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BY THE COMPTROLLER GENERAL

Report To The Congress

OF THE UNITED STATES

The Value-Added Tax-- What Else Should We Know About It?

The value-added tax (VAT), a sales tax collected at all levels of business, could become a new addition to the Federal tax system. Its proponents maintain that it can raise large amounts of revenue at low rates, is more difficult to evade than other broad-based taxes, and fosters economic growth. Opponents reply that it is inflationary, costly to administer, and more burdensome on the poor than on the rich.

Interest in a VAT for the United States has waned recently, following hearings before the House Ways and Means Committee. But it is certain to revive one day, and before it does, the Congress needs to know more about the characteristics and effects of this tax. GAO makes no recommendations in this report but does identify some questions that would have to be answered before a VAT could be imposed.



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To the President of the Senate and the
Speaker of the House of Representatives

This report discusses the advantages and disadvantages of imposing a value-added tax to replace some of the revenues raised by other U.S. taxes, a proposal that was made in the Congress in 1979 and 1980 and that has recurred every few years since the 1960's. We made this study to determine the present state of knowledge about the value-added tax and identify areas in which further study would be useful in any future discussions of the subject.

Since the purpose of this report is simply to present the topic, outline the issues, and point to matters that require further study and analysis, agency comments were not solicited.

We are sending copies of this report to the Director, Office of Management and Budget and the Secretary of the Treasury.

A handwritten signature in black ink, appearing to read "Luther B. Stueck".

Comptroller General
of the United States

D I G E S T

Critics of the present U.S. system of direct taxation on income have proposed the value-added tax (VAT), a consumption tax, as a replacement. Their complaints about the present system point out that its rates are too high; it is complex, contains loopholes, and invites avoidance; it discourages work effort, reduces productivity, and offers less reward for saving and investment than a tax on consumption would. They also believe that the direct tax on income puts U.S. businesses at a disadvantage in competing with companies from countries that rely on indirect taxes, such as refundable sales taxes.

In this report, GAO's objective is to set out what is now known about VAT and raise the questions that still ought to be answered if the United States were to consider substituting a VAT for current taxes. GAO defines VAT in detail, discusses its economic and distributional effects, outlines the problems of administration, and suggests some alternatives. This discussion is based on the very extensive literature on VAT and interviews with authorities on the subject in this country and in Europe. GAO does not take a position on the desirability of the tax changes discussed in this report and offers neither conclusions nor recommendations. Since the purpose of this report is simply to present the topic, outline the issues, and point to matters that require further study and analysis, agency comments were not solicited.

DEFINITIONS

The VAT is essentially a sales tax that is collected from all businesses. It is most commonly imposed as a charge on the sales price of goods. In this form, it resembles the familiar retail sales tax except that

mined precisely enough, and more is usually exempted or taxed at reduced rates for public policy reasons. The actual tax base, therefore, is considerably less than total consumer spending (pp. 4-6).

ECONOMIC EFFECTS

Because the VAT is a tax on consumption, imposing a VAT and reducing income and payroll taxes penalizes consumption, rewards saving, and reduces the tax burden on investment capital. By themselves, increased rewards for saving and investment should increase productive investment. Increasing the cost of consumption, however, could depress demand and discourage investment (p. 17).

Which of these two effects would dominate the other is not known but might be estimated by careful studies. Since the answer might also depend on the present tax system, estimates of the burden that the present system places on capital would be useful. Such studies would be extremely important in any decision about a VAT, since the effect on investment is one of the main reasons for considering this type of tax change (p. 17).

Because an indirect tax like the VAT can be refunded on export goods, it does not increase their prices. International trade agreements prohibit the refund of direct taxes like income and payroll taxes, so including them in prices does increase the prices of exports. Substituting a VAT for income and payroll taxes, therefore, could help export trade by making exports cheaper, if three important assumptions are true-- if income and payroll taxes are included in prices, if changes in currency exchange rates do not eradicate the effects of the tax rebates, and if U.S. trading partners do not retaliate by making similar policy changes (pp. 18-19).

All these assumptions are considered doubtful, however (p. 19), and studies of the trade effects of a VAT should concentrate on them. If we knew the extent to which

what steps would produce the desired degree of progressivity in the total tax system would be useful. Because of the significance of regressivity in any future VAT debates, these studies would be of primary importance (p. 26).

Not all businesses may be equally able to pass the VAT forward to customers. Prices are set by many factors, and some businesses would undoubtedly have to absorb some of the VAT. The effects of a VAT on the sales and profits of particular businesses or particular industries depend partly on the structure of the markets in which they operate. Substituting a VAT for income and payroll taxes may affect different industries or different firms in the same industry in quite distinct ways (pp. 25-26).

Studies relating the effect of taxes to the structure of industries could help us predict whether the VAT would really be economically neutral. Such studies could also help us estimate the effects of exemptions and differential rates (p. 26).

ADMINISTRATION

{ Many of the problems of administering a VAT are known already from the experience of other countries. Multiple rates of tax are common, for example, and increase administrative costs to taxpayers and the government. Exemptions are administratively equivalent to an additional tax rate, and because some exemptions are inevitable, every VAT starts with at least two rates (p. 29). Rules to deal with special situations add to the VAT's complexity (p. 31).

The VAT generates large amounts of money from many taxpayers, requiring special attention to collection and reporting rules. If the timing of the payments to the government does not correspond closely to collections from customers, large windfall gains or uncompensated losses to the taxpayers can result. Reporting from large numbers of taxpayers (an estimated 5-15 million in this country) at least as frequently as once a

ALTERNATIVES TO VAT

Other tax policies could accomplish the goals that adding a VAT to the tax system is supposed to achieve. With all its flaws, the present U.S. income tax system is still the most efficient in the world. It could produce more revenue at reduced rates, with compliance benefits perhaps equal to those attributed to the VAT, without the fears about inflation and the regressivity of the VAT. This could be done by broadening the tax base to cover most income and eliminating most deductions not needed to measure net income. This change to a comprehensive income tax has been proposed often and is described in detail in a 1977 publication of the U.S. Department of the Treasury, Blueprints for Basic Tax Reform (pp. 38-39).

If taxing saving is considered to be the most serious drawback in the present tax system, then an expenditures tax--a tax on income that is used for consumption--that exempted saving would be more beneficial for capital formation while retaining most of the advantages of a comprehensive income tax (pp. 39-40). An example of this tax is presented in the Treasury Department's Blueprints.

The retail sales tax could be considered as a simple and familiar alternative to the VAT (pp. 41-42).

Some of the goals that the VAT is supposed to serve, such as increased capital formation and greater foreign trade, are not tax policy goals in themselves and might better be addressed with other tools, such as direct expenditures. All the tax alternatives to the present system, including the VAT, have enough apparent drawbacks to prompt the question of whether the present tax system is not the best of all (pp. 42-43).

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CHAPTER 1

INTRODUCTION

For most people, a new tax has about as much appeal and interest as a new method of execution has for a prisoner on death row. But taxes are a necessary part of the life we live, so occasionally we must discuss the adequacy of the tax system we use and whether we want to change to some other form of taxation. Many believe that such a time is at hand in the United States.

The Federal tax system at present relies almost entirely on income and payroll taxes. The corporation and individual income taxes and the Social Security tax make up about four fifths of all receipts of the Federal Government. Many people believe that the economy would operate more efficiently if some of the tax burden were shifted from income to consumption. Several taxes can do this, but the most popular among nations with advanced economies is a type of sales tax called a value-added tax, commonly known as a VAT.

It is this type of consumption tax that has been proposed for the United States. Senator Russell Long, then Chairman of the Senate Committee on Finance, proposed late in 1978 that a value-added tax be considered to replace some of the revenue being generated by the income and payroll taxes. Al Ullman, former Chairman of the House Committee on Ways and Means, introduced a bill in 1979 to reduce the individual and corporation income taxes and the Social Security tax by about \$140 billion and replace the lost revenue by imposing a VAT. Although neither of these proposals drew much support from other legislators, some hearings were held, and several groups, including the Treasury Department, published papers on the VAT. Many academic and professional tax authorities also favor a VAT.

WHY A NEW TAX?

The present tax system has many critics. Some complain that the high income tax rates, the complexity of the law, and the many loopholes have already undermined public confidence in the system. They support their claim with evidence of widespread cheating and underreporting of income, huge amounts of time and money spent on finding legal ways to avoid the taxes, and no prospect at all for raising the additional revenues that may be needed for national defense and domestic social programs.

Others believe that a system relying chiefly on income and payroll taxes discourages work effort and reduces produc-

interest in it. In this report, we attempt to identify the questions that will have to be answered before such a decision is made.

Each of these questions--what the inflationary impact of a VAT will be and how the costs of administration can be kept down are only two of them--is extremely complex. We do not attempt to answer them in this report. All require detailed study to answer--if, indeed, they can be answered at all. Instead we present the various issues to be decided, outline some information already available on them, and suggest those for which further study will have to precede rational decisions.

After a chapter in which we describe the value-added tax in detail, we present the issues in the broad categories of economic effects, distributional effects, and administration. In the final chapter, we suggest some alternatives to the VAT. We take no position on the desirability of the type of tax changes we discuss here, and we offer no conclusions or recommendations.

Our method has consisted mostly of literature searches and discussions with interested parties. Some of the material came from interviews we conducted with European officials on the European experience with the value-added tax.

is value added by others, so the value added by any one firm is the sum of its payments for labor and capital. The final retail price of the good is the sum of the value added by all firms; it is the sum of all payments for the labor and capital that are used in producing and distributing the particular product.

The idea of levying a tax on the value added at each stage of production is not new. Many countries of the world, including most in Western Europe, levy such a tax. The value-added tax is attractive to governments because it is collected at each stage of the production process and so does not burden one stage more than another, as a retail sales tax would, and it is also a productive source of revenues. It is attractive to business people and economists because it does not place unequal burdens on the capital and the labor used in production and therefore does not influence business decisions about how much of each factor to use. It is even attractive to the general public, as much as any tax can be, because it is a relatively painless way to pay for desired government services.

Or so, at least, the supporters of value-added taxation claim. We discuss the relative merits of these and other arguments surrounding the VAT in later chapters of this report. Like most such discussions, ours takes up the effects and characteristics of the VAT relative to some other tax. But in this chapter the subject is the VAT itself, without regard to what tax it replaces or substitutes for. The VAT we describe in this chapter is the one we use in making comparisons with other taxes in the remainder of the report.

TYPES OF VALUE-ADDED TAX

The concept of value added is actually more complicated than the description in the opening paragraphs suggests. Three different taxes can be levied, depending on how the value-added base is defined. The differences arise from the extent to which the value-added calculation allows for the cost of capital goods.

In one kind of value-added tax, no allowance at all is made. The tax base is simply the sum of labor income and gross returns to capital. In the aggregate, this is equivalent to the gross domestic national product, and so it is called a gross product value-added tax.

