A hypothetical case illustrates the revenue effect. Suppose an enterprising young man begins manufacturing some product which he has invented. His net worth, originally $1,000, grows at the rate of 40 percent annually. He lives in a land where savings and capital gains are tax-free, so that in 40 years his small shop has grown to an enormous plant worth more than $700 million.

If, on the other hand, he lived where there was a 100 percent tax on whatever would be saved (an exceptional rate, but convenient for illustration), then each year his $400 gain on the original $1,000 would be taxed away—assuming he would be foolish enough to try to add to his net worth. Over the 40 year period, the government would collect $16,000 in taxes and the shop would still be worth $1,000. At a tax rate of 80 percent, the government would collect $82,600 and the manufacturer's net worth would grow to $21,700. In either case, the total government revenue over 40 years is far less than even a 1 percent estate tax would yield at his death—more than $7 million.

Implicit in the revenue illustration is Fisher's belief that productive genius—as evidenced by the amassing of a large fortune from small beginnings—should be given full opportunity to develop new methods and expand production. If society wishes to break up large fortunes, time enough to cut them down when they pass to heirs who, since they as yet have given no demonstration of superior abilities, perhaps should be allowed to retain relatively little of the inherited fortune.

Kaldor, writing a dozen years later, restates most of Fisher's arguments and adds a novel point of his own. He takes the view that one of the functions of taxation is to prevent extreme degrees of economic inequality from emerging, maintaining that the standard by which economic inequality is to be identified is inequality of spending rather than inequality of income or wealth. He holds that the case for equity depends not so much on the alleged double taxation of savings resulting under an income tax as on the basic inadequacy of income as an indicator of taxable capacity. True equity, he says, requires the taxation of "spending power" and this is by no means equivalent to income. Spending power may come from dis-saving, from capital gains, from borrowing, from many other sources not ordinarily touched by the income tax. Kaldor claims that most of the untaxed sources of spending power are associated with ownership of capital, and that capital accumulation would be encouraged if spending from these sources were taxed.

**SHORTCOMINGS OF THE TAX**

Opponents of the spendings tax are most sharply critical of its socio-political consequences. The very effect which Fisher considers an advantage, the possibility of the accumulation of a large fortune, is seen as a peril to a free competitive economy. The power which accompanies great personal wealth, it is held, will sometimes be utilized in ways which harm society. Critics contend, moreover, that Fisher's example of Henry Ford as a builder of fortunes is not necessarily typical, but that rather the accumulation of great wealth can also occur via anti-social paths, with monopolistic and exploitative behavior as realistic possibilities.

The spendings tax raises a number of conceptual problems. Probably the most difficult is the attainment of equitable treatment of housing expenditures. While the same problem arises under an income tax, Kenyon Poole, discussing this difficulty in connection with the Treasury's proposal in 1942, held that it is more crucial under a spendings tax because housing cost generally is a much larger proportion of spending than of income.

---

EXHIBIT 1
The Individual Spendings Tax Schedule

<table>
<thead>
<tr>
<th>Funds at the Disposal of the Individual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Salaries, wages, and other compensation for personal services</td>
</tr>
<tr>
<td>2. Dividends and interest received, including government interest</td>
</tr>
<tr>
<td>3. Rents, royalties, annuities, pensions</td>
</tr>
<tr>
<td>4. Withdrawals from business, professions, partnerships, trusts</td>
</tr>
<tr>
<td>5. Cash receipts from gifts, bequests, and insurance</td>
</tr>
<tr>
<td>6. Receipts from sale of capital assets</td>
</tr>
<tr>
<td>7. Receipts from repayment of loans made to others</td>
</tr>
<tr>
<td>8. Receipts from borrowing, including debts incurred on installment purchases</td>
</tr>
<tr>
<td>9. Cash and bank balances at beginning of year</td>
</tr>
<tr>
<td>10. Other receipts</td>
</tr>
<tr>
<td>11. Total disposable funds (items 1 to 10) $</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deductions: Nontaxable Use of Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Cash and bank balances at end of year</td>
</tr>
<tr>
<td>13. Cash gifts and contributions</td>
</tr>
<tr>
<td>14. Interest and taxes paid, except on owner-occupied homes</td>
</tr>
<tr>
<td>15. Expenditures on the purchase of capital assets</td>
</tr>
<tr>
<td>16. Life insurance premiums, annuity, and pension payments</td>
</tr>
<tr>
<td>17. Outlays for repayment of debt, including installment debt</td>
</tr>
<tr>
<td>18. Loans made to others</td>
</tr>
<tr>
<td>19. Other nontaxable disbursements</td>
</tr>
<tr>
<td>20. Total deductions (items 12 to 19) $</td>
</tr>
<tr>
<td>21. Expenditures subject to tax (item 11 minus item 20) $</td>
</tr>
</tbody>
</table>


He felt that the worst inequities were likely to arise between (1) owners and renters, (2) those who own their homes outright and those who are in the process of paying off mortgages, (3) individuals living in different parts of the country. While equity might be achieved by imputing the rent outlay of the home owners, administratively this would be extremely difficult, says Poole, "in a large country, with a variety of local conditions, and with a tradition of local autonomy in property tax matters . . ." 4

Poole calls attention to another problem which would arise only at the time of the inception of an expenditure tax. Those who are able to engage in anticipatory buying prior to the effective date of such a tax probably would gain a substantial advantage. The wealthy individual could anticipate some of the next several years of his spending on durables; low-income groups would be protected by the basic exemption. The large proportion of the population in middle income groups, however, with typically large fixed commitments for mortgages, insurance premiums, and durable purchases, would be discriminated against seriously.

