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The Flat Tax, Value-Added Tax, and National Retail Sales Tax: Overview of the Issues

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Summary

The current income tax system is criticized for costly complexity and damage to economic efficiency. Reform suggestions have proliferated, including a national retail sales tax, several versions of a value-added tax (VAT), the much-discussed “Flat Tax” on consumption (the “Hall-Rabushka” tax), the “USA” proposal for a direct consumption tax, and revisions of the income tax.

Most reform proposals are based on the notion that switching to a consumption tax base or exempting savings from tax would increase the savings rate and improve economic efficiency. Although theoretical inter-temporal models predict that saving and efficiency would increase, evidence from past tax cuts does not bear out this prediction. Any effect on savings would depend crucially on the transition provisions. It is also argued that these taxes could improve the country’s trade balance. Trade balances, however, depend on capital flows and would be affected by these tax changes only if they do bring about an increase in the U.S. savings rate. There is no reason to expect trade benefits from any of the tax changes per se.

A broader tax base would have diverse effects on economic sectors. Sectors that might be adversely affected include the non-profit sector (loss of charitable contributions deductions), the state and local sector (loss of state tax deductions, change in their own tax structures), and the health care sector (taxation of fringe benefits). Shifting the tax base from income to consumption, while generally increasing business investment, would differentially affect firms, depending on their growth rate, capital structure, and employee benefit structure. Such a shift would also make investment in pensions, insurance policies, owner-occupied housing, and tax-exempt bonds relatively less attractive.

There are macroeconomic problems with a transition to a consumption tax, and these problems are extremely serious for transiting to a system that collects all revenue from business (VAT or retail sales tax). For these tax shifts, avoiding a serious economic contraction would be quite difficult. The flat tax would not have these problems but it can cause significant windfall losses in asset values.

A flat-rate tax is also intended to simplify the system and reduce compliance and administration costs. Many of the proposals, if kept simple while being enacted, would reduce costs; however, many individual taxpayers are currently under a flat-rate income tax, so their lot would not be much improved. An enacted law, however, might not be as simple as the proposals.

Consumption taxes also change the distribution of tax burdens, especially on generations. The old consume more of their incomes, and their burden would increase; younger people save more, and their burdens would fall. Higher income individuals would see a reduction in taxes.

This report does not track current legislation and will not be updated.

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The Flat Tax, Value-Added Tax, and National Retail Sales Tax: Overview of the Issues

The current tax system, with its graduated tax on individual incomes, its separate tax on corporate profits, its gift and estate taxes on the transfer of wealth, and its separate wage tax to fund the Social Security and Medicare systems, has many critics. It is said to cost the country in lost time, economic efficiency, trade, and contentment. Reform proposals have proliferated, ranging from a broader-based, flatter-rate income tax to scrapping the system altogether in favor of a national sales tax or some other form of national consumption tax.

This report surveys some of the issues to be considered in debating such drastic tax changes, considering not only a broader based income tax but also three basic forms of consumption taxes: the Hall-Rabushka “flat tax,” the value-added tax (VAT), and the national retail sales tax. After a brief overview of some of the current proposals, the sections that follow discuss economic efficiency issues, foreign trade issues, effects on different economic sectors, short-run adjustment costs, compliance and administration, and revenue and distributional implications.

Proposed Alternatives to the Present Tax System

The idea of replacing our current income tax system has been a topic of perennial congressional interest. Although many recent proposals are referred to as “flat taxes,” most actually go much further than merely adopting a flat-rate tax structure and would change the tax base from income to consumption. More recently, the President has indicated some interest in such fundamental tax reform, specifically referring to a national retail sales tax.

Three Main Tax Bases

Theoretically, one could construct a tax system using one or a combination of three main tax bases: income, wages, or consumption. Income- and wage-based taxes are familiar and relatively easy to understand.

Under a comprehensive income tax, all income, whether from labor or capital, would be included in the tax base. A wage-based tax would be levied only on income from labor; income from capital would be excluded from the base. Obviously, wages provide a smaller tax base than income and would therefore require higher tax rates to raise the same revenue as a tax based on all income.

With the exception of sales taxes, the American people are not very familiar with other forms of broad-based consumption taxes and so there is some confusion about how they might be measured and levied. The easiest way to understand the basis of consumption taxes is to first define and understand the economic concept of income.

In its broadest sense, income is a measure of the command of resources that an individual acquires during a given time period. Conceptually, an individual has two options with respect to his income; he can consume it or save it. This relationship means that by definition income must equal consumption plus saving.

This relationship helps in understanding how a comprehensive consumption-based tax might be levied at the individual level. An individual would add up all his income as he does under the current tax system but would then subtract out his net saving (saving minus borrowing) or add net borrowing. The result would produce a tax based on consumption at the individual level.

