Table 11

Estimated Excise Tax Burden for Urban Families Reporting Expenditures on Selected Taxable Items

By Income Class

1960-1961

	All classes	Money income class (Income after personal taxes)									
		Under $1,000	$1,000 to 1,999	$2,000 to 2,999	$3,000 to 3,999	$4,000 to 4,999	$5,000 to 5,999	$6,000 to 7,499	$7,500 to 9,999	$10,000 to 14,999	$15,000 and over
	Estimated tax as a percent of income before taxes										
Alcoholic beverages	1.50	4.50	3.60	2.29	1.89	1.69	1.37	1.34	1.17	1.12	.75
Tobacco	.81	3.49	1.95	1.47	1.21	1.04	.92	.80	.67	.50	.29
Telephone and telegraph[a]	.25	.98	.52	.38	.33	.29	.26	.25	.22	.20	.15
Auto purchase[b]	.49	.21	.47	.36	.54	.55	.46	.41	.42	.40	.24
Auto operation	1.14	3.60	2.11	1.72	1.59	1.31	1.17	1.07	.92	.78	.41
Club dues	.06	.18	.07	.06	.04	.03	.03	.03	.04	.04	.08
Spectator admissions	.04	.02	.08	.06	.05	.04	.04	.04	.03	.03	.02
	Percent of families reporting expenditure item										
Alcoholic beverages	62	20	25	38	55	61	69	73	79	83	89
Tobacco	70	35	43	59	70	73	75	79	79	74	72
Telephone and telegraph	91	57	73	81	88	93	94	98	98	99	98
Auto purchase	23	2	3	9	18	25	26	28	32	37	35
Auto operation	73	15	19	42	63	78	87	91	93	95	93
Club dues	33	12	15	18	24	29	31	39	45	51	62
Spectator admissions	73	14	29	48	66	77	81	85	91	94	92

Note: The estimates of excise tax burdens in this table were obtained by dividing the percentages in Table 10 by the respective percentage of consumer units reporting corresponding expenditure item. In effect the estimated amount of excise tax in each income class is related to the total income of consumers reporting the item of expenditure, rather than to the income of all consumer units as in Table 10. See text for a discussion of expenditures on durable goods.

a. The portion of these taxes levied on business services was assumed to fall on all consumers.

b. Estimates based on percentage of consumer units reporting expenditures for auto operation.

Source: Tax Foundation estimates based on Bureau of Labor Statistics Survey of Consumer Expenditures 1960-61.

excise tax burden. If the durable good is one that is nearly universally owned, the percentage of families purchasing it in any one year is an approximate indication of the average life of the good. In this case, the average expenditures in one year based on the total number of families. rather than those purchasing the item, is the appropriate indicator of the level of expenditures and of the tax burden in relation to income.

For durable goods which are owned by only a fraction of the population, the percentages of families reporting a purchase in one year reflect both the average life of the product and the proportion of families owning it. In such cases, data on ownership and average life would be necessary to refine the estimates of the burden of excise taxes.

A further difficulty with use of percentages of families reporting various expenditure items is that the resulting estimates of the excise tax burden are not additive. Variations in consumption patterns mean that we cannot add the estimated burden of the tax on tobacco, based on the percentage of families consuming it, to the estimated burden of the tax on alcoholic beverages, based on the percentage of families consuming such beverages. While the majority of families consume both, many consume one and not the other. Without an extensive cross classification, we could not tell in which category different families belonged.

In summary, while Table 11 presents more accurate estimates of the distribution of the burden of individual taxes on items of current and regular consumption, it provides no means of finding the total burden of excises. Table 10 presents an approximation of the total burden of existing Federal excises. It understates the tax burden for families that are heavy consumers of taxable items and overstates it for families that do not consume major taxable items.

Effects on Allocation of Resources. The major excises—those on liquor, tobacco and gasoline—are designed in part to affect the allocation of resources. Liquor and tobacco taxes presumably have some effect in holding consumption below levels they would otherwise reach. Highway user taxes are designed to place the major part of the cost of highways on those who directly benefit.

The large variety of other manufacturers and miscellaneous excises have allocative effects, but such effects are not now part of the purpose of the tax. Most represent attempts to tax "luxuries" and reflect either wartime goals of diverting resources to more essential uses, or of taxing items that presumably would be of more importance in the budgets of higher income families. Some are simply devices to raise revenue with the least "squawk." These taxes affect the allocation of consumer expenditures and of productive resources.[14]

The taxes that fall in substantial part on business costs are more subject to criticism on grounds that they interfere with the allocation of economic resources —that they tend to divert resources into less productive uses than would otherwise occur. The taxes on communications, as noted in Section II, offer an example in that they create an incentive for larger firms to provide their own communications services rather than rely on services of utilities that, in the absence of the tax, would be cheaper not only for the business customer, but also for the general public.

The tax on business and store machines is another tax with a potential excess economic burden in that it provides an inducement for reliance on types of machines that are not subject to the tax. Moreover, the effects of this tax run in the opposite direction to the investment tax credit enacted in 1962 as a stimulus to investment.

14. The 20 percent tax on club dues, it is said, reduces the use of private golf and other recreational facilities and indirectly increases the demand for municipal and other governmentally supplied facilities.