---

An important problem is that the best administrative machinery which has been suggested to date is relatively cumbersome. The report form proposed in 1942 (Exhibit 1) capsules the administrative problems. Not only does it require fairly complicated computation, it also presumes something approaching double-entry bookkeeping and balance-sheet accounting on the part of individual taxpayers. It requires all of the data presently necessary for an income tax return, plus information on the receipt and presentation of gifts, repayment of loans, borrowing and lending transactions, payment on life insurance, annuities and pensions, repayment of debt, cash and bank balances and any other receipts which might come the taxpayer's way, including, presumably, the discovery of a trunk full of money in the attic. Since most taxpayers justifiably do not keep such records, and since the checking of this kind of detail if the records did exist would involve a great deal of work for the Internal Revenue Service, it is obvious that opportunities for evasion are plentiful and tempting.

The report form suggests Fisher may have been somewhat optimistic in his contention that this tax would be easy to administer. If the administrative problem could be solved, however, the expenditure tax might well be worth serious consideration as an alternative to the income tax.
VII. REVENUE POTENTIAL OF THE TAXES

An important aspect of any new tax is the amount of revenue it is likely to yield at practical rate schedules. For instance, if it is already clear that a particular tax will have a number of undesirable economic effects and its revenue potential turns out to be negligible, then any hesitation about introducing the tax is readily resolved. On the other hand, if the revenue potential of the tax is quite large, one might be tempted to tolerate the disadvantages.

In this chapter, estimates have been made for a national retail sales tax, a manufacturers sales tax, a wholesalers sales tax, and a value-added tax. No estimates were made for a multi-stage turnover tax or an expenditure tax, since suitable data were unavailable. Appendix I explains the computational methods and gives sources.

The Retail Sales Tax

Table 15 gives estimates of the revenue from several forms of a Federal retail sales tax. Such a tax in its broadest aspect would cover all items of personal consumption expenditures except those for housing, education, and religious and charitable purposes. But any base actually used probably would exclude some or all of the items of basic necessity, such as food, drugs, and clothing. Several such bases are shown in Table 15. Fairly substantial revenues would be forthcoming from virtually all the bases considered, even at a rate of 5 percent. It should be noted that many items would be taxed at a lower rate than under the present excise tax. For instance, Base D, which excludes clothing, drugs, and food, as well as the non-retail items of consumption mentioned earlier, would have brought in revenue of $8.2 billion.

<table>
<thead>
<tr>
<th>Base</th>
<th>Estimated Revenue (billions)</th>
<th>1964</th>
<th>1965</th>
<th>1967</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3%</td>
<td>$5.2 $5.4 $5.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5%</td>
<td>8.8 9.1 9.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3%</td>
<td>5.8 6.0 6.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5%</td>
<td>9.7 10.1 10.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3%</td>
<td>8.2 8.4 9.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5%</td>
<td>13.6 14.0 14.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3%</td>
<td>4.9 5.1 5.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5%</td>
<td>8.2 8.4 9.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Base A includes following major commodity groups, as defined in national income accounts: tobacco, clothing, accessories and jewelry, items of personal care, items used in household operation (such as furniture, appliances, nondurable supplies), transportation (user-operated and purchased), items of recreation, and expenditures by foreign tourists.

b. Base B includes all the items in Base A, plus purchased meals and beverages.

c. Base C includes all the items in Base B, plus drugs, and all food except that produced and consumed on farms.

d. Base D includes all the items in Base B, except clothing.

Source: See Appendix I.
in 1964 at 5 percent. If clothing is added to the base, then revenue increases to $8.8 billion (as in Base A); the addition of purchased meals and beverages (Base B) increases the revenue still further to $9.7 billion. Probably the broadest base conceivable might include even medicine and all food except, of course, that which is produced and consumed on the farm. A base this broad (Base C) would have yielded $13.6 billion at 5 percent in 1964.

Manufacturers Sales Tax

The estimated base of a manufacturers sales tax (in lieu of present selective excises), and its yield at 5 percent, are shown in Table 16. It is presumed a tax on manufacturers sales would exempt, at a minimum, foodstuffs and sales by one manufacturer to another. Unfortunately, no reliable figures for the latter component exist. The deduction for intra-manufacturer sales is a very rough estimate; as a consequence, the estimate of yield may be in error by as much as $3 or $4 billion. The revenue from a manufacturers sales tax, in view of the possible estimating error, might be much less than often implied, roughly $7.7 billion in 1964 at 5 percent if food and intra-manufacturer sales are exempted.

