Chapter 7 is a case study of R & D expenditures in the aerospace industry. The author presents data relative to: (1) economics of scale in aerospace R & D, (2) amounts of public and private financing of aerospace R & D, (3) externalities among individual firms undertaking R & D and among militiary and commercial applications of R & D findings, and (4) capital-intensity and limiting factors of the aerospace R & D investment programs.

The book includes four appendices—a discussion of Weingartner's linear programming model of capital budgeting, a brief discussion of the application of dynamic programming to long-range planning, a simple representation of a military industrial complex as an economic subsystem (which is used to illustrate the conditions under which centralization may be superior to decentralization, and conversely), and, finally, a discussion of determining the economic life of an investment program.

In summary, the book represents a plea for more careful analysis of R & D investments, presenting anecdotal evidence and some elementary economic arguments in support of this plea.

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Tax Incentives. By TAX INSTITUTE OF AMERICA.
Lexington, Mass.: Heath Lexington Books, 1971. Pp. xiii+303. $12.50.

This book contains the papers and discussion presented at the Tax Institute of America's 1969 symposium. The book consists of four parts, each containing several papers and concluding with general discussion. Three basic questions tie the various pieces together: (1) What is an appropriate definition of a tax incentive, and hence what incentives currently exist? (2) What are the economic effects of particular existing tax incentives, and hence are they desirable relative to their alternatives? (3) What role can and should new tax incentives play in solving pressing social problems?

The papers by Stanley Surrey and Henry Aaron address the first question. Each offers a definition encompassing those "special provisions" of the tax laws, such as deductions, exclusions and preferential rates, designed to achieve social goals through the voluntary activities of economic agents. Within this framework, Surrey is primarily concerned with violations of commonly accepted notions of ability-to-pay—that is, of vertical or horizontal equity—whereas Aaron is concerned primarily with violations of neutrality with respect to resource allocation.

Aaron also presents an inventory of existing federal tax incentives (drawn mainly from the Tax-Expenditure Budget of the Treasury Department). Also included is an estimate of the revenue loss to the Treasury due to each provision.[1]

1. These estimates are drawn from a variety of sources, most of which assume no change in economic behavior from elimination of the special provision.

Are tax incentives in general good or bad? Are other devices—for example, direct expenditures—preferable means of achieving the same ends? Aaron suggests resorting to cost-benefit analysis in each instance. For example, an investment tax credit designed to stimulate economic growth much be compared with alternative methods of stimulating growth, and the one that stimulates growth the most efficiently and equitably should be chosen.

Surrey places the burden of proof on the tax incentives. He repudiates as false several virtues commonly asserted for tax incentives—simplicity and encouraging private, as opposed to public, economic activity—and supports some defects—inequity and inefficiency.

Tax incentives of state and local governments are discussed by Lloyd E. Slater. Existing state and local taxes have had their bases eroded in much the same way as the federal income tax. Many states actually use the federal tax base. Local income taxes, however, usually exclude unearned income (dividends, capital gains, etc.). Likewise, sales taxes are generally confined to tangible personal property, and exemptions under the property tax are numerous.

Mortimer Caplin compares tax credits with revenue sharing and concludes that both should be used to improve the financial position of state and local governments. It seems to me that a basic problem exists in helping state and local governments by either method—the interdependence of these decision-making units. What each does depends in part upon what the others do—no one government can raise tax rates alone for fear of losing part of its tax base![2]

Parts II and III deal with particular existing tax incentives. There are coupled pairs of essays on the tax incentives for natural resources, for real estate investment, and for business investment, and a single essay on property tax exemptions of charitable, educational, and religious organizations.

Robert Byrne and Wilbur Steger believe that the special tax treatment of natural resources by percentage depletion and expensing of intangible drilling costs should be continually studied and reviewed in light of the goals of natural resource policy. The paper by Leslie Cookenboo reports the results of three studies attempting to estimate the price elasticity of supply of crude oil. Accepting the notion of a relatively elastic supply, Cookenboo concludes that elimination of percentage depletion and expensing would decrease domestic crude oil production by half. Is this good or bad? I find too little discussion in the entire volume of the work (by Harberger and others) on the allocative inefficiency resulting from these special tax provisions.

Paul Taubman and Robert Rasche identify and quantify income tax

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Of course, this assumption is open to serious question; any elasticity of demand for accruing income taxed at preferential rates, for example, would imply an overestimate of the revenue loss.

