business, and philanthropy.

[377] In Part A we shall set down at the right-hand margin by each subject head, the reported money put up, supplied by that source, or our estimate, and its percentage of a total corrected for duplication, for the fiscal year 1953-54 or the nearest available year, and also the amount for the latest year, each in millions of unstabilized dollars. Then we come to the different matter of performance, which refers to what party performed the work, regardless of who *paid* for it. That more important contribution had been reckoned above, regardless of where the work was done. So next we set down when available the general *performance* of R&D, and its percentage. This time we shall not try to restrict the figure to invention proper and its pertinent sciences. Our reason for choosing 1953-54 for comparisons is the help afforded by a simultaneous series of studies then carried out for the National Science Foundation, which will be cited *passim*. All our figures for 1953-54 are brought together in table 7, ¶ 382.

[378] In the next (10th) chapter we shall take up the several sources again, under the same numbers, to consider the favorite and the best fields for each, and where increases are needed.

[379] In counting contributions, we seek to cover invention proper plus such research as we can find in physics, chemistry, metallurgy and engineering. Invention is taken in its common meaning, not that of patentability, and includes even the smallest improvements, but excludes, where possible for 1953-54, research in medicine, agriculture, mathematics, marketing, and social and other sciences than the four included. Our purview is thus somewhat smaller than that of all R&D, as in chapter 3, or of science, because it sticks to the common