<table>
<thead>
<tr>
<th>Table 16</th>
</tr>
</thead>
</table>

**Estimated Base and Yield at 5 Percent of Manufacturers Sales Tax, Selected Years, 1964 - 1967**

<table>
<thead>
<tr>
<th>Base</th>
<th>Base</th>
<th>1964</th>
<th>1965</th>
<th>1967</th>
<th>Tax yield at 5 per cent</th>
<th>1964</th>
<th>1965</th>
<th>1967</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Base A: total manufacturers sales</td>
<td>$425.3</td>
<td>$436.8</td>
<td>$459.8</td>
<td>$21.3</td>
<td>$21.8</td>
<td>$23.0</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Less: Intra-manufacturers sales</td>
<td>210.5</td>
<td>216.2</td>
<td>227.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Base B (Line 1 minus Line 2)</td>
<td>214.8</td>
<td>220.6</td>
<td>232.2</td>
<td>10.7</td>
<td>11.0</td>
<td>11.6</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Less: Food and beverage manufacturing</td>
<td>60.0</td>
<td>61.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Base C (Line 3 minus Line 4)</td>
<td>154.8</td>
<td>159.4</td>
<td>167.8</td>
<td>7.7</td>
<td>8.0</td>
<td>8.4</td>
<td></td>
</tr>
</tbody>
</table>

Source: See Appendix I.

<table>
<thead>
<tr>
<th>Table 17</th>
</tr>
</thead>
</table>

**Estimated Base and Yield at 5 Percent of Wholesalers Sales Tax, Selected Years, 1964 - 1967**

<table>
<thead>
<tr>
<th>Base</th>
<th>Sales</th>
<th>Yield at 5 per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>All wholesalers</td>
<td>$234.6</td>
</tr>
<tr>
<td>2.</td>
<td>Wholesalers of groceries and related products</td>
<td>33.6</td>
</tr>
<tr>
<td>3.</td>
<td>All wholesalers except of groceries and related products</td>
<td>201.0</td>
</tr>
</tbody>
</table>

*Includes manufacturers' sales branches and offices.

Source: See Appendix I.
Table 18
Estimated Base, Federal Value-Added Tax,
1964 - 1967
(billions)

<table>
<thead>
<tr>
<th>Component and Year</th>
<th>Total Taxable bases</th>
<th>Less Farms</th>
<th>Less Services</th>
<th>Base subject to lower rate</th>
<th>Base subject to full rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Compensation of employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>$277.2</td>
<td>$3.6</td>
<td>$28.4</td>
<td>$32.0</td>
<td>$245.2</td>
</tr>
<tr>
<td>1965</td>
<td>291.8</td>
<td>3.8</td>
<td>30.7</td>
<td>34.5</td>
<td>257.3</td>
</tr>
<tr>
<td>1966</td>
<td>325.5</td>
<td>4.3</td>
<td>36.0</td>
<td>40.3</td>
<td>285.2</td>
</tr>
<tr>
<td>B. Interest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>8.8</td>
<td>0.7</td>
<td>0.9</td>
<td>1.6</td>
<td>7.2</td>
</tr>
<tr>
<td>1965</td>
<td>9.2</td>
<td>0.8</td>
<td>1.0</td>
<td>1.8</td>
<td>7.4</td>
</tr>
<tr>
<td>1966</td>
<td>10.3</td>
<td>0.9</td>
<td>1.2</td>
<td>2.1</td>
<td>8.2</td>
</tr>
<tr>
<td>C. Rent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>30.8</td>
<td>1.8</td>
<td>0.2</td>
<td>2.0</td>
<td>28.8</td>
</tr>
<tr>
<td>1965</td>
<td>31.7</td>
<td>1.9</td>
<td>0.2</td>
<td>2.1</td>
<td>29.6</td>
</tr>
<tr>
<td>1966</td>
<td>32.9</td>
<td>2.1</td>
<td>0.3</td>
<td>2.4</td>
<td>30.5</td>
</tr>
<tr>
<td>D. Profits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>104.8</td>
<td>6.2</td>
<td>16.8</td>
<td>23.0</td>
<td>81.8</td>
</tr>
<tr>
<td>1965</td>
<td>110.1</td>
<td>6.4</td>
<td>18.1</td>
<td>24.6</td>
<td>85.6</td>
</tr>
<tr>
<td>1966</td>
<td>121.6</td>
<td>6.8</td>
<td>20.7</td>
<td>27.5</td>
<td>94.1</td>
</tr>
<tr>
<td>E. Capital attrition (deduct)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>37.6</td>
<td>3.1</td>
<td>3.9</td>
<td>7.0</td>
<td>30.6</td>
</tr>
<tr>
<td>1965</td>
<td>39.6</td>
<td>3.0</td>
<td>4.3</td>
<td>7.3</td>
<td>32.3</td>
</tr>
<tr>
<td>1966</td>
<td>43.7</td>
<td>3.1</td>
<td>5.1</td>
<td>8.2</td>
<td>35.5</td>
</tr>
<tr>
<td>F. Total base (A + B + C + D minus E)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>384.0</td>
<td>9.2</td>
<td>42.4</td>
<td>51.6</td>
<td>332.4</td>
</tr>
<tr>
<td>1965</td>
<td>403.2</td>
<td>9.9</td>
<td>45.7</td>
<td>55.7</td>
<td>347.6</td>
</tr>
<tr>
<td>1966</td>
<td>446.6</td>
<td>11.0</td>
<td>53.1</td>
<td>64.1</td>
<td>382.5</td>
</tr>
</tbody>
</table>

a. Excludes government, households, and institutions.
b. Sum of farms and services.
Source: See Appendix I.