In another kind of VAT, depreciation or capital consumption is allowed for. This is what happens in computing national income (or in normal procedures for accounting for income). The tax is called an income value-added tax.

royalties. Applying the tax rate to this base is one possible method of calculating the tax. If the VAT is of the consumption type, the base would have to be adjusted for capital purchases or profits would have to be redefined. Alternatively, value added can be derived by subtracting from gross receipts all payments made by a firm to suppliers of materials and services. This removes the value added by other firms (including that embodied in capital goods) and leaves only the value added by that firm. Applying the tax rates to this amount is, then, another way of calculating the firm's VAT.

The subtraction method suggests an even simpler way of computing the tax without having to calculate value added at all. Apply the tax rates to all sales made by a firm to its customers and subtract, as a credit against this sum, the value-added taxes that the firm has paid on all its purchases. If each producer computes the tax this way and shows the tax separately on all sales invoices, a chain of tax collections and credits is established that is exactly parallel to the production chain. This "credit" or "invoice" method of computing the tax is used almost universally to collect VAT's of the consumption type.

The VAT is normally collected by a self-assessment system in which the taxpayers compute the tax and remit the money without being billed for it. A VAT of the consumption type, however, is intended to be passed forward in prices until the final consumer pays the entire amount. Therefore, each stage of the production chain collects and pays to the government a part of what is to be the final tax. A simple example, following one product through the chain and ignoring all other taxed inputs, can illustrate how collection works for a 10 percent VAT.

The total tax collected in this example is equal to exactly 10 percent of the final sales price (before VAT).

	<u>Purchase price including VAT</u>	<u>Sales price without VAT</u>	<u>10% VAT</u>	<u>Tax paid to government</u>
Producer 1	\$ 0	\$100.00	\$10.00	\$10.00
Producer 2	110.00	150.00	15.00	5.00
Wholesaler	165.00	200.00	20.00	5.00
Retailer	220.00	250.00	25.00	5.00
Final consumer	275.00	0	0	0
Total value added = \$250.00				
Total VAT collected = \$25.00				

and exemptions create many administrative headaches. We discuss these in later chapters.

The one who must pay the VAT to the government is the business person--the producer, merchant, or supplier--who sells the good or service. It is up to this person to collect the VAT from the customers (if this can be done). 1/ Each VAT taxpayer is required to register with the government and submit VAT returns. The taxpayer calculates the VAT on all sales, subtracts from it a credit for all VAT paid, and remits the difference. If the credits are larger than the VAT on sales (as, for example, after a large purchase of capital equipment), the government must refund the difference.

THE TAX BASE

The value-added concept derives from the national income and product accounts. The potential base for a consumption VAT is the consumer expenditures portion of national income. As with all taxes, however, the base for practical taxation is somewhat different from the potential base.

Some kinds of consumer expenditure are excluded because of the nature of the tax. Expenditures by Americans abroad would not be subject to a U.S. destination-principle VAT unless they bought something to import, but expenditures by foreigners in the United States would be. Since the VAT depends on transactions to establish the value to be taxed, expenditures involving no objective transaction would also surely be excluded. Among these might be the imputed rents on owner-occupied housing, the value of farm products consumed on the farm, the labor performed for oneself in do-it-yourself activities, and the imputed value of financial services performed by banks and other financial institutions.

Other exclusions are made for administrative simplicity. Domestic service and very small businesses are likely to be

1/Actually, the responsibility is to show a VAT liability on sales invoices and pay this amount, less credits, to the government. Whether the customers can be charged the same price that would have been charged without the VAT plus the total amount of the VAT (thus really forcing customers to pay it) or whether the business person will have to reduce the before-VAT price and thus absorb some of the tax is a question we discuss later in this report.

and local governments). The second alternative would be administratively simpler. The net effect in either case is the same. Except for consideration of administrative costs, therefore, it does not matter whether government purchases are in the tax base.

Some calculations of the tax base from 1978 data will help illustrate the effects of the inevitable exclusions. Personal consumption expenditures in 1978 were \$1,351 billion. Had all this been taxable (except for the \$5 billion net foreign spending by Americans), a VAT would have yielded about \$13.5 billion for each 1 percent of tax rate, or \$135 billion for a 10 percent VAT. If all the exemptions we mentioned above were granted, the tax base would fall to about \$715 billion. Each 1 percent collected as a VAT would have yielded about \$7 billion. A 10 percent VAT would have brought in about \$70 billion. In 1980, these two figures would have been about \$9 billion and \$90 billion.

EXEMPTIONS AND ZERO RATES

"Exemption" means something different in a value-added tax from what it means in an income tax. Some tax is added to a good at each stage of production. If some stage (except the first) is simply exempt from the VAT system, all the tax that has been added at earlier stages is still included in the price of the good. If the final, retail stage is the only one exempt, the good contains all the tax except that on the retail markup. For many goods, this means almost full taxation, since the retail markup is relatively small. If the exemption occurs at an earlier stage and the later stages are not exempt, the result may actually be an increase in tax, because later VAT's will be computed on a price that includes value already taxed. Thus, exempting a producer does not necessarily mean that the good or service produced is exempt from all tax. To illustrate this, let us suppose that Producer 2 from the earlier example were exempt.

	<u>Purchase price including VAT</u>	<u>Sales price without VAT</u>	<u>10% VAT</u>	<u>Tax paid to government</u>
Producer 1	\$ 0	\$100.00	\$10.00	\$10.00
Producer 2	110.00	160.00	0	0
Wholesaler	160.00	210.00	21.00	21.00
Retailer	231.00	260.00	26.00	5.00
Final consumer	286.00	0	0	0
Total VAT collected = \$36.00				

incomes for consumption than higher-income people do. Exemptions for necessities, such as food, shelter, and medical care, are designed to make the tax less regressive, because lower-income people spend more of their income on these items. Exemptions of other goods or services, such as financial services, membership in private clubs, and domestic service, may make the VAT more regressive.

Price

A VAT affects the prices that consumers pay; if it is fully passed forward, consumer prices are the only prices it affects. When refunds are given to the buyers of capital goods or to exporters, the price they pay has not been reduced below what it would have been without the tax. The refund simply gives them back their own money.

Simplicity

One of the advantages frequently claimed for the VAT is that it is simple by comparison with, say, the corporation income tax. Obviously, this is a characteristic not of the tax but of the law imposing it. A VAT law could probably be written to be as complex as the Internal Revenue Code of 1954, if the lawmakers so desired. However, a "pure" VAT would be somewhat simpler than a "pure" income tax, so it might be possible to enact a VAT law somewhat simpler than the present income tax law.

Neutrality

A tax is said to be "neutral" if it does not change the relative prices of economic goods. If it is assumed that an economy operates most efficiently when all decisions are made on the basis of market prices, tax neutrality is an attribute making for a more efficient economy. A VAT preserves neutrality between capital and labor by taxing the value added by each factor equally, and so it creates no incentive for businesses to substitute one factor for the other. It may not be neutral, however, between saving and consumption. A VAT may encourage saving by increasing the price of current consumption but presumably only if the saving is not intended to finance future consumption that would also be subject to a VAT. For example, saving to pay for children's educational expenses may be encouraged. A VAT containing many exemptions and exclusions and multiple tax rates is not neutral; lightly taxed or exempted goods and services are given a price advantage. The more exclusions, exemptions, and variably taxed goods a VAT includes, the less this advantage can be claimed for it.

Of course, it also would have no "automatic stabilizer" effect, as the graduated income tax has, in which inflationary pressures in the economy are automatically deflated by increases in the income tax rates as taxpayers are pushed into higher tax brackets. And there might be problems in raising the rates legally to dampen inflationary pressures, because some time is always necessary to change rates, and what consumers spend in this time to beat the tax rise could cause a sudden surge in spending. This has been the experience of European countries attempting to use changes in the VAT rates for stabilization purposes.

Using the VAT to influence investment spending could also accompany a different way of conducting policy. Investment goods are effectively exempt from the VAT, so ways of directly affecting investment are limited. To dampen investment spending during inflationary periods, some temporary tax could be imposed on investment goods (as has been done in West Germany). Changes in payment and refund schedules could be used to temporarily increase cash flows. How effective such policies might be is at least as questionable as similar policies are questionable under the present income tax.

Topics for further study

The conduct of fiscal policy under a VAT probably raises no important questions. A VAT apparently would neither facilitate nor handicap policymaking in this area. There is no doubt that a VAT could be effective in raising whatever revenues policymakers set as their goal; this is one issue about which we probably already know all we need to know. A number of writers have considered VAT as a stabilization tool; few have considered whether or to what extent it could be varied to achieve other social or economic policy goals. If the likelihood increases that a VAT will be enacted, some study should be devoted to these issues, but this is not one of the areas of first concern.

SAVING AND INVESTMENT

The rate of U.S. productivity growth has been declining and is now lower than that of many other industrialized nations. The decline is partly because the growth in U.S. productive investment has not kept pace with the growth in the labor force, which lag some also blame for persistently high unemployment and inflation rates. The average U.S. saving rate is also said to have been lower in recent years than in the past. Since savings are the source of investment funds, some believe that the decline in saving is partially responsible for the decline in investment.

Other things, however, are not equal. The present tax system does not impose a straightforward tax on capital. By means of accelerated depreciation deductions, special amortization deductions, percentage depletion allowances, investment tax credits, reduced capital gains tax rates, and the like, much capital income is exempt or taxed at very low rates under the current income tax. The tax substitution might actually make very little difference in the tax burden on capital.

More importantly, taxes are seldom the most important determinant of the profitability of an investment. Expected demand for the product, which depends in part on current and future economic conditions, must normally be the most important factor. Demand might not remain constant if a VAT were imposed. If a VAT raised the cost of consumption, demand could be expected to fall, and with it would fall the profitability of projected investments. The very tax shift that made the investment possible (by providing greater savings) and attractive (by increasing after-tax earnings) could also make it superfluous, by reducing demand for the product.

Topics for further study

Many people consider the issues relating to saving and investment the most important in the VAT debates. Most proponents probably regard the effect of the tax substitution on investment as its most attractive advantage. Many opponents would be converted if they were convinced that substitution would really stimulate productive investment. Studies in this area, therefore, could be very influential in future VAT debates.

Whether the tax substitution would stimulate investment depends on the influence of taxes on saving, the connection between savings and investment, and the influence of taxes on investment. Economists have conducted numerous studies in all three areas, illuminating many aspects of the problem but producing no really conclusive results. Studies of any of these issues would be helpful in the VAT discussions, but definitive answers should not be expected from them.

At best, discussions of the tax substitution will have to proceed from plausible estimates of its effect. Many economists maintain that heavy tax burdens on capital are detrimental to investment. One useful study, therefore, would be to estimate current tax burdens on capital and how they would be changed by substituting a VAT for current income and payroll taxes. Determining the cost of lightening this burden on capital--that is, determining to whom and by how much the burden would be shifted by increasing other taxes, decreasing

that exchange rates have not adjusted and will not adjust for tax differentials between nations. And it assumes that U.S. trading partners will accept without retaliation the changes proposed in a tax structure that are designed to give the United States an edge in exports. We examine each premise in turn.