Table 12

Cyclical Changes in Federal Receipts at Constant Tax Rates by Major Source[a]

1953-1963

(Change in quarterly data seasonally adjusted at annual rates)

	Recessions[b]			Expansions[c]		
	1953-1954	1957-1958	1960-1961	1954-1957	1958-1960	1961-1963
Numbers of quarters	4	2	3	13	9	11
	Absolute change in billions					
Federal receipts excluding social insurance contributions	$−2.5	$−6.7	$−5.1	$+14.7	$+17.1	$+20.1[d]
Corporate profits tax accruals	−2.7	−4.7	−3.3	+ 4.1	+ 6.0	+ 8.4[d]
Personal tax and nontax payments	+ .6	−1.5	− .8	+ 8.6	+ 8.4	+ 8.5
Indirect business tax and nontax accruals	− .4	− .6	−1.0	+ 1.9	+ 2.6	+ 3.2
	Percentage change					
Federal receipts excluding social insurance contributions	− 4	−10	− 6	+27	+27	+27[d]
Corporate profits tax accruals	−14	−23	−15	+25	+39	+46[d]
Personal tax and nontax payments	+ 2	− 4	− 2	+30	+23	+19
Indirect business tax and nontax accruals	− 4	− 3	− 7	+18	+22	+24

a. As shown in the national income and product accounts except for exclusion of social insurance contributions. The latter are excluded because of the problems of adjusting for changes in tax rates and because of the limited relevance of these taxes to the choice among general fund tax sources.
b. Change measured from quarter in which GNP reached its peak to quarter in which GNP reached its trough.
c. Change measured from quarter in which GNP reached its trough to quarter in which GNP reached its peak except for the last expansion in which the fourth quarter of 1963 is used.
d. After adjustment for revenue effect of change in depreciation guidelines as well as the investment tax credit.

Source: U.S. Department of Commerce. Adjustments for tax rate changes based in part on Wilfred Lewis, Jr., "The Federal Sector in the National Income Accounts," in **Models of Income Determination, Studies in Income and Wealth, Vol. XXVIII** (Princeton, 1964).

Effects on Economic Stability. The general impression has been that Federal excise taxes do not have significant stabilizing effects on the economy, i.e., yields do not fluctuate significantly with changes in business conditions. However, an analysis of revenues over the past three business cycles does not support this conclusion.

From the point of view of stabilizing effects, the significant question is how much the revenues from different sources tend to rise and fall during different phases of "the business cycle." The response of different revenue sources to long-run growth in the economy is also important, but it is not relevant to the problem of dampening cyclical fluctuations. In the post-World War II years the cycle has had an average length of 42 months.[15]

Table 12 shows the absolute and relative changes in Federal receipts by major source over the last three cycles. The changes are measured from the quarter in which GNP reached its peak (trough) to the quarter in which GNP reached its trough (peak). Social insurance contributions are excluded because of the continuing changes in rates and tax base. Corporation tax receipts clearly show the largest absolute and relative declines during recessions. As between the individual income tax and excises (or indirect busi-

15. U.S. Department of Commerce, Bureau of the Census. *Business Cycle Developments*, April 1964, p. 61.

ness taxes[16]), the latter do not show significantly less tendency to decline in recessions—in fact the percentage decline in indirect business taxes in two recessions was greater for excises than for the individual income tax.

In expansion phases of the business cycle, the yield of the corporation income tax also shows a greater tendency to rise. The individual income tax provides the greatest absolute increase in revenues in expansion periods, but on a percentage basis the difference between the expansion of excise and individual income tax yields is not significant.

The conclusion that excise tax yields are just as responsive (per dollar of revenue) to business cycle fluctuations as are individual income taxes contradicts the widely held belief that the elasticity of income taxes is greater than that of excise taxes. This result appears to be explained in part by the high volatility of excise tax yields on cars. Moreover, there is relatively more cyclical fluctuation in quarterly than in annual excise tax yields.

Effects on Investment and Growth. One of the characteristics of excise taxes is that they put a penalty on various forms of consumption as compared with other uses of income including saving.[17]

Excise taxes may also have an effect on investment through price changes. Broadly based excises tend to raise the price of consumption goods relative to the prices of capital goods. A shift from income to excise taxes that resulted in (a) no change in aggregate demand, (b) some reduction in the prices of the "factors of production," and (c) a rise in the price level of consumption goods subject to tax, could provide an inducement to investment. The cost of producing capital goods would fall as resources tended to shift away from producing taxable consumption goods. Expected rates of return on capital might go down less than wages if the taxable consumption goods industries happened to be "labor-intensive."[18]

A reduction in the corporation income tax, however, might provide more of a stimulus to investment. The reduction in the corporation tax would raise the after-tax rate of return on investment. Insofar as the corporation tax constitutes a penalty on efficiency and provides an "umbrella" for inefficient firms, a reduction in the rate would improve the allocation of resources in the economy.

Other Considerations. One argument advanced for greater reliance on consumption taxes is that many people finance consumption out of sources of income that are not reportable for Federal income tax purposes. Windfalls from gifts and inheritances are undoubtedly often used for consumption expenditures. Capital gains may be used for consumption.

Various kinds of receipts are not reportable for Federal income tax purposes. Interest on tax exempt bonds is a sizable item of nonreportable income for some persons, and yet is a source of receipts for consumption. Many people are able to maintain consumption from reduction in assets or increases in liabilities. Such sources of purchasing power, it is claimed, represent some "ability to pay" taxes.