Wholesalers Sales Tax

The estimated base and yield of a wholesalers sales tax, shown in Table 17, is slightly larger than that of the manufacturers sales tax. If food is exempted, the wholesaler sales tax would yield $10 billion in 1964 at 5 percent.

Value-added Tax

The size of various bases for the value-added tax and the revenue from these bases are shown in Tables 18 and 19. Table 18 makes allowance for special treatment of the agriculture and service industries, but does not allow for a minimum exemption of gross receipts, such as incorporated in the Michigan tax. The provision of such an exemption can make a considerable difference in the total base, depending, of course, on the size of the exemption. It is difficult, however, to develop an accurate estimate of the precise effect of such an exemption; too little is known about the distribution of firms according to the size of their gross receipts. A very rough imputation may be made by assuming a correspondence between the number of employees and value-added. Such a computation would show that, in 1962, an exemption of $50,000 of gross receipts would have removed approximately $55 billion and 3 million firms from the base; a basic exemption of $100,000, roughly $75 billion and 3.4 million firms.
Table 19
Estimated Revenue at Various Rates, Federal Value-Added Tax, 1964-1967*  
(billions)

<table>
<thead>
<tr>
<th>Rates</th>
<th>1964</th>
<th>1965</th>
<th>1967</th>
</tr>
</thead>
<tbody>
<tr>
<td>3% on all industries</td>
<td>$11.5</td>
<td>$12.1</td>
<td>$13.4</td>
</tr>
<tr>
<td>5% on all industries</td>
<td>19.2</td>
<td>20.2</td>
<td>22.3</td>
</tr>
<tr>
<td>3% on farms and services; 7% on others</td>
<td>24.8</td>
<td>26.0</td>
<td>28.7</td>
</tr>
<tr>
<td>5% on farms and services; 10% on others</td>
<td>35.8</td>
<td>37.5</td>
<td>41.4</td>
</tr>
<tr>
<td>Farms and services excluded; 5% on others</td>
<td>16.6</td>
<td>17.3</td>
<td>19.1</td>
</tr>
<tr>
<td>Farms and services excluded; 10% on others</td>
<td>33.2</td>
<td>34.7</td>
<td>38.2</td>
</tr>
</tbody>
</table>

a. Excludes government, households, and institutions.
Source: See Appendix I.

Relative Yields

Figure 1 shows, in bar chart form, the probable yield in 1965 of each tax discussed in this chapter, compared with the estimated revenue from the present excise taxes and corporation income tax. The revenue from each alternative tax is computed on the assumption of a 5 percent rate.

Figure 1
Estimated Revenue from Existing Taxes and Selected Alternative Taxes, 1965  
(Alternative Taxes at 5 percent)

Present Taxes

Alternative Taxes

Value-added, all industries
Value-added, food & services exempt
Retail sales, Base C
Retail sales, Base A
Wholesalers' sales
Manufacturers' sales

Source: Tables 15, 16, 17, and 19, above.
The preceding sections have considered a variety of potential revenue sources for a revised Federal tax system, pointing out desirable, undesirable, and controversial effects. This section undertakes a comparative evaluation of the alternative taxes.

Table 20 provides some tentative ratings of the taxes examined in this study. Ratings with "scientific" precision are impossible, for most ratings must involve some subjective judgments. The objective is to apply a systematic method for evaluating and comparing taxes.

Ratings of A through E are assigned to each tax in connection with various criteria. The rating A indicates the tax has especially desirable effects in connection with the criteria involved; B designates good effects; C, fair; D, poor; E, exceptionally poor; I, insignificant effect; X, impossible to evaluate. In some cases there are two ratings, one for forward shifting (f), and one for backward shifting (b) or no shifting (n). The table may be read either horizontally or vertically. Horizontally what is shown is effectively a comparative rating of the taxes with reference to each criterion. The vertical rating may be taken as an "evaluation" of each tax. The vertical rating, however, must be tempered by the relative importance of the various criteria. One person, for instance, might consider resource allocation and growth effects more important than stability, or welfare not quite so important as equity, etc. Thus any final judgment of a particular tax will depend in large part on the weights assigned to the various criteria.

THE CRITERIA

The list of criteria in Table 20 covers those major items which, in the writer's opinion, are most significant for the evaluation of a tax. Ratings of the present Federal income and excise taxes are also included for use as a reference base, even though they have not been discussed in detail in this paper. It should be noted that rating "theoretical" taxes—those not in use—relative to actual taxes tends to give the "theoretical" tax an advantage because rating is on the basis of the ideal form. In various instances, the actual tax undoubtedly is rated lower than would be its theoretical counterpart.