A consumption tax could also be collected at the retail level as a retail sales tax on final consumption. (A retail sales tax exempts, in theory, the sale of intermediate goods including capital goods to be used in a business). Or it could be collected at each stage of the production process in the form of a value-added-tax (VAT). With the VAT, firms face a tax on gross receipts less purchases of materials, goods for resale and capital to be used in the business. A VAT can be implemented using either a credit-invoice method or a subtraction method.¹ Another way of collecting the tax, the Hall-Rabushka flat tax, would split the VAT base between firms and individuals. Firms would deduct wages from their tax base and individuals would pay a tax directly on their wages. Although the point of collection differs (individual level, retail level, or firm level), when defined comprehensively, the tax base is the same: consumption.

Regardless of the point or form of collection, however, a consumption tax is ultimately paid by the individual consumer. Because consumption is smaller than income, a comprehensive consumption tax would require higher tax rates than a comprehensive income tax to raise the same revenue, although with a low savings rate, the bases (and thus tax rates) are very close.

Other developed nations have VATs (of the credit-invoice type), but also have income taxes. Their VATs do not replace income taxes, but rather finance a higher level of government spending. Most of these nations do not have a retail sales tax, which is an important subnational tax in the United States.

¹ Under the credit-invoice method, a firm pays the VAT on total output and receives a credit for taxes paid by its intermediate suppliers. Under the subtraction method a firm pays tax on total output less the costs of intermediate inputs. The credit invoice method is commonly used in other countries and because of multiple reporting tends to lead to a high level of compliance. The credit invoice method allows differential rates to be applied to final products based on the tax at the last stage, while the subtraction method is appropriate for a single uniform rate.

Current Proposals

There is currently no serious proposal to shift the entire tax system to a wage-based tax as such. The current proposals are almost all based on a switch to some form of consumption taxation, either a national sales tax or some form of value-added tax. They differ principally in their point of collection rather than their tax base. These proposals include several versions of the value-added tax widely used in Europe, a national sales tax such as those used in the states, and more exotic variations, such as the “Flat Tax” devised by economists Robert Hall and Alvin Rabushka and the Unlimited Savings Account or “USA” tax originally introduced in the 104th Congress by Senators Dominici and Nunn. There is also some interest (and at least one serious proposal) in a broader-based, flatter rate income tax.² No bill for this type of fundamental tax reform has had sufficient detail to be operational, and no such bill has ever received a floor vote.

Can Switching to a Different Tax System Help the Economy?

Probably the most often repeated argument in favor of switching to a flat-rate consumption tax is that it will make the economy more efficient and will increase private savings. When evaluating this argument, however, comparisons should not be made between the current income tax system and an ideal consumption tax.

Compared to a theoretically ideal tax (whether the base is consumption or income), the existing tax system will always appear flawed. For policy evaluation, therefore, a more appropriate comparison is between a theoretically pure consumption tax and a theoretically pure income-based tax.

Efficiency Issues

The economic efficiency or inefficiency of a tax system may be judged by its effects on behavior. To the degree that the tax system distorts economic behavior (from what it would be in the absence of the tax), it is economically inefficient. The distortion prevents the efficient allocation of resources. Basically, with the exception of lump-sum or head taxes, all taxes, regardless of whether they are based on income or consumption, distort behavior and affect the allocation of resources.

Both an income and a consumption tax distort the choice between labor and leisure. For example, under either tax, the price of leisure is reduced relative to the consumption an individual could finance with an extra hour of labor.

An income tax also distorts the choice between present and future consumption (saving). Under an income tax, the return to savings is subject to tax. This reduces the resources an individual will have available for consumption in the future, and

²For a summary of current bills and proposals, see CRS Issue Brief IB95060, *Flat Tax Proposals and Fundamental Tax Reform: An Overview*, by James M. Bickley.

hence raises the price of future consumption relative to the price of present consumption. In contrast, a tax on consumption is neutral with respect to the choice between present and future consumption. The relative price of future consumption in terms of present consumption is the same as if there were no taxes.

In theory, adopting a consumption tax may or may not increase overall economic efficiency. Under a consumption tax which yielded revenue equal to an income tax, the tax rates would have to be higher than the tax rates on the income tax base because consumption is smaller than income. The higher tax rates under a consumption tax would increase the distortion between work and leisure choices. The efficiency gain from removing the present/future consumption distortions, therefore, might be offset by the efficiency loss inherent in the larger distortion between work and leisure decisions.