For these reasons consumption taxes may serve as a useful supplement to the individual income tax.[19]

Collection costs per dollar of revenue

16. Indirect business taxes (as shown in Table 12) at the Federal level are comprised of excise taxes, customs duties, and certain "non-tax" payments to government.
17. The following discussion assumes that the burden of excise taxes falls largely on the consumers of the items taxed. While there are differences of opinion among economists on this point, the assumption used here is the traditional conclusion on the incidence of excise taxes. Appendix II presents an "aggregative" argument in support of this conclusion.
18. J. A. Stockfish, "Excise Taxes: Capitalization-Investment Aspects," *American Economic Review*, June 1954, pp. 287-300. If the taxed consumption goods industries were relatively labor intensive (which seems unlikely for a broad-based tax), the shift of resources out of these industries would tend to reduce wages more than return on capital.
19. Harold A. Somers, "Some Economic Implications of Sales and Excise Taxation," *Excise Tax Compendium. Compendium of Papers on Excise Tax Structures*, submitted to the Committee on Ways and Means, U. S. House of Representatives, in connection with panel discussions on the same subject, June 15 and 16, 1964, Part I, p. 29.

are generally believed to be higher in the case of excise and sales taxes than in the case of income taxes. This is partly because of the larger amount of income tax collections at the Federal level. There is an economy of scale which favors the income tax.[20] Self assessment under the income tax probably serves to shift some of the costs of collection from the government to the taxpayer.

Critics of the present excise tax system also point to the confusing morass of administrative regulations and rulings, which are necessitated by selective taxes. Under the present system, there are as many separate bases as there are separate commodities and services subject to tax. The identification of taxable articles or services can raise complicated problems. The present system forces business men to try to answer such tedious questions as when does a knitting bag classify as a taxable purse, what is a household-type appliance, etc.

The problem is further aggravated, say critics, by the fact that the United States is in a period of rapid technological change in which it is impossible to define the base of a selective tax with any finality, since new products appear on the market continuously.

The fact that 37 states now levy a retail sales tax is an important consideration in extending Federal retailers' excise taxes. Retailers have voiced their concern over the burdens of compliance. Moreover, if the Federal government exploited further a field of taxation which is the major tax source of state governments, it would be charged with encroaching on the rapidly growing needs of state and local governments. Local government needs are significant because in many states local governments rely heavily on state aid financed by state sales taxes.

In summary, with respect to their economic effects, excise taxes have provided a desirable alternative revenue source; they may be almost as effective as the individual income tax in promoting economic stability, and they may provide less discouragement to saving and investment. The balancing of equity versus investment effects involves difficult judgments. Income taxes, as well as excises, have their deficiencies from the point of "equal treatment of equals." Consequently, the extent of reliance on excises beyond sumptuary, user, and regulatory purposes must also depend on evidence and judgments of the effects of income taxes.

20. At the state level, where volume favors the sales tax, costs of collection in relation to yield are often less for a general sales tax than for an income tax. For a general sales tax at the state level, collection costs generally are between one and two percent of yield. (*Retail Sales and Individual Income Taxes in State Tax Structures*, Tax Foundation Project Note No. 38, New York 1962, pp. 38, 53.)

IV.

TURNOVER AND SALES TAXES——

Much of what has been said in previous sections applies to turnover and sales taxes. The major differences arise in connection with the level at which the tax applies, and are concerned primarily with administrative problems and advantages, although there are a few differences in economic effects as well.

MULTI-STAGE TURNOVER TAX

A multiple-stage turnover tax, applying each time goods are sold (sometimes the retail stage is excepted) is subject to many shortcomings. The most notorious is the pyramiding or "cascade" effect. When the tax is applied at an early stage of production, the tendency is for the amount of tax embodied in the product to increase in direct ratio to the number of stages through which it must pass to reach the final consumer. For instance, a wholesaler will tend to mark up a commodity, not on the basis of its cost minus the tax but on the price he paid for it, which includes the tax; and the retailer and anyone else subsequently handling the product may do the same. As a consequence, not only is the price of the commodity itself marked up as it passes through successive hands, the tax also is marked up, and is levied on both prior taxes and markups on taxes.

Pyramiding, in turn, leads to other disadvantages. For instance, the total tax burden on different commodities will vary widely as a consequence of differences in the number of transactions required for the commodity to reach the consumer. Professor Due points out that some of the items subject to the heaviest burden, because of the many stages in their distributive process, are commodities of widespread use, giving the example of clothing relative to many luxury items.[1]

Pyramiding leads not only to differential tax burdens between one commodity and another; it can also result in different burdens on output of firms producing the same items, giving a distinct advantage to firms which incorporate several stages of the productive and distributive functions in one organization. A tax imposed on the full price of each transaction, from the extractive through the manufacturing stage to the final retail sale, clearly creates a strong inducement to reduce the number of intermediate steps. From the moment such a tax is introduced, the integrated firm will have an advantage over the non-integrated firm. This competitive advantage might, in time, drive the manufacturer without a distributive apparatus, or the retailer without manufacturing facilities, out of business altogether. Similarly, manufacturers would be under strong incentive to acquire their own sources of supply and reduce purchases of raw materials so that, even in industries where such a step has never been contemplated, sources of supply would be merged with manufacturers. Capital requirements and other barriers to entry by new firms might become insurmountable, with serious losses to

1. The material on turnover taxes is based primarily on the excellent discussion in John Due, *Sales Taxation*, pp. 354-356.

the viability of competition in the economy.