Burden on Poor and Related Considerations

The excise taxes have relatively little effect on the poor, even if no exemptions are allowed, if one assumes that shifting of the tax moves backward to owners of the factors of production. On the other hand, if the tax is shifted forward to the consumer, then the ratings become D or
### Table 20
Evaluation of Potential and Existing Federal Taxes on Basis of Selected Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Rating of Tax¹</th>
<th>Present Excise</th>
<th>Present Income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Retail sales</td>
<td>Manufacturers sales</td>
<td>Wholesale sales</td>
</tr>
<tr>
<td>1. Burden on Poor and Equivalent Treatment</td>
<td>D-f,C-b</td>
<td>E-f,C-b</td>
<td>E-f,C-b</td>
</tr>
<tr>
<td>a. Burden on poor (no exemptions)</td>
<td>D-f,C-b</td>
<td>E-f,C-b</td>
<td>E-f,C-b</td>
</tr>
<tr>
<td>b. Exemptions: feasible</td>
<td>B</td>
<td>D</td>
<td>E-f,C-b</td>
</tr>
<tr>
<td>c. Equal coverage of similarly situated</td>
<td>B</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>taxpayers</td>
<td>B</td>
<td>B</td>
<td>C</td>
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<tr>
<td>a. Tax-induced structural (e.g., methods)</td>
<td>B</td>
<td>B</td>
<td>C</td>
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<tr>
<td>2. Resource Allocation and Growth of doing</td>
<td>I</td>
<td>I</td>
<td>I</td>
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<tr>
<td>business distortions</td>
<td>C-f,E-b</td>
<td>C-f,E-b</td>
<td>C-f,E-b</td>
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<tr>
<td>b. Flight of resources from taxed industry</td>
<td>C-f,E-b</td>
<td>C-f,E-b</td>
<td>C-f,E-b</td>
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<tr>
<td>c. Economic neutrality between use of labor/capital</td>
<td>B</td>
<td>B</td>
<td>B</td>
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<tr>
<td>d. Pyramiding</td>
<td>A</td>
<td>D</td>
<td>C</td>
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<tr>
<td>e. Effect on savings and investment</td>
<td>I</td>
<td>I</td>
<td>I</td>
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<tr>
<td>f. Work incentives</td>
<td>A</td>
<td>B</td>
<td>A</td>
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<td>g. Export exemption</td>
<td>A</td>
<td>B</td>
<td>A</td>
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<td>a. Effect of tax collections on business</td>
<td>D</td>
<td>D</td>
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<td>cycle</td>
<td>D</td>
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<td>4. Revenue</td>
<td>D</td>
<td>D</td>
<td>D</td>
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<tr>
<td>a. Revenue potential</td>
<td>B</td>
<td>C</td>
<td>C</td>
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<tr>
<td>5. Administration and Compliance</td>
<td>B</td>
<td>C</td>
<td>C</td>
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<tr>
<td>a. Ease of taxpayer or taxable commodity</td>
<td>A</td>
<td>B</td>
<td>B</td>
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<tr>
<td>identification</td>
<td>A</td>
<td>B</td>
<td>B</td>
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<tr>
<td>b. Adequacy of records</td>
<td>C</td>
<td>B</td>
<td>B</td>
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<tr>
<td>c. Number of taxpayers</td>
<td>C</td>
<td>B</td>
<td>B</td>
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<tr>
<td>d. Compliance and administration costs</td>
<td>C</td>
<td>C</td>
<td>C</td>
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<tr>
<td>per dollar of revenue</td>
<td>C</td>
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<td>C</td>
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¹ Rating code as follows: A—exceptionally good; B—good; C—fair; D—poor; E—exceptionally poor; I—insignificant effect; X—impossible to evaluate; NA—not applicable; f—when forward shifting to consumers, in form of higher prices, occurs; b—when backward shifting to owners of factors of production, in form of lower factor prices, occurs; n—when tax is not shifted.
poor, for the broad-based excise, retail sales tax, and value-added tax. The multi-stage turnover tax as well as the manufacturers and wholesalers sales taxes are rated E or exceptionally poor, because pyramidizing adds to the adverse effects. The expenditure tax also is rated as poor. The corporation income tax presents special problems, since in some cases it may rest entirely on stockholders and in others may be shifted forward to the consumer either partially or wholly. In the former case, the tax probably imposes relatively little burden on most very low-income persons, affecting only those who are stockholders; to the extent the corporation income tax is shifted forward, it burdens the lowest income group and therefore must be rated poor.

Appropriate exemptions, when possible, can considerably lessen the burden on the lowest income groups. Exemptions based on the economic condition of the user probably are not feasible under the manufacturers sales, multi-stage turnover, value-added, or corporation income taxes, since the final use of products can be extremely difficult to define at the earlier stages of production at which the tax would be imposed. Exemption of medicines, for example, might have to begin as exemption of multi-purpose chemicals. Except in the case of food, it might be impossible to develop exemptions which would reduce the relative burden of these taxes on the poor.