The first premise is that the prices of goods exported from the United States include a tax component. It is assumed that prices increase to enable payment of the income and payroll taxes and that replacing these taxes with a VAT would induce businesses to lower their prices.

A reasonable argument can be made that businesses regard the taxes as a cost of doing business to be passed on to consumers in higher prices. There are plausible reasons, however, for believing that some businesses may not be able to pass on such costs and are forced to absorb them by accepting lower profits or by reducing wages. Should a refundable VAT replace existing nonrefundable taxes, some industries may be willing and able to lower their prices while other industries may not be either willing or able to lower theirs.

The second premise is that replacing U.S. direct taxes by a VAT and establishing border tax adjustments, if these succeed in reducing U.S. export prices, will not affect foreign exchange rates. Current exchange rates between two currencies are determined in part by the comparative tax burdens of the two countries. Removing a tax that now makes American goods more expensive would make American dollars more expensive, if exchange rates were allowed to "float" freely. This would tend to nullify the effects of the tax change. Imposing a VAT on imports at the border would likewise make the foreign goods more expensive but the foreign currency cheaper, also tending to nullify the price increase.

Although currency exchange rates do not float with complete freedom--being subject to intervention by central banks and governments--they do appear to be sufficiently flexible to handle rather promptly small adjustments such as the proposed U.S. VAT. The most reasonable expectation for a change in the U.S. tax system would be that if it does affect commodity prices, exchange rates would move in the opposite direction from the commodity prices, and the net result might be no change at all.

Countering the third premise, other nations might react to a U.S. VAT in ways that would negate any possible trade advantage. In order to protect existing trade positions, other nations might impose tariffs or import restrictions, offer

higher prices. If the VAT were shifted forward, the general price level would not change. If the VAT replaced a tax that is not shifted forward, or one that is only partially shifted forward, the price level would then change in response.

The effects of a VAT probably would not be uniform across industries and economic sectors, so relative prices might change. If some goods are exempt from the tax, the ratio of their prices to the prices of taxed goods should fall. Firms in highly competitive industries might find themselves less able to pass the VAT forward than firms that dominate their industries. If a VAT replaced a tax that is not shifted forward in prices, the relative prices charged by these two classes of firm would be altered. The prices charged by the firms that are better able to pass the VAT forward would presumably rise relative to the more rigid prices of the other firms that are less able to do so.

Such changes in relative prices would change spending patterns. Consumers and businesses would (to the extent possible) substitute spending on less expensive items for spending on the goods and services that became relatively more expensive following the introduction of a VAT. This substitution would then lead to a further change in relative prices.

Recurring price changes could result from the effects of cost-of-living agreements (COLA's), both formal and informal. Wages are frequently tied to the Consumer Price Index by COLA clauses in labor contracts, for instance. Social Security benefits, by law, are adjusted for CPI changes. Other income sources are frequently tied to the CPI or a similar index through informal arrangements. If changes in general prices or in relative prices were to cause the CPI to increase, indexed sources of income would increase, thus further changing prices.

It is not clear, however, whether these price changes would diminish over time or whether they would extend beyond some limited adjustment period. Which they do is likely to depend on institutional conditions, such as the timing of cost-of-living wage increases under COLA clauses in labor agreements and the ability of firms to adjust their prices readily and correctly.

The price level after the tax substitution will also depend on the actions of the Federal Reserve Board in determining monetary policy. The Board might respond to price increases by restricting the growth of the money supply, hoping to limit the possible inflationary effect of the price changes. Alternatively, if potential price level changes seem less im-

CHAPTER 4

THE DISTRIBUTION OF TAX BURDENS

If a value-added tax is imposed to replace part of the revenues from the individual and corporation income taxes and the Social Security tax, tax burdens will shift to benefit some (by reducing their share of total taxes) and penalize others (by increasing their shares). For example, substituting a VAT for a part of the individual income tax means that taxpayers who spend a larger portion of their incomes will pay more while those who save will pay less. Our purpose in this chapter is to examine some of the probable shifts of this sort to see who benefits and who is penalized. Developing more information about the change in tax burdens resulting from this kind of shift in tax policy could be important in influencing the political decision to make or not make the shift.

Tax burdens do not always fall on the individuals, groups, or institutions that are designated in the law to bear the burdens. The true incidence of a tax--who really bears its burden--is a subject of considerable debate among tax authorities. The corporation income tax, for example, is usually thought to be paid in fact by the corporation's customers (in the form of higher prices), its stockholders (in the form of reduced dividends and capital gains), or the owners of all capital (in the form of a general reduction in capital income). The employers' share of Social Security taxes is frequently said to be borne by labor, because it substitutes for higher wages. (It is treated as a labor cost by the employers.)

Obviously, knowing the true incidence of the various taxes is essential in deciding who gains and who loses in the type of changes we are considering. Unfortunately, it is not always possible to know or even to make a reasonable guess about incidence. The question will arise frequently in this chapter, both as we discuss what we think we already know about the shift to a VAT and as we consider what more we need to know.

TAX BURDENS ON INDIVIDUALS

The VAT is primarily a tax on consumption. As we discussed earlier, it may not be possible for all businesses to pass forward all the VAT in price increases, but certainly enough of it will be passed forward to warrant calling it a consumption tax--a tax that is directly related to spending for consumption.

The fact that it falls on consumption is, of course, one of the arguments for the tax. By increasing taxes on consump-

TAX BURDENS ON BUSINESS

The corporation income tax and the individual income taxes paid by proprietors and partners of unincorporated businesses are levied on business profits. Most business people contend, however, that they work to achieve a certain after-tax profit and that they therefore simply pass forward any profits taxes to their customers through price increases. Many economists argue that the business that operates in a competitive market cannot, in fact, control prices this easily and that the owners of such businesses, or the owners of private capital generally, really do bear the burden of the taxes.

Obviously, this incidence question is of some importance in discussing changes in tax burdens caused by substituting a VAT for income or other taxes. If taxes on business income are usually shifted forward in the form of price increases, and if the VAT is similarly shifted forward, there would apparently be little or no change in tax burdens. If the income taxes go instead to reduce the income of the owners, the substitution of a forward-shifted VAT would change tax burdens dramatically.

Although many will argue vigorously for one point of view or the other, we do not really know which, if either, of these views is correct. In fact, we do not even know how much of the VAT would be shifted forward in the form of price increases.

These viewpoints are usually presented as if the incidence of a tax is the same among all businesses. However, given the complexity of the U.S. economy and the many different market conditions under which businesses operate, the assumption of a uniform incidence seems highly improbable. The dominant businesses in a highly concentrated industry making a product for which demand is highly inelastic may have as much power to pass forward their income taxes as they would a VAT. The members of a highly competitive industry making a product for which demand is relatively elastic may be unable now to shift forward their income taxes and may remain equally unable to increase their prices by the amount of any newly imposed VAT. Most industries fall somewhere between these extremes, so the incidence of most business taxes probably also falls somewhere between shifting not at all and shifting completely forward.

Even in a perfectly competitive market, of course, firms differ in ways that may affect their reactions to a VAT. An income tax penalizes a business for being successful by taxing away part of its profits. Substituting a VAT for income taxes would reduce this penalty. Unprofitable firms that had no tax

CHAPTER 5

ADMINISTRATION

The administrative system for any tax is closely related to the type of tax it is. The tax law sets the standards and conditions for administration. In turn, administrative problems are considerations in designing the tax law. This is as true for a VAT as for other taxes.

In this chapter, we discuss the effort that would be required to produce the administrative rules and regulations for a newly enacted VAT, set up the collection and accounting system, allow for education, compliance, enforcement, and transition problems, and minimize administrative costs. We conclude the chapter by suggesting some areas in which further study of administrative problems might contribute to the VAT debates.

One problem we do not discuss here is the administrative structure necessary for collecting the VAT. We are assuming that this function would be placed in the present Internal Revenue Service and integrated with the collection of other taxes, especially business income taxes. As throughout the report, we assume that the VAT is a consumption type of VAT computed by the invoice method and taxing imports and exempting exports.

TAX RATES

The simplest possible VAT would be one imposed at a single rate on all value added. Leaving aside the problem of taxing all value added (discussed in chapter 2), some immediate administrative decisions would have to be made. The tax can be determined by computing value added and applying a tax rate (the addition and subtraction methods) or by applying the tax rate to the selling price and subtracting any VAT previously paid on purchases and shown on the sales invoice (the invoice method). As we explained in chapter 2, the invoice method is the one a U.S. VAT would most likely employ.

The tax can also be computed on the price of the product including or excluding the tax itself. Both methods--including and excluding the tax--have been used in Europe. Including the tax in the price produces more money for the government, because the tax base is higher by the amount of the tax. Some consider this merely a deceptive way to raise money at ostensibly lower tax rates. Computing the tax in the way the theoretical examples in chapter 2 show may not, however, be all that simple.

would have to draw what are often difficult distinctions between classes of goods, as in the famous "chocolate biscuit" case in England. Chocolate covered cookies, considered confectionaries, were taxed at the luxury goods rate, while chocolate filled cookies, considered ordinary food products, were tax exempt.

The administrative costs to both the government and the taxpayers and the economic distortions they cause (as we discussed in earlier chapters) suggest that multiple rates of tax should be avoided as much as possible. Most observers believe that the more rates there are, the more difficult and costly the tax is to administer.

EXEMPTIONS

As we explained in chapter 2, the term "exemption" usually means a point in the production-distribution chain where the sale is simply not taxed. The seller collects no VAT from customers and receives no credit for previously paid VAT's. This type of exemption is really only a partial exemption, because the good or service will still contain in its price the previously paid VAT's. If the good or service is to be altogether nontaxable, it is "zero-rated," meaning that the seller collects no tax on the sale and is therefore treated as having collected a tax of zero, allowing a claim for a refund of the VAT paid on purchases.

It is probably obvious that the presence of either a zero rate or an exemption is administratively the equivalent of having more than one rate of tax. Most of the administrative difficulties arising from multiple tax rates like definitional problems and separate sets of records may also occur when a good or service is zero-rated or passes through an exempt stage. A VAT system with a single positive rate of tax and some zero-rated items or exemptions already has, in effect, two rates of tax to be allowed for in administering it. And, since some exemptions are inevitable, every VAT starts with at least two tax rates.

Exemption and zero rating involve different administrative costs. Zero rating means that the taxpayer is a

5 percent while the tax on the alcohol remains at the general rate of 10 percent. The manufacturer pays \$5 VAT when buying the grain, collects \$20 when selling the alcohol, and remits the \$15 difference to the government. Total tax collections are still \$20, and the total price to the consumer is still \$220.

the taxpayer and create more auditing problems for the tax collectors.