Problems stemming from the uneven burden created by pyramiding would arise in connection with foreign trade. One would be the difficulty of equalizing tax burdens on imported and domestic goods. Another would be removing from exports those taxes which would penalize firms competing with untaxed firms in foreign markets.

The major advantage of the multiple-stage turnover tax is basically political; it will raise a given amount of revenue at a lower rate than any other tax. The lower rate, of course, reduces the gains to be achieved by evasion of the tax and does, therefore, to some extent simplify administration. Due holds, however, that this advantage is not experienced in fact since the inequities created by multiple stage taxes are greater inducement to evasion than the higher rates of the single stage taxes. Another administrative advantage for the multi-stage turnover tax is the simplicity of interpretation resulting from a tax which applies to all transactions.

SINGLE-STAGE TURNOVER TAXES

Single-stage turnover taxes may be applied at either the manufacturing, wholesale, or retail level. Advantages and problems depend on the level at which the tax is imposed.

When the turnover tax applies only on sales at the wholesale level (i.e., on sales to retailers) certain advantages are seen. For one thing, the number of taxpaying firms is greatly reduced. Also, it is relatively easy to apply a differentiated rate structure at the wholesale level, and the definition of taxable sales is fairly simple. Compared with a manfacturers sales tax, the wholesale tax simplifies the treatment of imports and exports. The tax burden is somewhat more evenly distributed among various commodities, since the problem of differing wholesale margins is eliminated. Moreover, since the tax is imposed close to the retail level, the danger of pyramiding is lessened.

There are, however, a number of disadvantages to the wholesalers tax compared with the manufacturers tax. One of the most troublesome centers around the determination of the wholesale value on which the tax is based. This value is not necessarily the actual price paid by the retailer; adjustments would be necessary in various cases. First, if the actual price were uniformly used as the taxable price, there would be a lower base in three typical situations: sales at quantity discounts sales by manufacturers directly to retailers (typically at lower prices than the products are sold by wholesalers), and sales to retailers performing some of their own wholesaling functions. These cases necessitate the so-called "uplift" of price for tax purposes. For example, a manufacturer of vacuum cleaners might sell most of his output to wholesalers, but some of it to a large department store, at the same price as it charges the wholesalers. If a particular model costs $40, and the wholesaler's typical markup were 10 percent, than the wholesale tax base would be $44, and a five percent tax, $2.20. Unless there is an "uplift" for tax purposes of the sale to the department store, the wholesaler will pay 10 percent more tax than the department store, on exactly the same item. Due points out that any such upward adjustment is strongly resisted by taxpayers.

On the other hand, when the tax applies at the manufacturer level and sales are made directly to retailers, the taxable price does not require uplift. Instead, there must be a downward adjustment, because the price includes payment for services other than manufacturing. Even though the net result is approximately the same as the uplift of the wholesale price, the psychological effect on the taxpayer is markedly better.

Another problem can be raised by small wholesalers. In Canada, for instance, the government experienced difficulties with small establishments which entered the wholesale trade, bought tax free, and then disappeared before payment of tax. Problems also arise in connection with firms conducting both wholesaling and retailing activities, since it is difficult to distinguish between goods to be sold at retail and those at wholesale.

A shortcoming of both the wholesalers and manufacturers tax is that the many services rendered at the retail stage, such as repairs, laundry, and dry-cleaning, are totally excluded from the tax since these services never appear at the earlier stages. If services are to be taxed, separate provision must be made.

The third type of single-stage turnover tax, the retail sales tax, is subject to different shortcomings. It escapes the problems of uplift and pyramiding, but, because it applies to large numbers of relatively small establishments, with typically casual record-keeping practices, administration can be difficult. On the other hand, since the base of the retail sales tax is so broad, it yields large amounts of revenue at relatively low rates.

Since the retail sales tax is extensively used as a source of state revenue, its introduction at the Federal level might engender opposition from the states. In any case, the potential revenue from such a tax would be limited by the fact that the source is already utilized, in some cases quite heavily, by the states.

INCIDENCE OF THE TURNOVER TAXES

The incidence of the multi-stage and various single-stage turnover taxes depends on the extent to which they partake of the nature of a sales tax as distinguished from a corporation income tax. Implicitly, many writers believe there is at least some short-run forward shifting of taxes imposed at the manufacturing or wholesaling level, since such shifting is a necessary condition for the existence of pyramiding. But pyramiding also would intensify the problems which some economists insist subsequently lead to backward shifting of the tax to owners of the resources producing the taxed commodity. Thus the main thing that can be said with certainty about sales taxes levied at the early stages of distribution is that wherever the tax finally rests, the burden is heavier than if the tax had been imposed at the final stage. It also is probable that the percent of total incidence likely to rest on the consumer is less when the tax is imposed at the manufacturing or wholesaling level, since the more stages required to shift the tax in its entirety to the final consumer, the more obstacles are likely to be encountered.

V.

THE VALUE-ADDED TAX

Interest in the value-added tax is currently at an all-time high in the United States. Since both France and Michigan have had experience with this type of tax, and other countries have given it considerable attention, an extensive body of literature has been built on the problems associated with the value-added tax.