Each of the ratings under I(c) involves judgments as to what is meant by "similarly situated" in each case. The method of defining the base of the tax inevitably excludes some commodities and services which are similar to and competitive with taxed articles. Such difficulties arise under the present excise tax, which is rated as poor. The wholesalers tax is rated as fair, a higher rating being precluded by the difficulty of identifying wholesalers and the possibility that some wholesale transactions could be concealed so as to escape tax. Those taxes applying to all transactions, such as the multi-stage and value-added taxes, and those applying to functions which can be defined clearly, such as manufacturing and selling at retail, are rated as good in equal coverage. The highest rating goes to the expenditure tax, provided one accepts the framework of its definition of relevant taxpayer status (i.e., level of spending).

**Resource Allocation and Growth**

One of the factors involved in resource allocation and economic growth is the possibility of tax-induced structural distortions. To the extent that a particular tax causes individuals or businesses to change their methods of earning income to reduce tax, i.e. decisions are based on after-tax income, growth and efficiency will be inhibited. The worst offender in this respect is the multi-stage turnover tax, which is rated as exceptionally poor because it encourages vertical integration of manufacturing, wholesaling, and retailing functions even in cases in which other economic considerations argue against integration. The present corporation tax is subject to similar criticism; its many special provisions distort a variety of business decisions. Similarly, the present individual income tax leads to such distortions as the substitution of fringe benefits in lieu of higher salaries, preference for capital gains income, and so on. The value-added tax, on the other hand, could be good by this standard; even though it is a multi-stage tax, it gives no special advantage to any one form of business organization or type of operation. The remaining taxes would appear to have no particular effect on structural decisions except as special provisions might be made.

2. No allowance is made for the possibility that backward shifting might affect it poor more than any other class, even if it might be established that the major burden fell on labor. Many with low incomes are not in the labor market. For those employed, there is little reason to assume that a relatively poor, and presumably unskilled, laborer would be affected any more than the worker with high specialized skills. In some ways, of course, adverse effects on many factors, including resource allocation, growth and stability, probably harm the poverty stricken family more than others; marginal workers are likely to be among the first to feel the damage from anything which harms the economy as a whole.
Another possible effect of each tax is that it might induce resources to move out of the taxed sector. To the extent that the original resource allocation was relatively good, such tax-motivated changes probably would reduce overall productivity. If the tax is shifted forward to consumers, these distorting effects are minimized. If, on the other hand, the tax is shifted backward to factor owners, then resources will move, to the extent this is possible, into untaxed or less heavily taxed sectors. The expenditure tax, the present individual income tax, and the corporation income tax may be relatively free of this result, assuming that backward shifting is insignificant. If backward shifting occurs, this effect can be serious in the case of the excise-type taxes.

The use of relatively more of any one of the factors of production, primarily labor or capital, solely because of forces growing out of taxation also reduces economy-wide efficiency. The present corporation income tax is especially deficient in this respect, insofar as it falls relatively heavily on returns to capital. Taxes imposed on the sale of commodities (other than producers goods), however, do not bias normal economic choices between the relative use of factors, and thus all the potential sales and turnover taxes are rated as good under this criterion, on the assumption that producers goods could be made negligible in the base. The present excise tax system, which includes some producers goods, is rated as only fair.

Pyramiding of a tax is another effect which tends to distort resource allocation. When the forward shifting on which pyramiding depends does occur, then the multi-stage turnover tax is rated as especially bad and most of the other sales taxes are rated as poor. The value-added tax, on the other hand, is rated as especially good, since the nature of the tax eliminates pyramiding. The retail sales tax also rates well, since no stages intervene between imposition of the tax and sales to consumers.

Two effects in resource allocation are concerned primarily with reactions to the tax. Taxes related to the sale or production of commodities have only indirect bearing by these standards. The individual income and corporation income taxes, however, contain various provisions that are said to have a dampening effect on savings and investment, and therefore are rated as only fair on this score. The expenditure tax, on the other hand, by avoiding so-called "double taxation" of savings, qualifies as exceptionally good. It is also felt by some writers that the steeply progressive rates in the present income tax have a negative effect on ambition and work incentive generally. The expenditure tax has the merit of not inevitably penalizing additional income with successively higher tax bills, and thus is rated as especially good.

Satisfactory economic growth also requires that the United States be able to compete effectively in world markets. If commodities produced for export must bear U. S. taxes, or if domestic firms must compete with imports bearing less tax, American firms will be at a disadvantage relative to firms from countries without comparable taxes. Thus the possibility of exempting exports is an important aspect of a tax. The value added, wholesaler sales, and retail sales taxes all lend themselves easily to exemptions for exports and compensating levies on imports. Under the General Agreement on Tariffs and Trade (GATT), exemption of the corporation income tax is not permitted. Exemptions would be complicated, but possible, under the other types of taxes.

Stability of the Economy

One effect depends on how tax collections contribute to the business cycle, aggravating or dampening it. Collections for income taxes, particularly corporation income taxes, have the special advantage under the present system of tending to rise more than national income in expansions, thus reducing inflationary pressures, and falling rapidly in periods of decline, thus withdrawing less from
funds available for consumption and investment. Federal commodity taxes probably would have relatively little effect or a slightly contra-cyclical effect on the business cycle, since they tend to represent a fairly consistent percentage of gross national product in both prosperity and depression, and hence are rated poor. The expenditure tax presumably would be somewhat like the sales taxes in its effects.