SPECIAL RULES

Under even a very simple VAT, there would be many problem areas that would require special rules in the law or the regulations. At a minimum, some value added must be excluded from the tax base, because the cost of collecting taxes on it would be prohibitively high. Exclusions would extend to a number of low-volume activities such as those of small businesses, domestic services, do-it-yourself repairs, exchanges of services between neighbors and friends, and casual sales of used consumer items. The cost of attempting to include such activities in the VAT system would be higher than the tax to be collected, even assuming public acceptance of the idea.

Small businesses are considered a problem in virtually all VAT's. Very small businesses are usually exempt. Moderately sized ones are often given special accounting privileges and extended payment schedules. These special provisions recognize the bookkeeping burdens and cash flow problems a VAT can impose, which tend to be worse for smaller businesses and less sophisticated accounting systems.

Special rules would be required in many other situations as well. The handling of installment sales, bad debts, refunds, discounts, and leases would require special attention. The invoice method of collection probably requires fewer rules than methods requiring an actual computation of value added, but many areas would still not be covered by the standard rules.

COLLECTION AND ACCOUNTING

One advantage of a VAT that is often cited is that it generates large amounts of money from a multitude of payment sources. This depends, however, to a great extent on the administrative system. And it involves certain disadvantages, also.

Because a great deal of money changes hands, payment to the government must be at fairly frequent intervals. A long gap between collecting the VAT and remitting it to the government could be the equivalent of a sizable interest-free loan. Some VAT systems use this delay as a means of compensating businesses for the cost of collecting the VAT. Smaller businesses are often given longer time to remit VAT collections, both to reduce their reporting burdens and to compensate for

the necessity for audits to some extent, but auditing VAT returns could still be surprisingly expensive.

The ordinary VAT is about as vulnerable to evasion and avoidance as most other taxes. ^{1/} A very simple VAT might offer fewer avoidance possibilities than the U.S. income taxes do, but there would still be some. Under the income tax, it is common for taxpayers to deduct as business expenses amounts they spend for what are really personal consumption expenses, such as vacations and entertainment. Because the line between personal and business expenses is so difficult to draw in such cases, most such deductions are controversial and savor of tax avoidance. Since these same expenses would be subject to VAT if they were personal and would generate VAT credits if they were for business, the necessity of distinguishing business from personal expense will persist under a VAT. Considerable tax savings may be realized if capital assets, such as automobiles, can be successfully represented as business assets.

Opportunities for criminal evasion will also exist under a VAT. Collusion between buyers and sellers, false invoices, and similar means of defeating the "self-policing" character of the VAT are possible at any stage of production. At the retail stage, where the buyer has no reason to maximize the tax credit because none is received, the possibilities are even greater.

The simultaneous existence of both an income tax and a VAT, however, could make evasion of either more difficult. In some countries with VAT systems, the VAT serves as an aid in enforcing the income tax. The registration of taxpayers and the reporting of sales and purchases for the VAT can give the income tax authorities additional information, and cross-checking the information reported for the two aids in enforcing both. Audits for one type of tax could involve at least some checking for the other, no doubt increasing collections of both.

But as the combination of the VAT and the income tax offers tax collectors increased opportunities for tracking evaders, it offers the evaders increased rewards for their evasion. Failure to file income tax returns is said to be disturbingly

^{1/}In the jargon of tax professionals, "evasion" means escaping taxes by illegal means and "avoidance" means escaping them by using a legal provision. Evasion is criminal; avoidance is shrewd business or good accounting.

mine whether some allowance is needed. Many economists believe that none of the replaced taxes are included in prices.

COST

The high cost of administration is usually admitted to be a disadvantage of the VAT. European experience suggests that collection costs might be twice as great as the average for current U.S. Federal taxes. ^{1/} The higher operating costs come from the very large number of returns to be processed and the high audit coverage thought to be required. In addition, of course, there would be start-up costs for new systems work, regulations, forms and instructions, and taxpayer education.

Almost everyone filing a business income tax return would be a VAT taxpayer. In addition, many organizations not now required to file income tax returns, such as charities, would need to file VAT returns, at least to claim a refund. Additional bookkeeping would be required for these organizations as well as for the government and almost all business. Exemptions, exclusions, and additional rates of tax would add even more to accounting and administrative costs.

Carefully planning the design of the tax and its implementation might reduce these costs. Integrating the reporting and auditing for the VAT into the income tax system could be a way to keep costs down. It might be possible to allow monthly or quarterly reporting on a very simplified return, perhaps by copies of deposit slips, and to require only annual summarization of VAT transactions and the information needed for checking compliance. The annual VAT return could even be made part of the income tax return for taxpayers required to file both.

It might also be possible to recover some of the costs of adding a VAT to the tax system by simplifying other taxes. Raising the filing limits for individuals and thus reducing the number of individual income tax returns to be processed would free resources for processing VAT returns. Reducing business taxes might make some of the special tax incentives for business unnecessary. Simplifying the income tax could reduce administrative costs for both government and business. If top income tax rates were reduced enough, the distinction between capital gains and ordinary income could be eliminated.

^{1/}About 0.5 percent of collections. European tax systems cost more to administer than the U.S. tax system; however, collection costs for the VAT are apparently higher than for other European taxes.

is written. They could even affect the decision whether a VAT is desirable.

Enforcement

The idea of enforcing the VAT and the income and payroll taxes together should certainly be explored. The results of such an investigation seem unlikely to affect the way the law is written, so the effort might not be necessary before enactment. But if it is possible that a great deal of money might be saved, a study could affect the decision whether or not to enact a VAT.

Social Security, but to meet several of the goals of the VAT proponents, some reduction in that tax is also required. This could be accomplished perhaps by funding the parts of the Social Security system that are not related to earnings (disability, Medicare, minimum payments) from general revenue.

These changes could meet the goal of attaining additional revenues rather easily, according to the Treasury document. A truly comprehensive income tax could raise large amounts of money easily. Since the resulting system would be much simpler than the present system and the rates would be much lower, many objections to the present system would be obviated. Most of the special incentives that reduce the present income tax for special groups would be eliminated, which would increase their taxes, but this would be partially compensated by reductions in the income tax rates. (In Blueprints, a maximum individual income tax rate of 38 percent on a broadened base is said to raise as much revenue as the present system was raising in 1976 with a maximum rate of 70 percent.)

Continued reliance on the income and payroll taxes would not serve to shift the burden of taxation toward consumption, but with lower tax rates this goal might not be as important for capital formation. Taxes presumably have a greater effect on the decision to save or consume when rates are higher than when they are lower, and more income of all sorts would be left for all taxpayers to save and invest (except those who now benefit greatly from tax incentives).

These changes seem unlikely to have much effect on the balance of trade, other than whatever benefit a more efficient tax system confers. Shifting some of the payroll tax into the income tax system could reduce export prices, if the payroll tax is more often included in prices than the income tax.

If a VAT is unnecessary, its regressivity and its high administrative costs can be avoided. But spurning a VAT in favor of the current income and payroll taxes does nothing to promote saving and capital formation or to resolve the questions that have provoked disagreements among tax analysts and policymakers for so many years.

EXPENDITURES TAX

Blueprints for Basic Tax Reform also contains a detailed model of an expenditures tax (called a "cash-flow" tax by the Treasury Department). A tax based on a person's total annual spending for consumption rather than on total annual income, according to its proponents, taxes the citizen on the basis

investment income are not altogether matters of free choice, and such choice as there is is not evenly distributed among all members of society.

NATIONAL SALES TAX

As we mentioned earlier in the report, a retail sales tax is conceptually the same as a consumption type of VAT but only if the coverage of the sales tax is considerably broader than that of most State retail sales taxes in this country. Professional services are almost always exempt from retail sales taxes, and many other services are also. They do not have to be, however, and there is no reason why a sales tax could not be designed to be as comprehensive as a VAT. Given the same coverage, the two taxes are the same in all respects except the method of collection.

A retail sales tax would produce the same revenue as a VAT with the same tax rates, barring differences in coverage and losses in collection. The difference in collection could cause revenue yields to differ, however. Since there are none of the cross-checks between taxpayers or incentives for compliance of the VAT, the rewards and opportunities for cheating are greater. The incentive to cheat grows as the tax rates grow. European observers have estimated that something between 10 and 15 percent is the maximum feasible rate for a retail sales tax without widespread evasion. This suggests that a national retail sales tax may not be quite as effective at raising revenue as an equivalent VAT.

A retail sales tax would be simpler than a VAT, almost equally difficult to avoid, and productive of enough money for the sort of "tax restructuring" envisioned by VAT proponents. Surveys by the Advisory Commission on Intergovernmental Relations have found that taxpayers consider the State retail sales taxes less annoying than either property taxes or State income taxes. This is an advantage that a VAT would presumably share.

Replacing revenue from the income tax with revenue raised by a retail sales tax would certainly shift the tax burden toward consumption. Without some additional mechanism, however, it might not be as effective in promoting capital formation as a VAT is supposed to be. In order to tax consumption goods, some way is required to remove it from capital goods. In the VAT, this is done case by case. The purchaser pays the VAT and must then convince the tax authorities that the purchase was of a capital good. The purchaser who is able to do so is entitled to a rebate. In a retail sales tax, exemption is usually by classes of goods, and goods that can be either consumer or

If the links between taxes, saving, and capital formation or between taxes and the balance of trade are thought to be too tenuous for important policy decisions, the case for drastic changes in the tax system is considerably weakened. Deficiencies in our economic performance are not, after all, primarily a tax problem, and it might be preferable to seek a solution to them somewhere other than in the tax system. Each of the alternatives we have considered here has serious drawbacks. It is at least arguable that doing nothing to the tax system might be better than making any of the proposed changes.

WHAT MORE SHOULD BE DONE?

At present, we have no opinion on whether a VAT should be imposed. The present tax system has many problems, some of them growing. Whether it is easier to correct these problems or enact a new tax to sidestep them is a political judgment only the Congress and the voters can make.

One element of this political judgment is what we want our Federal tax system to look like. If we want it to be oriented toward the supply side--taxing consumption more heavily and investment more lightly--the VAT and the retail sales tax are both proven devices to accomplish this. Each of these taxes has advantages and disadvantages, and neither the advantages nor the disadvantages are so compelling as to dictate the choice. An expenditures tax could accomplish this purpose perhaps as well as the direct consumption taxes, and a progressive expenditures tax might be less favorable toward the wealthy than a VAT or a sales tax producing comparable revenue. Shifting to an expenditures tax might also be easier than adding a new tax, since the present income tax has many features of an expenditures tax.

Studies of the present tax system and how to reform it abound. Further studies are unlikely to turn up evidence of impending doom. The statistics on collections give assurance that the present system is an excellent source of revenue. Further studies are not necessary to know that the present system generates a lot of criticism. Court cases, Treasury mail, and congressional bills all indicate widespread dissatisfaction. How deep this dissatisfaction is and what its sources are could be topics for study, perhaps to suggest the direction any reforms or new taxes should take to satisfy public opinion.