Many economists have argued, however, that a consumption tax is superior in achieving economic efficiency (i.e., in leading individuals to consume and work in a more optimal fashion) because of the elimination of the distortion between present and future consumption. They base this argument on the simulated outcomes of inter-temporal models, which virtually always predict a gain in efficiency from the shift from flat rate income to flat rate consumption taxes.³ One reason for this predicted efficiency gain — which often does not occur with a shift from an income to a wage tax base — is that a consumption tax is the equivalent of a tax on wages and a lump sum tax on existing wealth. The lump sum tax allows tax rates to be much lower with a consumption base than with a wage base, even though neither tax the return to new investment. In fact, when an economy's saving rate is very low, the consumption tax base is quite close to the income tax base. (There are distributional consequences to this feature that will be discussed subsequently). Thus, even though tax rates may be higher under a consumption tax than under an income tax and increase the distortion between work and leisure, this increase is a relatively small effect — the lump sum tax on old wealth has made this efficiency gain possible.

The existence, and even the magnitude, of this efficiency gain, however, is not entirely clear under a less abstract modeling of the tax. First, under current law the income tax imposes higher marginal tax rates on capital income than on labor income (primarily because of the corporate income tax). To replace both corporate and individual revenues by a flat consumption tax would require a higher consumption tax rate and the tradeoff between the labor leisure distortion and the present and future consumption distortion is less clear. There may be potential gain from moving from graduated tax rates to flat rates, but such gains could be accomplished within an income tax reform; moreover many consumption tax proposals include some form of relief for lower income individuals.

Perhaps more importantly, there is a good deal of uncertainty about whether these intertemporal models actually reflect how people behave. The presumed sophistication and information requirements of such models is high and there is

³ For a discussion of these models and their effects on savings, see CRS Report RL31949, *Issues in Dynamic Revenue Estimating*, and CRS Report RL32517, *Distributional Effects of Taxes on Corporate Profits, Investment Income, and Estates*, both by Jane G. Gravelle.

evidence and reason to believe that most individuals decide their savings behavior based on fairly straightforward rules of thumb that suggest savings does not respond positively to higher rates of return (although it could decline). There is even less evidence that individuals are able to shift their leisure (and therefore their working hours) over time, a behavior that is an important feature of many of these intertemporal models. If the behavioral responses are small, then the efficiency gains are small.

There are certain practical aspects of consumption taxes, however, that may give them some advantages over income taxes. For example, the problems and complexities of measuring income from capital are eliminated under a consumption tax. Eliminating the current law differential in the tax treatment of different forms of capital could improve resource allocation and economic efficiency. In practice, of course, there may be pressure for differential taxes on different types of consumption goods, a differential that is quite feasible with the retail sales tax and with some forms of the VAT, but much less likely under a tax on consumed income. Moreover, in some types of taxes (particularly the retail sales tax) it is very difficult to separate out intermediate purchases from final purchases and administer such rules. As a result, some final goods are likely to escape the tax and some intermediate goods and capital goods are likely to be subject to the tax.

It appears that, on the whole, switching from an income to a consumption tax would probably not produce great improvements in economic efficiency. Nonetheless, even small efficiency gains may be important because they continue year after year. However, similar gains might also be achieved through income tax reform.

Effects on Saving

Intertemporal models also tend to predict an increase in savings in switching from income to consumption taxes and this effect is often viewed to be a positive result of a consumption tax (separate from the efficiency gains described above). An increase in the savings rate, however, cannot be determined to be necessarily desirable, since it trades off current consumption for future consumption. Moreover, under a consumption tax the old (retirees who are dissavers because they are drawing down their accumulated capital to finance consumption) would pay higher taxes and the young would pay lower taxes. Because of their higher tax liabilities, retired workers would have to reduce their consumption (or return to the work force). Since some of the increase in savings, at least in these models, is the result of a windfall tax on assets of the old, it is even more difficult to determine the extent to which the savings effects are desirable.

For the young, a consumption tax is the equivalent of exempting the rate of return on savings from tax. Normally, the effect on savings of increasing the rate of return (via a tax cut) is ambiguous. There is a substitution effect — because the return is higher, one has to give up less consumption today in order to consume a given amount in the future. This lower “price” of future consumption encourages more of it. At the same time, there is an income effect — because the rate of return is higher one can actually consume more in the future, while saving less, allowing more consumption today. The net effect of these two forces is uncertain.

A consumption tax has another important feature, however, that overwhelms this income effect. Unlike a mere exclusion of tax on the return, the consumption tax allows an up-front deduction for savings, but requires the payment of tax on both principal and return when consumption occurs in the future. Thus, individuals need to save today to pay these taxes due in the future; they can do so while still consuming more today because of their large tax cuts. Thus, while the young may consume some part of their tax cut, the old reduce their consumption by much more, and the overall effect is to increase aggregate savings in the economy.