The value-added tax, as indicated earlier, is a levy based on the value added at each step in the production and distribution of a commodity or service, from the earliest stage up through the final retail sale. The value-added tax, unlike the ordinary turnover tax, has the meaningful advantage of making allowance for taxes paid at earlier stages of the productive process. This advantage, however, is not without its price, for the computation of value added or the base upon which the tax is levied is not so simple a matter as often implied.[1]

PROBLEMS OF THE VALUE-ADDED BASE

Shoup and other writers point out that, ignoring the depreciation problem, value-added is conceptually quite simple. It may be defined either by the subtraction method or the addition method. In the former case, for any given firm, value-added is equal to total sales receipts after subtraction of payments to other firms for goods and services on which tax has been paid. The addition method bases the tax on the sum of wage, interest, and rent payments to *individuals*, and the owner's profit. Whichever of the two methods is used, the result will be the same. For the economy as a whole, taxable value-added (assuming accurate figures) is more appropriately defined by the addition method: total wages paid, profits earned, and interest and rent payments to individuals in the private sector. In actual practice, however, a number of rather difficult problems are encountered.

Expenditures for business investment purposes raise a particularly difficult problem. How should the purchase of new plant and equipment be treated? Should deduction be allowed for depreciation and obsolescence? What should be done about changes in level of inventory? Where do capital gains and losses fit into the picture?

A variety of patterns might evolve to deal with the problem of capital expenditures. Both depreciation and new capital outlay might be included in the base subject to the tax, one or the other might be deducted from the base or, as in the Michigan case, certain types of capital outlay and depreciation might be made explicitly deductible, with all other business investment expenditures subject to the tax.

When firms pay rent, interest, and dividends to other business firms rather than to individuals, the question arises: which firm has added the value and therefore which firm is subject to the tax? It is by no means apparent in which value-added base these payments are more appropriately included. An arbitrary decision must be made that either the remitting firm or the receiving firm

1. Complication, of course, is relative, and compared with the corporation income tax, the value-added tax is not unduly difficult to compute.

will be liable for the tax. The real necessity is for an orderly and fully consistent method which avoids either overlap or omission of the tax. The most significant difference would occur in the timing of the tax payments when the transactions might spread out over two or more tax periods, but serious discrepancies would rarely occur.

Expense accounts raise another problem, since they are indirect interfirm transactions which would be deductible if they were made directly from one company to the other. When, instead, these payments are made to an employee in recompense for payment the employee has already made to another the proper treatment becomes less clear. For some firms, expense account payments might be quite large relative to direct wage compensation, and consist of two parts, in indefinite proportions: payments which are actually wages, and inter-firm transfers. Inter-firm transfers probably should not be included in the value-added base, and yet their exclusion when they are disguised wage payments would open tempting evasion possibilities.

Another problem stems from the occasional organization which combines charitable, educational, or otherwise normally non-taxable activities with taxable activities under conditions of joint costs. Provisions for such situations must be worked out carefully lest loopholes be created or tax imposed where not desired.

ECONOMIC EFFECTS OF THE VALUE-ADDED TAX

The method selected for the treatment of capital expenditures can have considerable bearing on the impact of the tax upon investment decisions. Shoup has classified the value-added tax into two types on the basis of the method of dealing with capital accumulation, calling them the consumption type and the income type.[2] Under the consumption type, the full cost of capital equipment is deducted from the tax base in the year of purchase. Under the income type, no deduction is allowed for current capital outlay *in toto*, but rather depreciation deductions of the sort now allowed under the corporation income tax are made over the life of the capital equipment.

The primary difference between the two types is that under the consumption concept the tax base is smaller the first year and slightly larger in the following years. The total base added over the full depreciation period is identical under both methods. Clearly, the longer the life span of the capital equipment, the more advantageous (to the firm) is the consumption type of tax, since the longer the payment of the full tax can be deferred, the greater the amount of implicit interest on the tax which accrues to the firm. The firm gains by receiving the entire tax benefit immediately, rather than piecemeal over several years.

Slitor has pointed out that the consumption approach is "more favorable to investment expansion, [since] capital goods are taxed as output but the tax is rebated to business investors. This shifts the burden from investment to consumption and in full operation tends to neutralize the impact of the tax on the return to plant and equipment in the manner of highly accelerated depreciation."[3] Noting that in the case of the rapidly expanding firm, the consumption approach might result in a negative base, Slitor suggests that a carryover of unused capital allowances might be appropriate.

Incidence of the Value-added Tax

Underlying all judgments about the shifting of the value-added tax are assumptions about the incidence of both the excise tax and the corporation income tax.

2. Carl S. Shoup, "Theory and Background of the Value-Added Tax," *Proceedings, National Tax Association*, October, 1955, p. 9.
3. Richard Slitor, "The Value-Added Tax as an Alternative to the Corporate Income Tax," *Tax Policy*, Vol. 30, Nos. 10-11, October-November, 1963, p. 5.