Comparative studies of the costs of administering a VAT and a Federal retail sales tax with the same coverage should be made before a VAT is enacted. If acceptable and cost effective ways could be found to rebate all sales tax included

in the cost of capital and export goods, a Federal retail sales tax could prove to be a cheaper and simpler version of a VAT.

People who are primarily interested in the influence of taxes on capital formation should give careful consideration to an expenditures tax. A number of academic studies of this tax, as well as the detailed design in Treasury's Blueprints, could serve as starting points. The administrative system the tax would require, especially with regard to withholding, and the social problems the indefinite accumulation of untaxed wealth could cause are possible topics for further study.

capital goods depending on how they are used (a typewriter, for example) are either exempted as a class or taxed as a class. There are many such goods in the economy, and in practice no retail sales tax exempts capital goods altogether. This problem can be solved, of course, but the solution is likely to involve filing for refunds, as in the VAT, which further narrows the differences between the two taxes.

Theoretically, a sales tax imposed on domestic retail sales would be exactly equivalent to a VAT imposed on the destination principle. Imports, like domestic goods, would have the sales tax added at the cash register when sold at retail. Goods bought at wholesale for export would not be taxed, so when they were exported their prices would not include the sales tax. Like capital goods, however, export goods would, as a practical matter, contain some taxed inputs, unless provision were made for claiming refunds.

Compared to other alternatives, the retail sales tax has most of the advantages and disadvantages of the VAT. Compared to the VAT, a retail sales tax is simpler to administer, because it involves far fewer taxpayers and is familiar in this country. But it may be more liable to evasion, and it must involve either some unwanted burden on capital goods and exports or a refund system approaching that of the VAT in complexity.

NO TAX CHANGES

Some of the goals of VAT proponents have little to do with tax policy itself. Many ways of achieving their goals that do not involve taxes could be considered. These include reducing Federal spending and thus the need for additional revenues, increasing Federal loan and grant programs, and renegotiating the General Agreement on Tariffs and Trade. Such solutions are outside the scope of this report, however, and we have confined this chapter to tax policy alternatives. The ultimate tax policy alternative is to leave the tax system alone.

The present tax system produces additional revenue each year, because of the interaction of the graduated rates, income growth, and inflation. In recent years, it has been necessary to cut the tax rates periodically to keep the system from producing too much revenue. The system generates much controversy and provokes many complaints, but compliance has nevertheless been good. The vast majority of all taxpayers pay painlessly, if not happily, through withholding. Indeed, most of them voluntarily pay more than they owe through withholding, in order to get a refund.

of what is taken out of the economy rather than what is put into it. In practice, an expenditures tax is an income tax that taxes all money used for current consumption and exempts all saving. It has some of the attractive features of an income tax. It can be progressive and can cover almost as broad a base as an income tax. The present personal income tax could be converted into an expenditures tax by allowing a deduction for additions to savings and including all withdrawals from savings (and borrowings) in taxable income.

An expenditures tax could raise revenue almost as easily as an income tax of approximately the same coverage. If all saving and investment income were exempted but all income and withdrawals from savings spent on current consumption were taxed, the differences between the bases of the two taxes would be small and the rates for the expenditures tax would not be much higher. (Normally around 90 percent of disposable personal income is spent on consumption.) Collecting the revenue could be somewhat more difficult, since the expenditures tax is not as well suited to withholding as the income tax.

Whether an expenditures tax would be more annoying or less and more difficult to avoid or less than the present income tax would depend in part on how it was designed. Like the comprehensive income tax, a comprehensive expenditures tax could have relatively low rates, which would make avoidance less rewarding and payment less painful. There would be additional annoyance in accounting for deposits into and withdrawals from savings, which could make it less popular than an equivalent income tax. This would be especially true for the perhaps large number of taxpayers whose deposits and withdrawals over the course of a year are about equal.

An expenditures tax would represent a straightforward shift of the tax burden away from saving and onto consumption. Saving would be a direct and visible way to reduce taxes, and investment earnings would be taxed only when spent on consumption. The encouragement to save and invest would be direct and obvious. The tax can also be made progressive, at least with respect to spending, as the VAT cannot.

An expenditures tax seems no more likely to affect the balance of trade than a comprehensive income tax. It would have most of the advantages of the comprehensive income tax without the defects of the VAT. Its most unattractive features seem to be complexity, unfamiliarity, and the inherent inequity many would see in a system that exempted investment income for as long as it was reinvested. Saving and acquiring

CHAPTER 6
ALTERNATIVES
TO VALUE-ADDED TAXATION

In chapter 1, we gave several reasons for considering the addition of a value-added tax to the U.S. tax system. Each implies some goal that this shift in tax policy would accomplish. The VAT has been promoted as a means of raising additional revenue, as a way of reducing what is seen as increasing resistance to taxation caused by relying too much on income and payroll taxes, as a device for shifting the tax burden away from saving and onto consumption in order to foster capital formation, and as a means of improving the U.S. international trade position.

In each case, there are many other ways to accomplish the same goal. We discussed in earlier chapters the extent to which a VAT might or might not achieve the desired goal. In this chapter, we consider briefly some of the alternatives to a VAT. We intend the discussion in this chapter to add perspective to the picture of the VAT. We do not evaluate the alternatives. Each would deserve a report at least the size of this one for a complete discussion. The objectives we consider here are those advanced by the proponents of a VAT. We have included them in the discussion regardless of whether we think the VAT would, in fact, accomplish the goal.

REFORM OF THE PRESENT TAX SYSTEM

The U.S. tax system, with all its much discussed flaws, is still the most efficient tax structure in the world. It raises more revenue at less direct cost than any other tax system ever devised. It is capable of raising far more revenue than it does and with lower rates than we now have. Before the present system is abandoned, ways of changing it to meet the desired goals should be considered.

If all sources of income were included in the income tax base, if most deductions not necessary to measure net income were eliminated, and if the rates were drastically reduced, most taxpayers would pay no more taxes than they pay now-- and many would be paying less. The resulting income tax system could raise even more revenue than the present one does.

A very thoroughly explained example of this type of comprehensive income tax revision is contained in the Treasury Department's 1977 publication Blueprints for Basic Tax Reform. Treasury's Blueprints does not cover the payroll tax for

Eliminating this distinction might free enough regulation writers, tax lawyers, and business accountants to administer the VAT.

TOPICS FOR FURTHER STUDY

There are perhaps not as many uncertainties in administering a VAT as there are in trying to determine its effects. Several of these uncertainties would be resolved merely by waiting to see what the tax law looked like. Others could be resolved before any VAT law is enacted.

Timing

It should be possible to determine how long it would take businesses to modify their accounting systems to collect a VAT and how long it would take IRS to prepare to administer a VAT. It should be emphasized that providing sufficient time to set up the system is very important to its success. If the VAT is to be considered seriously in the Congress, the Treasury Department should prepare to survey potential taxpayers and study IRS operations in order to tell the Congress when the tax should take effect.

Education

The same studies that determine timing could also determine how much assistance will be needed for smaller taxpayers to learn how to comply with the tax. Some will definitely be needed. In Great Britain, for example, the national accounting standards board published detailed discussions of the modifications necessary in both computerized and manual accounting systems well in advance of the effective date of the tax.

Special problems

Many of the problem areas could be studied in detail to determine how they should be handled. They need not be studied before the law is enacted, of course. The problem areas could be left to the regulations writers and the courts. But since many of the problems are already known from the literature, much about them could be determined in advance.

Costs

Studies to identify where the VAT costs are apt to be excessive could perhaps suggest ways to write the law or regulations to minimize them. These studies would be worth doing before any law is enacted, since they could affect the way it

common among small businesses such as painters, plumbers, and other types of household contractors that provide services directly to consumers. They would have little incentive to register as VAT taxpayers, in any event, because they invest relatively little in capital equipment. Registering for VAT could reveal their income tax evasion. Failure to register could enable them to collect the VAT and keep it for themselves or to increase their business by giving their customers a discount equal to the VAT. More sophisticated ways of doing the same thing would be available to larger businesses with more complex accounting systems; if they are inclined to evade taxes, they would be strongly tempted to evade two taxes with one stroke.

TRANSITION PROBLEMS

A major new tax that covers a broad range of activities and involves many new taxpayers will obviously involve some transition problems. Countries that have implemented the VAT the most successfully are those that allowed a long time to prepare for the change. Staffing the tax collection agency and writing regulations, designing and printing forms, preparing the computer programs, and so on obviously take a great deal of time. Assuming that a U.S. VAT would be administered by an expanded Internal Revenue Service, this time need not be as long as would be required in creating a new agency, but it might well take a year or more rather than just a few months.

Complete regulations, forms, instructions, and rulings would have to be available to taxpayers in time enough to allow them to modify their accounting systems, including their computer programs, for collecting and accounting for the new tax. Some smaller businesses would have to institute more elaborate accounting systems than they had needed before. The government would have to educate taxpayers and assist them in getting any VAT system started.

The VAT itself does not seem to contain many transition problems. Capital goods and inventories in place when the VAT was imposed would contain no VAT; those bought after it was imposed would contain a VAT to be refunded. All goods sold after the VAT was imposed would have the VAT added to their price. In the initial payment period, any VAT paid would be subtracted from any VAT collected, and the difference would be remitted, with no need to separate previously taxed and untaxed inputs.

Inputs bought before the VAT was imposed might contain some part of the taxes the VAT was replacing (income and Social Security taxes). However, there does not seem to be any practical way to offset their inclusion--or even to deter-

the higher relative costs they usually incur. The rules for frequency of reporting must balance these factors, allowing some compensation in the form of additional temporary cash flow--but not too much.

Another element is the difference in cash flow among businesses. If the schedule for remitting VAT collections to the government differs too much from the business's normal schedule for collecting from its customers, windfall gains or cash shortages can result.

The refund system involves another type of cash flow problem. Some businesses--exporters and those with heavy investments in new equipment--will have an extended or permanent excess of VAT credits over collections. If these refunds are not paid promptly, the additional burden on the business will nullify any benefits the VAT was supposed to have had for them.

Since the VAT is collected at so many points, it involves large numbers of taxpayers. (The Department of the Treasury has estimated it as between 5 million and 15 million, depending on exemptions.) If VAT returns are to be required quarterly for everyone and monthly or more frequently for some, as is common in other VAT systems, the number of additional returns that will have to be processed is vast. A reasonably simple VAT, however, should mean fairly simple returns, and consideration could be given to simplified reporting requirements to minimize the costs of preparing and processing tax returns.

EVASION, AVOIDANCE, AND AUDITING

One of the advantages claimed for a VAT collected by the invoice method is that it is "self-policing." What this usually means is that at most stages, one taxpayer's VAT collections are another taxpayer's VAT credits; the seller's desire to minimize the tax paid to the government is offset by the buyer's desire to maximize the tax for which credit can be claimed. Although this feature undoubtedly promotes compliance, it does not replace the audit function. In the absence of regular audits (or at least plausible threats of audits), it would be too easy to satisfy both desires by keeping two sets of records.