Revenue

The taxes best for producing a high yield are the present income taxes, the multi-stage turnover tax, and the value-added tax. Because of the rather large coverage, even at quite low rates, the retail sales tax and expenditure tax also would yield fairly large revenues. Taxes imposed early in the production process, such as the manufacturers and wholesalers sales taxes, however, would yield relatively smaller revenues.

Administration and Compliance Problems

Ease of identification of taxpayers and/or taxable commodities is a factor in administration. The most difficult problem of identification arises in connection with selective excise taxes, for which there are as many bases as there are taxable commodities; therefore, the present excise system must be rated as poor in this connection. The wholesalers tax is rated as only fair because taxpayer identification can be somewhat fuzzy; all the other taxes are rated either good or excellent.

The adequacy of taxpayer records for tax auditing purposes is also a consideration. Small retailing firms are notorious for their usual record-keeping habits, and thus each of the taxes involving retailers is rated as fair. Most individuals probably are as indifferent about records as small retailers, and thus both the income and expenditure taxes are rated only fair. Manufacturers, wholesalers, and corporations typically keep more detailed records and these taxes are rated as good.

The fewer taxpayers affected by a particular tax, the easier will be administration. The only taxes rated as good under this point are the manufacturers sales, wholesalers sales, and corporation income taxes All others involve larger numbers of taxpayers and are rated fair or poor.

Compliance costs, either as an absolute amount or as a fraction of tax liability, are exceedingly difficult to estimate. It would appear that excise taxes might create rather large administration and compliance costs per dollar of revenue. The various sales taxes and the value-added tax are rated as fair. The income taxes, on the other hand, require extremely low administrative expenses per dollar of revenue, and are rated excellent.

WHICH TAX IS 'BEST'?

Now that the taxes have been rated on a multiplicity of criteria, is it possible to conclude that one or more is clearly superior to the taxes presently levied at the Federal level? Is it possible for instance to add the scores for each tax and then say that the tax with the highest score is the most desirable? The answer is no, for the reason given earlier—no, because it can by no means be assumed that each of these criteria is equally important. Moreover, yet another consideration, that of political practicability, must be raised.

A scoring system could be useful, however, if one were able to assign relative weights to each of the criteria, or, at least, to the major categories. For instance, one might decide that stability is twice as important as administration and thus the stability score would be adjusted before the total score was computed, and so on. But judgments about the relative importance of each of the major criteria

3. For exception, see supra, pp. 41-42.
will vary widely from individual to individual. In part, the weights attached to the criteria will reflect one's evaluation of the strengths and weaknesses of the present tax system. They will depend, too, on whether one thinks of a new tax as supplementing or substituting, either partially or wholly, for present taxes. The weighting might also depend on general economic conditions at the time possible tax changes are being considered.

The specification of appropriate weights is a problem outside the scope of this study. The purpose here has been to make explicit, so far as possible, the factors relevant to the available choices.
APPENDIX I

REVENUE ESTIMATING METHODOLOGY

Retail Sales Tax

The revenue estimates for yields of a national sales tax were based on projections of the consumption patterns for major commodity groups, the components of which are listed in the footnote to Text Table 15. Trend equations were developed for the consumption of these commodities as a percent of personal income, using least-square techniques. Thus the projections assume that expenditures for specific commodity groups in relation to personal income will follow the same pattern as in the period from 1950-1963. Basic data were taken from publications of the Office of Business Economics, U.S. Department of Commerce.

Personal income projections were based on trend equations made available by the National Industrial Conference Board.

Various rates, as indicated, were applied to consumption totals to obtain the estimated tax yields.

Manufacturers Sales Tax

Total manufacturers sales were projected on the basis of a least-squares trend equation, computed for the period 1945-1962. The non-corporate portion of total sales and total food manufacturing sales were derived from Treasury Department data published in Statistics of Income. Total manufacturers sales, based on the trend projection, were then adjusted to obtain estimates of corporate sales, excluding food.

The major problem in the computation of the manufacturers sales tax was the elimination of sales by one manufacturer to another manufacturer. None of the available source material on manufacturer sales gives data on this type of transaction. Intra-manufacturer sales, therefore, were estimated by two methods. The first, based on national income accounts, gives an overstated figure. Value-added by retailers and wholesalers was deducted from total retail sales to obtain an approximation of cost of goods sold. This latter component is roughly equal to manufacturing sales to non-manufacturing purchases; the balance of manufacturing sales should represent intra-manufacturing sales. On this basis, intra-manufacturing sales ran about two-thirds of total manufacturing sales.

An alternative estimate was obtained by deducting from sales those commodity classes which could be clearly identified as applying to industrial purchases. Figures on value of shipments for various industry subgroups, as given in Concentration Ratios in Manufacturing Industries, 1958, a report prepared for the Senate Subcommittee on Antitrust and Monopoly (1962), were used to obtain the approximate percentage going into such sales. For instance, the industrial subclassification “glass containers” clearly would represent sales to primarily industrial users. The figure thus computed was 33 percent.

The arithmetic mean of the minimum and maximum estimates, 49.5 percent, was taken as a measure of intra-manufacturer sales.