Bronfenbrenner, for instance, appears to accept the classical theory of excise tax incidence and applies it to the value-added problem. He holds that there was no foundation for the fears of the Japanese businessmen that they could not shift the tax forward, and predicted that in the course of time, perhaps a few months, perhaps a few years, each line of retailing and manufacturing would develop a "representative percentage" of value-added to gross income. Those few whose ratio was higher than typical would be unable to pass on the tax in full, and those with lower than typical ratios would be able to pass on more than the full amount of the tax. But for the typical firm, "the incidence should be the same as for any other type of sales tax, and the differentials are as likely to work in favor of any particular Mr. Smith or Mr. Tanaka as they are to work against him."[4]

A less firm prediction of forward shifting was made by the Minnesota Governor's Tax Study Committee in its report discussing the possibility of a value-added tax. The Committee held that a value-added tax imposed at the Federal level in the main would be shifted forward, with its incidence resting on consumers of final products, because variable costs comprise the major part of the tax base, and the tax would be applied under pricing practices that primarily are either purely competitive or on "full-cost" basis. But the Committee conceded that "complexities and rigidities in market structures and pricing practices might result . . . [in] less than full forward shifting, particularly with respect to that portion of the tax that is based on profits."[5]

Firmin, in his study of the Michigan tax, makes two realistic observations about the incidence of the value-added tax. His first point is that the initial impact of the tax will vary considerably from one type of business activity to the next, because the ratio of value-added to gross receipts differs. His second point is that the long-run direction of shifting will depend, in general, on one major condition: balance of power. The more easily forward shifting occurs, the less likely is backward shifting, and vice-versa.[6]

It should be noted that all the preceding views about the burden of the value-added tax contain implicit assumptions about the incidence of the excise tax, the corporation income tax, or both. This is inevitable because, as Slitor pointed out in his address at the Tax Institute symposium in late 1963, the value-added tax is a hybrid, based partly on costs and partly on profits. Recognition of this hybrid nature raises the unappealing consequence that prediction of the incidence of the value-added tax can be no more exact than the prediction of the incidence of the other two. This ambivalence caused Slitor to raise a number of vital, unanswered questions:

Will the cost and profit components of the tax go their separate ways in the shifting process, or will the dominant element drag the other with it?

What would be the mechanism of the shifting, if any, of the profit component: restriction of investment or no more than short-run adjustments of the cost-price spread?

Will the net effect of the tax be the substitution of a consumption tax for a profits tax, an open sales tax for a hidden one, or will it lead to a more economically neutral form of business taxation than any other tax?

Initial Impact of Tax

One of the important factors to consider in an examination of the value-

4. Martin Bronfenbrenner, "The Japanese Value-Added Sales Tax," *National Tax Journal*, Vol. 3, No. 4, December, 1950, p. 310.
5. *Report of the Governor's Minnesota Tax Study Committee*, 1956, pp. 486-487. Lock *et al.*, *op. cit.*, quote Shoup in his assertion that presumably the value-added tax can be shifted to the consumer, and concur in his view. They also quote Professor Musgrave's suggestion, however, that there might be some backward shifting to labor in an administered price environment.
6. Peter A. Firmin, *The Michigan Business Receipts Tax*, Michigan Business Report No. 24, Bureau of Business Research, University of Michigan, Ann Arbor, 1953, pp. 129-130.

Table 13

Analysis of the Basis of the Michigan Business Activities Tax[a]
All Industry Summary

Industry classification	Payrolls	Depreciation, depletion, and amortization	Net operating profit
Manufacturing	67.46%	5.50%	27.04%
Wholesaling	59.82	4.79	35.39
Retailing	61.67	5.00	33.33
Service enterprises	69.40	4.48	26.12
Farming	16.29	27.08	56.63
Mining	59.82	23.39	16.79
Contract construction	90.18	1.85	7.97
Public utilities	72.75	9.78	17.47

a. Michigan statutes explicitly exempt from the base payments for taxes, rent, and interest.

Source: Peter A. Firmin, **The Michigan Business Receipts Tax**, Michigan Business Report No. 24, Bureau of Business Research, University of Michigan, Ann Arbor, 1953, p. 102.

added tax is the fact that the ratio of value added to gross receipts varies considerably from industry to industry. For instance, in the case of professional, business, and personal services, and some forms of agriculture, this ratio is so high that it is often suggested these activities either be excluded from the tax altogether or, alternatively, taxed at a lower rate.[7]

As a consequence of this variable ratio, the initial impact of the tax will differ considerably from industry to industry. While the burden may not rest where it falls, the impact will make a difference at least in the early period of the tax, before channels of shifting are fully established. Firmin's study includes extensive and careful analysis on an industry by industry basis which, although designed explicitly for the Michigan case, is to some degree applicable to a possible tax at the Federal level, with minor adjustments.[8]

Table 13, which shows the percent of the tax base attributable to each of the three major components of production—payrolls, capital attrition, and profit—illustrates variability of proportions among major industry lines. Unfortunately, the composite rates reflect the pattern of industry and the tax deductions in Michigan, and are not strictly applicable to the United States as a whole, but they probably give an approximate notion of the relative importance of each of the three components. Capital attrition is a relatively insignificant element of value-added except in the case of farming and mining; labor costs are overwhelmingly important in contract construction; net operating profit is a relatively high proportion of value-added in farming. In general, the relative proportions of factors comprising value-added are impressively different by major industry classification.