Most countries with VAT's claim that they audit all VAT taxpayers at regular intervals--every 3 to 5 years. Although this might be more than this country needed or could afford, some system of regular, random audits, with each taxpayer having a fairly high chance of being selected, would certainly be required. Cross-checks between information reported for VAT and information reported for the income tax could reduce

part of the system; the taxpayer must file returns, keep records, and undergo audits. Exemption removes the taxpayer from the system entirely; neither the taxpayer nor the government has the cost of returns and audits. It also means, however, that the taxpayer receives no credits or refund for VAT paid on purchases of supplies or capital goods and that customers receive no VAT credits for purchases from this taxpayer. Since this can make sales to VAT taxpayers (other business people) more difficult, most VAT systems allow exempted producers, such as small businesses, the option of registering as VAT taxpayers and joining the system if they want to.

There are various reasons for including exemptions and exclusions in a VAT. Some inhere in the design of the tax, some are for administrative convenience, and some are for explicit public policy reasons. The decision to impose a destination-principle VAT of the consumption type expresses the public policy decision to exclude capital goods and exports from taxation. It is absurd to impose the tax in areas where the cost of administration might exceed collections from the tax, such as small business and domestic service. Public policy may require other exclusions such as for charities, education, or goods considered necessities.

The reason for the tax relief may suggest the type of exemption to be given. If the reason is purely administrative convenience, as with very small businesses, exemption rather than zero rating is appropriate; the only purpose is to avoid forcing the small business person to keep records, file returns, and undergo audits. Usually, such businesses would be allowed to register as taxpayers if that is to their advantage (that is, if most of their sales are to VAT taxpayers who want the credits).

If the wish is merely to reduce the rate of tax for policy reasons, exemption might be desirable. Exempting rather than zero rating retail sales of food, for example, would reduce the rate on all food but would still produce some tax. If the intention is to remove all tax, as with exports, then zero rating is required.

For dealers in both exempt and fully taxable goods, zero rating is easier to administer than exemption. Credit is allowed for taxes paid on purchases of zero-rated goods, so the dealer could simply claim credit for all VAT paid, whether or not it is collected from customers. With some tax exempt and some taxable goods, however, the dealer would be allowed credits only for goods taxable to the customers. This would require additional bookkeeping for

Suppose taxable inputs are bought for a total of \$1,100 and output is sold for \$2,200. Suppose there is a 10 percent VAT. The seller searches the invoices and discovers that purchases included \$100 paid in VAT. What does the seller owe the government if not \$120 ($\$2,200 \times 0.10 - \100)? The answer, of course, is that the books should not have been kept this way. They are supposed to show that the seller paid \$1,000 plus \$100 VAT for inputs and sold output for \$2,000 plus \$200 VAT. If \$2,200 is the most that the output can be sold for, including VAT, this taxpayer loses \$20 out of pocket unless the bookkeeping method changes. The seller will probably be willing to do this, but it may involve a way of accounting for costs not used before.

Multiple rates of tax are universally denounced as making compliance especially difficult, and they are almost universally employed by countries imposing VAT's. Multiple rates are generally for the purpose of countering some of the regressivity of the VAT. A typical multirate system would have a "standard" rate for most goods and services, a reduced rate for items considered necessities, and a higher rate for luxuries.

The purpose of having multiple rates is to change the price of the goods to the buyers. Multiple rates are thus useful only if they are imposed at the final, retail stage, where they can change the price to the final consumer. Since everyone except the final consumer gets back any tax paid, the only tax rates that matter are those on the final, retail sale. 1/

Different rates do, however, add to administrative costs. All records would have to distinguish between goods taxed at different rates. For example, if a single shipment contained goods taxed at more than one rate, the invoice would have to identify them so that all concerned--the buyer, the seller, and the tax auditors--could calculate the tax correctly. And, of course, the law and regulations

1/To illustrate, imagine a manufacturer making \$200 worth of alcohol from \$100 worth of grain. For simplicity's sake, ignore all other inputs and imagine that the alcohol is sold retail. In a system with a general 10 percent VAT, the manufacturer pays \$10 on the grain, collects \$20 when selling the alcohol, takes a credit for the \$10 already paid, and remits \$10 to the government. VAT collections total \$20 and the price to the consumer, including VAT, is \$220. Now suppose the tax on the grain is reduced to

liability under the income tax would suddenly find themselves taxable. Whether the new tax were to come out of prices or operating costs (in other words, regardless of its incidence), an unprofitable firm would have to trade a previous advantage for a new disadvantage. If the firm's unprofitability were caused simply by inefficiency, this shift in tax advantages would be good for the economy. If it were caused by start-up costs for a new firm or market inefficiencies, the overall result could be worse for the economy.

Topics for further study

The question of the incidence of business taxes, particularly the corporation income tax, has been studied extensively and inconclusively. The possibility that there is not one incidence but a collection of incidences depending on market conditions has received less attention. A study of the factors that affect incidence would be especially valuable because they could help identify how reactions to a VAT might differ among industries and markets. Such a study could also shed light on the investment and price effects of the tax substitution we discussed earlier.

Information about the effect of market conditions on the incidence of taxes could be combined with studies of market conditions in particular industries to suggest the probable effect of a tax substitution on key industries. Market conditions within an industry--concentration of firms, the size and age of firms, difficulty of entry--may be found to dictate incidence. This would mean that the shift to a VAT could carry either special advantages or disadvantages for certain firms (small ones, old ones). Knowledge of any such differentials could be important in future debates.

tion and decreasing taxes on saving, it is hoped that saving and investment will be encouraged. But in the opinion of others, the incidence of the tax on consumption is a drawback, because the decision to save or consume is not entirely voluntary.

Some groups in society are habitual savers, and some are habitual users of savings (or credit, which amounts to the same thing). People with very low incomes, of course, save little and consume virtually all their income, because they must do so in order to live. Young people establishing households typically have many first-time expenses, such as for furniture, making them heavy users of credit (to be paid for out of future savings). Retired people frequently live on savings accumulated while they were working. Workers in their peak earning years usually pay off old debts and accumulate savings out of current income. A shift in taxes from income to consumption means shifting the tax burden from taxpayers who have high earning power to those who earn less income and spend more of it.

This is the reason the VAT is frequently called a regressive tax, but it is not the entire story. Directly and indirectly, individuals pay many taxes, and the regressivity of any one tax may mean little in their total tax burdens. The Social Security tax is also a regressive tax; replacing part of it with VAT revenues would not necessarily make the system as a whole more regressive. Exempting necessities from the VAT may make it less regressive. Using tax credits or rebates for low-income people might alleviate the regressivity altogether. Many of the low-income people who figure in the regressivity argument do not pay either income tax or Social Security taxes at present, so for them there is no tax substitution at all but only a wholly new tax.

Topics for further study

It is likely that discussions of tax distribution will be important in debates over whether a VAT is a desirable addition to the U.S. tax system. Careful studies of these issues would be useful. Statistical studies distributing the burden of a VAT by income groups and comparing total tax burdens after a hypothetical shift to a VAT would help define the problem. Other studies could simulate the effects of various mechanisms for offsetting the regressivity, such as cuts in other taxes, increases in Social Security or welfare payments, or direct rebates of some sort. Because of the importance of this issue, such studies would be needed fairly early in a decision-making process.

portant than the possibility of an economic downturn at the time of the tax substitution, the Board might try to reduce the possibility of a VAT-induced slowdown by implementing an expansionary monetary policy. Its doing so, however, could increase the inflation rate.

Topics for further study

At a time of persistent inflation, the price effects of a VAT will undoubtedly loom very large in any debates on its desirability. Unfortunately, this is an area in which reasonable answers are very difficult to uncover, because the results of any study depend on the assumptions going into it. The assumptions upon which most macroeconomic models are built would probably show the effect to be first a one-time price increase equal to a sizable fraction of the tax followed by diminishing increases over the subsequent year or two. Other, perhaps equally plausible, assumptions would show the effect to depend entirely on the monetary policy of the Federal Reserve Board. A definitive description of the effects of a VAT on the inflation rate would require a definitive answer to the question of what causes inflation--an answer we do not now have.

There are few prospects for useful studies in this area. Estimates of the magnitude and persistence of VAT-induced price changes can be made for a variety of assumptions, but there is little hope of deciding on the validity of the assumptions. Such decision must await the research that tells us the causes of inflation generally. In the meantime, policymakers must decide whether or not to impose a VAT in the absence of any clear idea of its ultimate effects on prices.

direct aid to their own export industries, or make tax changes themselves.

Topics for further study

If further studies are to be conducted on the effects that a shift to a VAT might have on foreign trade, they should probably be concentrated on the basic assumptions of the VAT proponents that we have just outlined above. For some industries, it might be possible to estimate how present U.S. taxes enter into pricing decisions and how the effects might differ under a VAT. It is thought that the effects of flexible exchange rates are well understood, but the timing of the changes and the influence that various interventions in currency markets (including private interventions) might have on the conclusions we have discussed could be fruitful topics for study.

If the decision to impose a VAT is ever made, it would be helpful to have some idea of the probable reactions of our major trading partners and competitors. At present, however, it does not seem that the foreign trade effects are particularly compelling reasons for imposing a VAT. Any studies of this area are likely to be of lesser importance in the decision to accept or reject a VAT.

INFLATION AND PRICES

Because the VAT is a form of sales tax, many people expect that a newly enacted VAT would be shifted forward to final consumers in the form of higher prices. At a time when inflation is a pressing national concern, any instrument that threatens to create or intensify inflationary pressures is bound to be scrutinized with special care.

The supposition that introducing a VAT to replace or reduce current taxes might cause prices to rise stems from the widespread expectation that producers would try to shift the VAT bill forward by raising their prices to include the tax. It is assumed that producers would be unwilling to absorb the VAT themselves and would, therefore, endeavor to pass it forward. Some people also fear that prices might be increased by more than the amount of the VAT, as might happen if some producers seized upon the introduction of a VAT as a convenient pretext for raising their net-of-tax prices too.

The effect on the general price level of introducing a VAT would depend, of course, not only on such evident characteristics of the tax as its rate and exemptions but also on the tax or taxes that it replaced. Suppose, for example, that a VAT were to replace some current tax that is shifted forward in

government services, or increasing the Federal deficit--would be an important objective of such a study.

Reason suggests, as we outlined in the previous section, that a shift to a VAT could affect investment in two opposite directions simultaneously. It could increase the availability of investment funds and raise after-tax earnings from investments at the same time that it reduced demand and, thus, the desirability of investment. It should be possible to produce plausible estimates indicating which of these effects would predominate, given various economic conditions at the time of the tax shift. Such a study would greatly assist those who are seeking an answer to the question of whether to impose a VAT in the United States.

FOREIGN TRADE

Concern over foreign trade increased considerably in the 1970s. Persistent deficits in the U.S. current foreign accounts, changes in exchange rates making imported goods more expensive, and ever larger payments for foreign oil contributed to this increased concern. A change in tax policy that promises to alter the U.S. foreign trade position is, therefore, of great interest.