2. See my paper "Local Government Tax and Product Competition," *Journal of Political Economy*, vol. 81 (January–February 1973).

incentives for real estate investments. Unlike most of the other papers in the volume, they present their own original estimates. While a variety of tax provisions pull in opposite directions, they conclude that on balance the tax law subsidizes real estate investment because of generous depreciation allowances (true depreciation is estimated as less rapid than straight-line). They find that while the stock of office space is affected only slightly (because of an inelastic demand), the economic life of buildings is appreciably lowered. A major problem is that the tax subsidy is worth most to high-tax-bracket investors, landowners, etc. This makes the current set of incentives particularly inappropriate to defray the housing expenditures of the poor. No attempt is made to discuss the welfare loss due to these special tax provisions. The paper by Leon Keyserling is a plea for continued tax subsidies to housing and related construction. Keyserling sees housing and commercial development of cities, as a key component of an effective social policy. Since millions of families cannot obtain "decent housing accommodations at costs within their means," Keyserling defends the special tax provisions. Most economists, myself included, would prefer unrestricted income transfers for improving the lot of lower-income persons. This done, the allocative inefficiency produced by the special tax provisions relating to housing could be reduced or eliminated.

The papers by Gerard Brannon and Leonard Kust each discuss the desirability of the investment tax credit, the former offering a summary of the literature and (favorable) comparison with accelerated depreciation, the latter supporting the credit along the old "double taxation of savings" line.

The paper by Alfred Balk criticizes the current state of local property tax exemptions for charitable, religious, and educational organizations. Balk is particularly appalled, at a time when state and local governments are hardly solvent, by the incentive to "overbuild" business properties of churches and universities, industrial plants leased from government agencies, high-rise retirement homes, etc. No empirical evidence on the extent of this overbuilding is presented.

Part IV consists of a series of essays on tax incentives and social problems: Herbert Stein on stability and growth, Carl Madden and James Morris on employment and training of the disadvantaged, Douglas Wilson on environmental pollution, and Richard Slitor on urban blight.

Stein's paper cautions against asking too much of tax policy changes in promoting stability, for the appropriate timing so necessary for prudent policy is usually not forthcoming.

Madden and Morris suggest that tax incentives may be useful in promoting the employment and training of the disadvantaged and suggest experimental pilot programs as a method for accumulating information on the potential contribution of general programs.

Wilson prefers grants and loans to tax incentives in decreasing pollution. His focus is mainly on encouraging installation of pollution abatement equipment, rather than on optimal outputs.

Slitor argues that tax incentives, if carefully designed, are a useful additional policy tool in eliminating urban blight. However, given the magnitude of the problem, tax incentives must be viewed as a supplement to other policies.

In summary, the volume is richer in the variety of issues discussed and identified than in depth or original economic research. Since much progress has been made by public finance economists in the last decade in understanding the effects of tax provisions on income distribution[3] and resource allocation,[4] it is a bit disconcerting to note the general absence of this type of analysis in the volume.

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3. As developed, for example, in Arnold Harberger, "The Incidence of the Corporation Income Tax," *Journal of Political Economy* (June 1962).

4. See Arnold Harberger, "The Measurement of Waste," *A.E.A. Papers and Proceedings* (May 1965).

The Management of Advertising, By JULIAN L. SIMON.
Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1971. Pp. xii+287. $5.95 (paper).

There are two major sources of books about advertising: one arises from the aphorisms of charismatic men who have built great agencies (e.g., Albert Lasker, David Ogilvy, Rosser Reeves); the other is based upon a combination of experience and research on techniques or functions (and here, the books are much more often written by academicians than by practitioners).

Julian Simon's book is not in the usual grain. It is a strongly personal document but is based upon research. It opens with a page-long list of symbols, but then the opening paragraph of the preface starts with Lasker's "I am going to make you"—however, Simon takes that hope away in the following paragraph. His own experience includes being a practicing mail-order advertiser, pharmaceutical copywriter, and college professor.

The book is concerned with the formal scientific aspect of advertising decisions, but the material is admittedly based upon Simon's own pet ideas. Some of those pet ideas are: all advertising shows a diminishing-returns response function to increased expenditures; advertising budgets should be set on the basis of absolute sales data and customer retention rates rather than share-of-market data; a cross tabulation of product-brand characteristics and consumer activation methods can be used to determine what advertisements should look like and what the headlines and copy should say; and much of advertising is useful and important economically, and social issues in advertising are based fundamentally on esthetics and morals—the only exception to this argument is what Simon calls homogeneous packaged goods (HPG), concentrated primarily in television, and which he would like to find some way to control while leaving the balance of advertising untouched.