Major industry classifications obscure much interesting detail. For example, Table 14 contrasts the proportions of the tax base for individual lines of manufacturing. Nonetheless, a general relationship holds true for practically all types of manufacturing: payroll represents about two-thirds of the value-added base, net operating profit about a fourth, and capital attrition about five percent. Similar diversity within broad patterns is

7. In actual practice, such adjustments always have been made; see Section I on the French TVA and the Michigan business activities tax.
8. Firmin, *op. cit.*, pp. 63-104. Taxes, interest, and rent payments are excluded from the Michigan base; possibly the latter two elements would be retained in the base of a Federal value-added tax.

observable for other major industry classifications.

Firmin is probably correct in his opinion that in the short-run, even in those industries for which labor costs are a high proportion of value added, the burden of the tax will not be on labor or on capital, but on net operating profits. He asserts that unless the tax is quickly shifted to the consumer, the value-added tax invades net operating profit. The ratio of the Michigan tax to net operating profit suggests that the short-run, and possibly even the long-run, effect of the tax is likely to be quite different from one type of business to the next. For instance, the value-added tax for manufacturers of apparel and related products represented 3.71 percent of operating profits, in contrast to the case of liquor stores, where the ratio was only 0.59 percent. Even lower ratios were observed in the special cases of farming and public utilities.

The Case against the Value-added Tax

Criticisms of the value-added tax are relatively scarce. One of the chief complaints, as reported by Lock at the Tax Institute Symposium, comes from operators of small businesses who object to

Table 14

Analysis of the Basis of the Michigan Business Activities Tax[a]

Manufacturing

Type of business	Percent of tax based on: Payroll	Depreciation, depletion, and amortization	Net operating profit
All manufacturing	67.46%	5.50%	27.04%
Food and kindred products	69.86	5.71	24.43
Tobacco manufacturers	70.79	1.27	27.94
Textile mill products	73.30	4.67	22.03
Apparel and related products	87.27	1.95	10.78
Lumber and timber basic products	68.91	7.05	24.04
Furniture and fixtures	80.60	2.46	16.94
Paper and allied products	52.73	7.68	39.59
Printing and publishing	81.87	3.19	14.94
Chemicals and allied products	49.94	8.13	41.93
Petroleum and coal products	57.69	9.62	32.69
Rubber products	49.77	8.00	42.23
Leather and leather products	79.57	2.60	17.83
Stone, clay, and glass products	58.78	6.28	34.94
Primary nonferrous metals	57.61	5.86	36.53
Primary iron and steel industries	79.27	6.78	13.95
Fabricated metal products	73.12	3.54	23.34
Machinery (except electrical)	73.36	3.58	23.06
Electrical machinery	71.30	3.03	25.67
Transportation equipment (except motor vehicles and parts)	82.68	2.47	14.85
Motor vehicles and parts	59.49	3.97	36.54
Instruments, photographic and optical goods; watches and clocks	71.35	3.39	25.26
Miscellaneous manufacturing	76.77	3.51	19.72

a. Michigan statutes explicitly exempt from the base payments for taxes, rent, and interest.

Source: Peter a Firmin, **The Michigan Business Receipts Tax**, Michigan Business Report No. 24, Bureau of Business Research, University of Michigan, Ann Arbor, 1953, p. 67.

the fact that a tax liability is created even when a business operates at a loss. This objection, of course, is the inverse of the advantage cited by others, to wit, that the value-added tax does not penalize the efficiently operated, profitable business by making it bear the cost of government services used by unsuccessful firms. Small business also has complained, according to Lock, that the value-added tax places a new business immediately on the same tax footing as the established business. This result may, of course, create a serious problem for the health, vigor, and progress of the economy as a whole.

Two practical difficulties which might arise should a value-added tax be substituted for the corporate income tax were raised by Slitor in an address at the Tax Institute Symposium in 1963. He noted that in our society not only is it important to consider who actually pays taxes, but also who gets credit for paying them, and asks what kind of tax legislative instability might result and what kind of vacuum might be created by the proposed substitution. He also called attention to the problem of non-corporate business, which would not enjoy the offsetting benefits of a corporate rate reduction or removal. This would mean that unincorporated firms, primarily small scale, family-type enterprises, would bear an additional tax load unless some compensating adjustment in individual income tax rates were provided.

Bronfenbrenner calls attention to the opposition of Japanese labor organizations to the value-added tax on the ground that it is a measure which tends to encourage the employment of machines in preference to manpower. Bronfenbrenner feels that the labor organizations' fears are exaggerated; since the tax will have the effect of increasing machinery prices as well as other prices, he doubts that the "resulting downward pressure on employment (or wage rates) will be more than infinitesimal . . ."[9]

Lock and his associates find that the value-added tax is criticized as:

(1) Disregarding the taxpayer's ability to pay; even loss firms are liable.

(2) Being hard on "small business."

(3) Penalizing payrolls, unfairly discriminating in favor of highly mechanized industries, lacking in neutrality, and possibly promoting technological unemployment.

(4) Being a manufacturers' sales tax under another name.[10]

The Arguments for the Tax

Advocates of the value-added tax argue that it is based, in an approximate way, on the contribution of each enterprise, from factory to retailer, to the total output of economic goods and services. Government services, it is said, are one of the inputs used in the operation of a business enterprise; these services are used whether the business is successful or not. Moreover, it is argued, the quantity of these services used is approximately proportionate to the extent to which the firm utilizes the economic factors of land, labor, capital, and entrepreneurial effort. If so, under a value-added tax every business pays for its use of government services, regardless of its level of profits. Consequently, a value-added tax reaches sources of revenue not subject to tax under other forms of business taxation.