Replacing some current taxes with a value-added tax would affect the foreign trade balance of the U.S. beneficially, in the view of many who propose such a change. The General Agreement on Tariffs and Trade (GATT) permits a country to refund indirect taxes paid on exports and impose them on imports. Since the VAT is an indirect tax, a firm that exports a product may receive a refund for any VAT paid on the exported good. A VAT can be imposed on any imported good. Thus, the country in which the product is finally consumed will receive the tax revenue on it.

These border tax adjustments are not allowed for direct taxes like the income and payroll taxes on which the U.S. Federal tax system chiefly relies. A U.S. business receives no rebates of any of these taxes that may be included in the prices of exports. This puts U.S. businesses at a disadvantage in competing with exporters from countries that rely more on indirect taxes like the VAT. Thus, by this argument, replacing income and payroll taxes with a rebatable VAT would reduce U.S. export prices and make them more competitive with the prices of other countries.

This argument in favor of the VAT rests on several assumptions. It assumes that the prices of goods exported from the United States are increased by U.S. domestic taxes. It assumes

Some people blame the tax system for all or part of these ills. In their view, an income tax discourages saving by taxing away part of the interest it earns, and it discourages productive investment by taxing capital. Reducing the income tax and imposing a VAT would increase the reward for saving, decrease the cost of investing, and increase the cost of current consumption relative to saving. Thus, the VAT has been advanced as one means of fostering saving, investment, and improvements in productivity.

VAT and saving

The income tax falls on income saved as well as on income spent on consumption. It also falls on any interest or other earnings that saving generates. By saving, one increases one's total tax bill. The rewards of saving are subject to income taxes, while the rewards of consuming are not. A consumption tax like the VAT, on the other hand, exempts saving and falls only on consumption. One can decrease one's tax bill by saving. A shift of the tax system away from income taxation and toward consumption taxation should serve to increase saving rates.

The two mechanisms whereby substituting a VAT for income taxes might increase saving should be separated. One is that if tax burdens are shifted from upper-income to lower-income people, saving is apt to increase. The other is that decreasing the taxes on savings and investment earnings (increasing the after-tax rewards) makes saving more attractive to everyone.

There is considerable controversy about this latter point. Most studies of saving and consumption have not found any close connection between the interest rate paid on savings and the general saving rate. Savings are a residual (what is left after consumption), and apparently the influences on consumption are far more important than are the rewards for saving. Even if the tax substitution were to increase the return on savings significantly, it still might not have much effect on the saving rate.

VAT and investment

Investment decisions are definitely sensitive to after-tax rates of return. If a shift in the tax system makes an investment more profitable, it also makes it more likely that the investment will be made. On the surface, substituting a VAT that exempts investment expenditures for an income tax that applies also to investment earnings appears to promote investment, other things being equal.

CHAPTER 3

FISCAL AND ECONOMIC POLICY

The tax system is expected not only to raise the revenue to fund the government but also to serve the government's economic policy goals. At the very least, taxes are intended to interfere as little as possible with economic policy. More often, they are used as active tools to further policy goals. Thus, discussions of a value-added tax for the United States have often centered on the economic effects of a VAT--or, more precisely, the effects of reducing or eliminating some existing taxes, such as income and payroll taxes, and replacing the lost revenues by imposing a VAT.

Substituting VAT revenues for income and payroll tax revenues, some hope, will provide a powerful new tool for raising needed revenue, encourage private saving and business investment by removing some of the disincentives of income and payroll taxation, and promote foreign trade by structuring the U.S. tax system to be more like that of major trading partners. At the same time, some fear that such a tax substitution would add to inflation, because more of a VAT is likely to be included in prices than the taxes it replaces. In the following sections, we examine these hopes and fears in more detail, attempting to separate what is presently known from what remains unknown about the economic effects of value-added taxes.

FISCAL POLICY

The purpose of taxes in fiscal policy is primarily to raise revenue, but they also are an effective way for policymakers to vary the amount of money that private investors and consumers have to spend. Thus, in the past, such changes as raising income tax rates to dampen inflationary pressures and providing income tax credits for investments have been used to control private spending decisions. Relying more on a VAT and less on income taxes could mean some differences in the way fiscal policy is conducted.

It is generally agreed that the VAT is a good revenue raiser. Even with many exemptions, it would extract a significant fraction of all dollars consumers spend, which is a very large number. It is also a very stable source of revenue, since consumer spending tends to be relatively constant--more so than income, for example. It is a flat-rate tax, so receipts from it would grow as consumer spending grew. In times of inflation, receipts would grow proportionately with inflation, with none of the "windfall" gains for the government that inhere in a graduated income tax.

If the good or service is to be exempted from the VAT entirely, it is "zero-rated." The seller registers as a VAT taxpayer and files returns, but the tax is imposed at a rate of zero. This means that the seller collects no tax from the customers and pays none to the government but does receive a refund of all VAT paid on inputs. Thus, the good or service sold contains no VAT at all, if we assume that the seller passes the savings forward to the customers.

CHARACTERISTICS OF THE TAX

The tax we describe in this chapter is not a theoretically "pure" VAT; rather, it is the sort likely to be enacted. However, many of the characteristics usually attributed to the ideal VAT are apparent to some degree in the one we have outlined. These are the characteristics of incidence, regressivity, price, simplicity, and neutrality.

Incidence

A tax is paid out of someone's income or wealth; the someone whose income or wealth is reduced by the tax is said to bear that tax's "incidence." This may or may not be the person the law says is to pay the tax. The question of who really bears the burden of a VAT, in this sense, is not as simple as it looks.

The tax is designed to be passed forward through all stages of production to the consumer. Thus the initial blow appears to fall directly on consumers. However, when prices go up, consumers buy less; if incomes do not go up also, some consumers must buy less. When sales fall, producers either lower prices (or at least do not increase them as much) or reduce production; in either case, their income and that of the factors they employ are frequently reduced. Thus, even though a sales slip may show the VAT as having been added to prices, the producer is really bearing some of its burden. This is especially true if some consumer goods are not taxed, so that consumers can choose to buy more of them and less of the taxed items. The consumer will certainly bear a part of any VAT but probably not all of it.

Regressivity

A tax that increases as a proportion of income as income rises, like the Federal individual income tax, is said to be "progressive." One that increases as a proportion of income as income falls is said to be "regressive." To the extent that the incidence of the VAT is on the consumer, a VAT is regressive, because lower-income people use more of their

excluded, because of the difficulty of collecting the tax. Banks and similar financial institutions present special problems, because some of the services they perform (such as administering checking accounts and transferring money) constitute value-added production chains that could be taxed but their principal service--lending money--does not. 1/

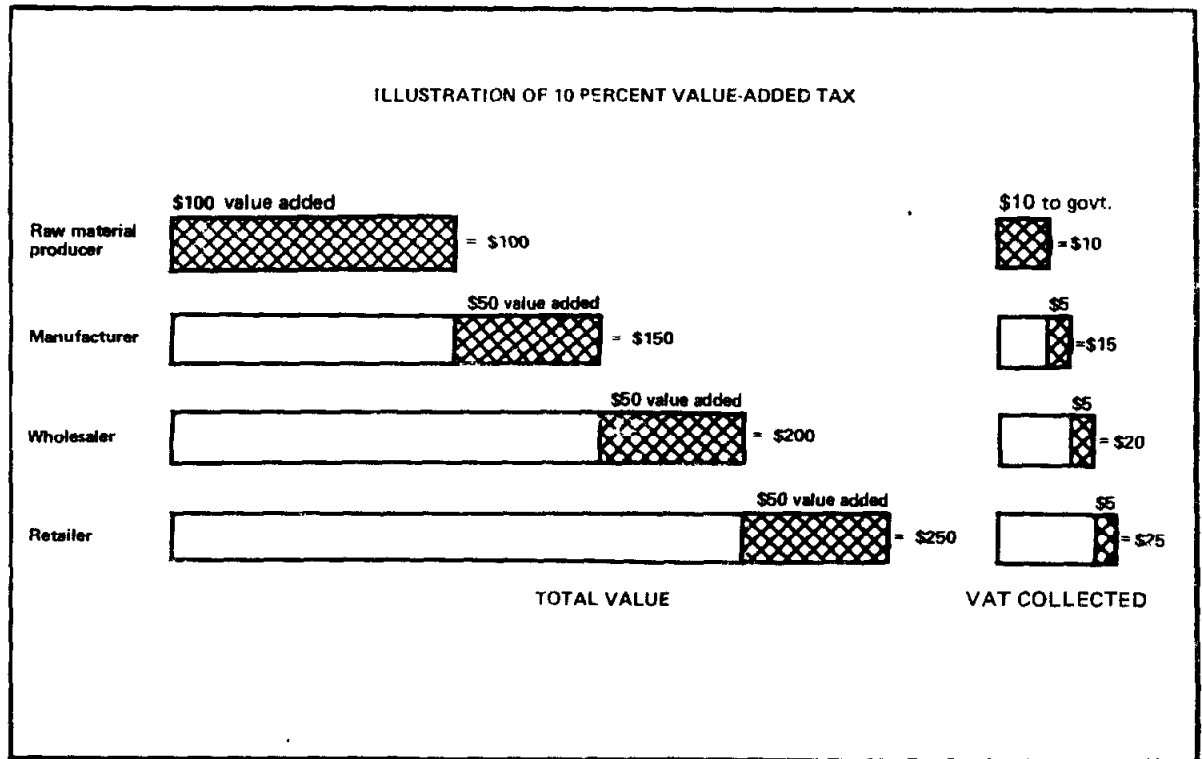
Unfortunately for a VAT system, the services that could be taxed are usually not priced at their actual market value. They are given "free" or at reduced prices by the institution, which recovers their cost by paying less interest. If the imputed value of these services is not taxed, the only VAT that such institutions would pay would be on services for which they made explicit charges (such as safety deposit boxes), and this could easily be avoided if the institution so chose. Most countries that impose VAT's simply exclude the financial sector (including insurance) altogether. Many impose some sort of excise tax instead.

Housing is often excluded from a VAT for mixed conceptual, administrative, and social policy reasons. If the imputed rents of homeowners are not covered by the VAT, as they surely would not be, either some other way to tax homeowners must be found or residential rents must be exempt also, to avoid making an unjustified distinction between renters and homeowners. Since taxing homeowners is so difficult, and since housing is a "necessity" that many feel should not be further taxed for social policy reasons (it is virtually exempt from the Federal income tax), many of the world's VAT systems exempt housing from the tax altogether.

Religious and welfare organizations are exempt from virtually all taxes in the United States, for public policy reasons. It is safe to assume they would also be exempt from a VAT. Other likely candidates for exemption for policy reasons are education, mass transit, medical services, and food.