Wholesalers Sales Tax

Wholesalers sales were estimated by projecting the trend in the relationship of these sales to gross national product observed during the period 1945-1962. GNP product projections were made...
from trend equations prepared by the National Industrial Conference Board. Basic data on wholesalers sales for the period of the trend study were derived from information published by the Treasury Department in *U.S. Business Tax Returns*, which reports business receipts for establishments engaged primarily in wholesaling, plus information from the U.S. Department of Commerce publication, *1958 Census of Business, Vol. IV*, covering sales of a wholesale nature transacted by manufacturers' sales branches and offices. It was assumed that sales of groceries and related items would bear the same relationship to total wholesalers sales in the years projected as in the period 1945-1962.

**Value-added Tax**

The value-added tax was estimated in five separate parts: compensation of employees, interest, rent, profits, and capital attrition.

Figures for compensation of employees were taken directly from national income data, as reported in *Survey of Current Business* and *U.S. Income and Output*. Compensation of employees was estimated to be a slowly increasing proportion of personal income. From this total was deducted compensation originating in government, households, and institutions to obtain the maximum taxable base. To estimate the base subject to a lower rate, deductions were made for farming and for services, based on past trends.

Balance sheet data from *Statistics of Income*, U.S. Treasury Department, were used for estimating the four remaining components.

Interest paid to individuals was assumed to be equivalent to the difference between interest paid and interest received (other than that on government obligations). The financial sector was excluded from computations. Corporate and noncorporate interest payments to individuals were computed on the basis of past relationships to GNP. Interest paid by incorporated farms was estimated on the basis of linear trend analysis, and the noncorporate agricultural sector on the basis of its past relationship to the corporate figure. Interest paid by incorporated services was projected on a linear trend; the noncorporate sector was estimated at the same size as the corporate sector.

Similarly, rents received were deducted from rents paid to obtain an approximation of rent paid to individuals. Corporate rent to individuals was estimated on the basis of its past relationship to GNP, and noncorporate rent as a declining portion of corporate rent, based on past trends. Similar procedures were used for projections of corporate and noncorporate farm rent and rent payments in the service industries.

The balance sheet item of compiled net profits was used as a measure of the profits element. Projections were derived from annual trends in the relationship of the components to GNP and to total corporate profits.

Similar procedures were utilized for estimating the components of capital attrition. Capital attrition was taken as the sum of amortization, depreciation, and depletion minus short-term and long-term capital gains reduced by capital loss.
APPENDIX II

EFFECTS OF EXCISE TAXES ON PRICES AND FACTOR INCOMES

The following model is designed to show that under certain conditions the effect of partial excise taxes is simply to raise the relative prices of the items taxed.

ASSUME: (1) that an excise tax of 10 percent is levied on goods accounting for 10 percent of total output,
(2) that monetary conditions remain the same in the sense that the general price level for final goods and services is the same after the tax is levied as before,
(3) that perfectly competitive conditions hold in factor markets so that the same rates of return must go to factors in the taxed as in the untaxed sectors after the tax is levied,
(4) that there is no significant difference in the proportions of the factors used in the two sectors,
(5) that all goods and services are produced under conditions of constant costs.

Since the general price level of final goods and services remains unchanged, the levying of this excise tax must result in a fall in factor prices (passing over the difficulties of exactly how “monetary conditions” remain the same). Factor prices must fall because indirect taxes are the difference between output valued at “market prices” and output valued at factor prices. For aggregative equilibrium to be maintained, it may be assumed that the excise tax revenue is returned to the economy in transfer payments or that the excise tax is levied as a substitute for an equivalent income tax.

The following algebra then shows that the result of levying an excise tax of 10 percent on 10 percent of output is to cause a fall in the price level of untaxed goods of 1 percent and a rise in the price level of taxed goods by 9 percent over their pre-tax levels.

Let \( P_n^0 \) = the price level of untaxed goods after the tax is levied (\( P_o = 100 \))
\( P_t^1 \) = the price level of taxed goods after the tax is levied (\( P_t = 100 \))

The general and partial price levels are 100 in period 0, before the tax is levied. Weighting the indexes in the proportions assumed,
\[ .9P_o^0 + .1P_t^0 = 100. \]

Assume further that the same proportion of total expenditures goes to the taxed goods after the tax is levied as before (i.e. elasticity of demand for taxed items is unity—whatever figure is chosen here, the results below are essentially the same).

Then:
\[ .9P_n^1 + .1P_t^1 = 100 \quad (1) \]

The tax, under the conditions assumed, will mean a 10 percent markup on factor costs in the taxed sector.

Then:
\[ P_t^1 = 1.1P_n^1 \quad (2) \]

Substituting in (1), we have:
\[ .9P_n^1 + .1(1.1P_n^1) = 100 \quad (3) \]

This comes to:
\[ 1.01P_n^1 = 100 \]
Or: \( P_n^1 = 99 \), and \( P_t^1 = 109 \).

Since the prices of untaxed goods fall in proportion to factor prices, consumers who buy only untaxed goods are in the same real position as before. The effect of the tax is to reduce the real income of consumers of the taxed items.