"Economic neutrality" has frequently been offered in justification of the value-added tax, since this tax does not tend to distort the pattern in which resources are allocated, either among industries or by favoring firms of a particular size or legal form of organization. Nor does it give artificial advantage to either debt or equity financing.

The value-added tax avoids several defects of sales taxes. Most important, it does not create the problems associated with pyramiding, characteristic of several forms of sales taxes. Advocates claim that both administrative and compliance costs

9. Bronfenbrenner, *op. cit.*, pp. 311-312.
10. Lock, *et al.*, *op. cit.*, p. 370.

are lower under a value-added than under a retail sales tax. It is also argued that compared with a manufacturers' sales tax, the value-added tax does not tie up capital funds at so early a period in production; the value-added tax thereby reduces the added cost which results from an accumulation of interest over the period during which funds have been tied up for tax purposes.

An important attribute of the value-added tax stems from its large base, as a consequence of which the tax can be applied at a lower rate than any other tax except a comprehensive turnover tax (with its attendant grave disadvantages) to raise a specified level of revenue. In addition, some writers hold that the yield of value-added tax would be relatively stable.

Several tax specialists have taken the view that a value-added tax might be substituted, either partially or wholly, for the corporation income tax. The corporation income tax tends to a number of defects of which the value-added tax is free. For instance, the value-added tax does not discriminate between cost and profit, whereas the income tax is imposed on profits alone, with the result of lessening incentives to apply cost control and productivity-increasing measures. Moreover, by falling on profits alone, the income tax raises the acceptable level of pre-tax return for new investment projects and consequently retards capital formation.

An important advantage of the value-added tax *vis-à-vis* the corporation income tax relates to the United States' position in international trade. The substitution of a value-added tax for an income tax should improve the competitive position of U.S. firms in international trade. GATT rules permit a rebate on exports for indirect taxes (such as a value-added tax) but not for direct taxes (such as an income tax). Presuming that a reduction in the corporation income tax would permit a reduction in export prices, and that a value-added tax would be fully applicable to imports competing in markets in this country, the substitution would strengthen the U.S. balance of payments.

Slitor has held out three important objectives which might be achieved by the substitution of the value-added tax for the corporation income tax:[11]

1. To restructure the tax system to promote capital formation and growth.

2. To increase the employment of capital or at least improve its allocation between corporate equity and other uses in order to boost productivity and other efficiency.

3. To relieve exports from some of the load of direct taxation so as to strengthen the competitive position of domestic industries.

The consensus of informed judges probably would be that the value-added tax rates well in comparison with other revenue sources. Slitor's goals are ambitious; yet it seems quite reasonable to expect that just such results would follow in varying degree were a value-added tax to be substituted for all, or part, of the present corporation income tax.

11. *Ibid.*, p. 3.

VI.

THE EXPENDITURE TAX

The paucity of recent literature on the expenditure tax makes this tax a prime candidate for the role of the orphan of public finance. Aside from two books, one published in 1942 and the other in 1955, a chapter in a book published in 1947, a few articles in response to the publication of the books, and occasional pieces in Indian journals of limited distribution, this tax has been largely ignored. Even writers of comprehensive textbooks on public finance rarely deign to take note of the expenditure tax with so much as a definitional sentence or two. The explanation for this neglect, of course, is that very few economists have considered the expenditure tax a practical possibility, even though many may have found its theoretical concept generally appealing.

ADVANTAGES OF THE TAX

One basic rationale of a progressive tax on spendings, advanced by Nicholas Kaldor, is that an individual does not penalize the society in which he lives by adding to its stock of goods and services (as measured by income), but does "burden" it by taking away from this stock (as measured by consumption or spending), particularly if this spending is on a lavish scale.

An earlier spokesman for the expenditure tax was Irving Fisher, who evolved what he thought was a practical scheme for the administration of an expenditure tax. Professor C. Lowell Harriss has made a convenient summary of the essence of the arguments made by Fisher.[1] These main points are as follows:

1. It is inequitable to tax receipts which are saved and then tax their subsequent yield as well.
2. An income tax cannot make a clear distinction between capital and income and in certain cases tends to tax capital as if it were income.
3. An expenditure tax encourages savings and discourages "luxury" spending.
4. Over the long run, an expenditure tax would result in increased revenue yield.
5. An expenditure tax conforms more closely with ability to pay than does the income tax.
6. Administration would be simpler under an expenditure tax.

Fisher believed that since the tax would be based on cash items only, it possessed the virtue of precision, and its administration would be far simpler, than that of the income tax. He pointed out that the expenditure tax "does not require, as does the taxable income under the present system, any appraisal or valuation of assets. It is entirely free from such troublesome questions as what markdowns are to be taken on merchandise, how much shall be written off for bad debts, what is legitimate depreciation and depletion—questions which are uncertain, debatable, and often costly to decide.[2]

1. C. Lowell Harriss, "Revenue Implications of a Progressive-Rate Tax on Expenditures," *The Review of Economics and Statistics*, August, 1943, p. 176.
2. Irving and Herbert W. Fisher, *Constructive Income Taxation*, Harper, New York, 1942, p. 33.