Government purchases could be exempted, or the VAT could be collected and used to offset the increased cost of the purchases (with the Federal Government giving rebates to State

1/Interest paid on borrowed funds is counted toward value added in production just as a return to the owner's own capital (profit) would be. Interest paid on money used for consumer goods could perhaps be considered value added, but it is difficult to tax interest on the basis of what the borrowed money is used for. Also, in lending money, banks are in competition with millions of nonbusiness lenders, such as bond buyers.



That is, the same sum is collected as would be collected under a 10 percent retail sales tax. The difference is in the way it is collected. The government receives part of the money much earlier in the production chain, and no one stage is responsible for collecting the entire tax. (We discuss other differences between the VAT and a retail sales tax in chapter 6.)

Ideally, the VAT should be a flat-rate tax on all value added. This is the tax that is said to be simple and economically neutral and have other desirable properties. All countries that impose VAT's, however, have more than one rate of tax, and many have several positive rates--a low rate for "necessities," a medium rate for most goods, and a high rate for "luxuries" is typical. Also, no country taxes all value added. We discuss typical exemptions in the next section in this chapter. These departures from the ideal introduce some uncertainties in analyzing the effects of substituting a VAT for other taxes, and the complications of multiple rates

In a third kind of VAT, a deduction is allowed for the full cost of capital goods when they are purchased. This tax falls entirely on consumer goods and is called a consumption value-added tax.

The gross product tax treats capital expenditures as if they were for final consumption, making no allowance for the fact that capital goods are used in further production. This results in heavier taxes on the capital used in production than on the labor, so this type of VAT is not economically neutral. No country imposes a VAT of this type.

An income VAT allows for capital costs in the same way that an income tax does, by means of depreciation allowances. This makes it more neutral, but it requires the same sort of computation as an income tax, including depreciation accounting. Because of the more complex accounting required and because most VAT's are specifically designed to be taxes on consumption, the income VAT is not used much, although Michigan's Single Business Tax is a version of it.

Almost all VAT's in actual use in the world, including all those in Europe, are of the consumption type. This version is in theory perfectly neutral in the choice between capital and labor, and it is relatively simple to administer. We have assumed here that this is the only type of value-added tax that the United States would consider imposing. In the remainder of this report, we use "VAT" to refer to a consumption tax unless we indicate otherwise.

VAT's can differ in the way they are imposed on imports and exports. If exports are taxed and imports are not, the VAT is said to be imposed on the "origin" principle; goods are taxed in their place of origin. The Michigan Single Business Tax and the VAT's imposed by the Brazilian states are origin-principle taxes. The European Economic Community and most other countries with VAT's, however, impose the tax on imports and exempt exports in accordance with the "destination" principle. Since almost all U.S. trading partners that impose VAT's apply the destination principle, any U.S. VAT would almost necessarily be of this type--taxing imports and excluding exports.

CALCULATING THE TAX

There are two ways to calculate the value added by a firm, and there are three ways to calculate the firm's value-added tax liability. Value added can be measured by adding together the payments to factors that add up to value added--wages and salaries, interest, profits, and rents and

CHAPTER 2

FUNDAMENTALS OF VALUE-ADDED TAXATION

Goods and services are produced in our economy when a business buys materials, supplies, services, and equipment from other producers, hires labor to combine these inputs and perform other essential duties, and sells the product at a price that will pay for its purchases from other firms, the wages of its employees, and interest on borrowed capital and leave a residue of profit. The difference between the selling price of the product and the cost of the materials, supplies, services, and equipment that were bought from other producers is the "value added" to the product by this business operator. All goods and services sold in the economy are produced in this way and all contain value added at various stages of production.

One way to illustrate the value-added concept is to follow a good through the stages of production. A landowner discovers an ore deposit and sells it to a mining company. Its total value (selling price) at that point would be the value added by the efforts of the discoverer. By removing the ore and delivering it to a refinery, the mine operator increases its value. If the operator is successful, the increase in value will be sufficient to pay for the operator's purchases from other firms, its payments to labor, and interest on borrowed capital and leave a return upon its own efforts and capital. The refiner buys the ore, refines the ore into metal, and sells the metal for a price that covers its costs, including the cost of the ore, and provides a profit.

This process of adding to value continues through each stage of producing a good from raw material through manufacturing, wholesaling, and retailing. In each stage, the price of the good is marked up to cover costs and a profit for the business, until the final retail sale to a consumer. Since the consumer will use up the good rather than resell it, the chain ends here.

The final price that the consumer pays is the sum of all value added throughout the production and distribution chain. Starting with an initial price of zero, the price of the good has increased at each stage by enough to cover the cost of the raw material and previously processed material, the cost of equipment and supplies bought from other firms, the cost of labor, any payments (such as interest, rents, or royalties) for the use of capital, and a profit (another payment for either labor or capital). The value of the previously processed material and other material bought from other producers

tivity. They say that the more one makes through extra effort or wise investment, the higher the proportion of it the Government takes in taxes and the less rewarding the effort is. They add that the rewards for the current consumption of income are greater than for saving it or investing it. Income is taxed when it is earned; if it is then spent for consumption, no further tax is paid, but if it is saved and invested, the earnings of the investment are taxed again.

Still others believe that the U.S. tax system, relying on direct taxes on income and payrolls, puts U.S. businesses at a disadvantage in competing with companies from countries that rely on indirect taxes. This is because indirect taxes, such as sales taxes, are refunded to exporters and not included in the prices of their goods, while direct taxes are not refundable and therefore increase the prices of export goods.

The VAT has been advanced as a solution for all these perceived problems. It is primarily a tax on consumption, so it exempts saving and investment. Its base is very large, so it is capable of raising large amounts of revenue at relatively low rates. It is a relatively simple, indirect tax, and so it can be less avoidable, less irritating, or at any rate less obtrusive than the income tax. It can be rebated on exports and imposed on imports. Reducing the income or payroll taxes and replacing the lost revenues with a VAT might, therefore, both improve the tax system and aid the economy.

People who are not enthusiastic about a VAT for the United States point out that it is expensive to collect. It requires many additional tax returns from the businesses that collect it, and administrative costs to the government are much higher than those of present U.S. taxes. As a tax on consumption, it is necessarily harder on the people who must spend more of their incomes. Because it exempts saving, it falls more lightly on those who save more, who are likely to be those who have more. And it is a new tax and, therefore, will require considerable adjustment to get used to.

OBJECTIVES, SCOPE, AND METHODOLOGY

We prepared this report to set out what is presently known about a VAT and what is still to be determined. The decision to impose a VAT or to reject the whole idea will depend on many political and social factors that are purely matters of judgment. For this judgment to be informed, much more must be known about the economic and distributional effects of substituting a VAT for current U.S. taxes, the administrative system a VAT would require, and the extent to which the VAT would solve the problems that have generated

ABBREVIATIONS

CPI	Consumer price index
COLA	Cost-of-living agreement
GATT	General Agreement on Tariffs and Trade
IRS	Internal Revenue Service
VAT	Value-added tax

quarter requires the preparation and processing of very large numbers of returns, unless some form of simplified reporting is devised (p. 32).

The VAT is said to be "self-policing," because the tax that one taxpayer pays the government often represents a credit against the tax owed by another. Even with this incentive for compliance, however, there are ample opportunities for cheating, and fairly high audit coverage would probably be required. Compliance could be improved by linking the enforcement of the VAT with the enforcement of the income tax. Of course, taxpayers could also link the two taxes for their own purposes and attempt to avoid two taxes at once (pp. 33-34).

A major new tax like the VAT would require a great deal of planning, education, and time to implement successfully. New or enhanced accounting systems would be required of many businesses. The government would have to assist businesses in the transition, especially small ones (p. 34).

The large number of returns and the high audit coverage would make the VAT expensive to administer. The transition costs would also be high for both government and taxpayers. These costs could probably be reduced by linking the collection and enforcement of the VAT and the income tax. Changes in the income tax that reduced its coverage and complexity could also free resources to administer the VAT (p. 35).

Studies of these administrative problems could help determine in advance the time and effort necessary for a successful transition to a new VAT law, including systems modification that would be required. Linking the reporting and enforcement systems of the VAT and the income tax could reduce costs and improve the collection of both taxes, so this also deserves study (pp. 36-37).

income and payroll taxes are included in prices, we could estimate whether the tax substitution would affect export prices appreciably. The speed and extent of exchange rate adjustments and the probable reaction of trading partners could also be estimated. However, the supposed trade effects do not seem a very compelling reason for imposing a VAT, and so such studies are not of primary importance (p. 20).

A major concern about the VAT is that it would be inflationary. If the income and payroll taxes it replaces are less likely to be reflected in prices, substituting the VAT would bring price rises. This could lead to further cost-of-living wage increases or to businesses increasing prices by more than the amount of the VAT (pp. 20-21).

Some argue, however, that inflation could result only to the extent that the money supply expanded to accommodate the VAT-induced price increases (p. 21). The importance of this issue suggests a need for further study, but it is difficult to conceive of a study that would produce convincing results. The causes of inflation are intensely debated and knowledge of the long term effects of a VAT on prices must await the debate's outcome (p. 22).

EFFECT ON TAX BURDENS

The VAT falls most heavily on people who consume most, so substituting a VAT for an income tax shifts the burden from people with high incomes to those with large expenditures. Since the poor spend a higher proportion of their incomes on consumption than the rich do, the VAT is a regressive tax. Exempting food and other necessities relieves the regressivity somewhat. Adjusting income and payroll tax rates and paying rebates to people with very low incomes who are exempt from income and payroll taxes might make the overall system as progressive as the present system (p. 24).

Studies estimating the extent of the change in tax burdens and defining in detail exactly

it is added to every sale throughout the economy.

Double taxation is avoided by allowing businesses to credit the VAT they pay on their purchases against the VAT they charge on their sales. By remitting only the difference to the government, businesses effectively are taxed on only the value they add in the production process. The retail customer, who does not resell and so cannot claim any credit, pays the entire tax.

As a cure for one affliction of the current U.S. tax system, the VAT could produce enough revenue to permit a reduction in the income and payroll tax rates that many believe are now too high. This is because the VAT is capable of raising large amounts of revenue at relatively low rates. It also can be a simple tax, and so it might not provoke as much annoyance and resistance as the complex income tax does. Because the VAT taxes consumption rather than capital and work effort, some people believe it promotes saving, capital formation, and higher productivity. It is refunded to exporters so that it does not raise the price of exports, as some think income and payroll taxes do.

The "value added" that forms the base for the VAT is the difference between a product's sales price and the prices of the raw materials, supplies, and equipment the producer bought from other businesses. Ultimately, as this value is added by all producers, it equals the selling price of all consumer goods and services in the economy. Since the tax is normally rebated on exports when they leave the country and imposed on imports when they enter, the base is exactly the same as that of a comprehensive retail sales tax (pp. 4-6).

In principle, the VAT could be imposed on all value added in the economy, the equivalent of total consumer spending. In practice, some value added is beyond the reach of taxation, either because to tax it would be too costly or because it cannot be deter-

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