As with the case of efficiency gains, some of the results regarding the effects of a consumption tax on savings are based on intertemporal models which rely on somewhat idealized assumptions. For instance, they assume that all taxpayers have perfect information, and the sophistication to map out their consumption choices over a long period of time, and that they are certain that the tax system will not change during their lifetimes. If these idealized assumptions are relaxed, then the results are not conclusive that switching from an income tax to a consumption tax would increase savings.

In addition, the empirical evidence regarding the effect of tax incentives on savings is inconclusive. For example, the Economic Recovery Tax Act of 1981 significantly reduced marginal income tax rates, expanded the availability of individual retirement accounts (IRAs), and accelerated depreciation deductions. Life-cycle models would predict that these changes should dramatically increase private savings, but that did not happen.

Finally, it is critical to note that any transition rules that are enacted to mitigate the increased taxes on the elderly at the time of transition to a consumption tax would tend to reduce the stimulus to new saving. A crucial part of the savings effect is the reduced consumption of the old; moreover, any increase in taxes on the young would be more likely to come partly at the expense of savings. Indeed, if enough transitional relief were given to the elderly, the income effect could be reduced to a point where there may be no effect, or even a negative effect, on new saving, at least in the short run. In addition, the elderly, particularly those with high incomes, often do not exhibit the dissaving associated with life cycle model savings, and it then becomes crucial to determine their motive for leaving bequests.

Because of these ambiguities and the lack of conclusive empirical evidence, it cannot be determined definitively that a consumption tax would significantly increase the level of saving in the economy.

Competitiveness of U.S. Companies Under Different Tax Systems

Among the arguments for switching from an income tax to a consumption tax is the assertion that a consumption tax would make U.S. industries more competitive and help the U.S. balance of trade.

When analyzing the effects of tax policy changes on international trade it is important to differentiate between a nation's perspective and a firm's perspective. A nation engages in trade because through trade it can obtain the goods and services its people want or need at a smaller resource cost than if it were to produce those goods and services itself. A nation exports its products as a means of paying for what it imports.

On the other hand, a firm's ultimate goals are to sell its products and maximize its profits. Exports provide a means to achieve these goals.

The Balance of Trade

Popular perceptions about trade tend to reflect a firm's perspective on trade. Most people believe that if the United States could produce goods at costs comparable to or lower than those abroad, our exports would increase and our imports decrease. This in turn would improve our trade performance and reduce our trade deficit.

In the aggregate, however, the United States is not like a firm that can continually capture larger shares of the world market by producing output at lower costs than foreign firms. A nation engaging in trade cannot be a market winner in all products.

Indeed, without borrowing and lending (international capital flows), trade between nations would always be balanced. The only way trade can be out of balance is if one nation lends another nation the resources to pay for the extra goods it imports but does not pay for with its current exports. Capital flows and trade balances are always mirror images of one another; a capital inflow produces a trade deficit while a capital outflow produces a trade surplus.

Hence, tax policy designed to reduce the cost of traded U.S. goods and services will have little effect on trade performance or the balance of trade.

Border Tax Adjustments

For example, consider the argument that if the United States were to replace its income tax with a border-adjustable VAT, then U.S. trade performance would improve and the trade deficit would diminish.

Under the World Trade Organization (WTO) rules, indirect taxes such as a VAT may be rebated on exports and imposed on imports. Direct taxes, such as income taxes, however, cannot be adjusted at the border. The existence of these border tax adjustments has led some to conclude that nations with VATs have a trade advantage over the United States.

On the surface, this appears to be a plausible argument; reduce the price of U.S. goods and exports will rise, increase the price of foreign goods and imports will fall. Trade, it is said, will move into balance.

A simple response to this argument is that most European countries with VATs also have income tax structures similar to the United States. Their VATs are not displacing income taxes; they are permitting a higher level of government spending.

But, at a more fundamental level, border tax adjustments don't matter, other than in the composition of trade (and in this case, they serve to preserve relative prices in each country in accord with that country's own consumption taxes). This is because the balance of trade is a function of international capital flows, not the flow of traded goods and services.

Therefore, in the absence of changes to the underlying macroeconomic variables affecting capital flows (for example, interest rates), any changes in the product prices of traded goods and services brought about by border tax adjustments are ultimately offset by exchange-rate adjustments. Border-tax adjustments would have no effect on a nation's balance of trade or its basic competitiveness.

The Effects of Tax Policy on Trade

That is not to say that changes in the tax structure could not influence trade levels or patterns. Changes in tax policy which affect the underlying macroeconomic variables that govern capital flows (for instance, by increasing either public or private savings, which in turn would lower interest rates, or by making investment in the United States more attractive) could affect the balance of trade. For example, if a tax policy change caused domestic savings to rise, then a likely outcome would be a fall in interest rates and a reduction in the net inflow of capital, which would reduce the level of imports relative to exports. This effect of capital flows is transitory, however. As foreigners adjust their portfolios these effects would reverse, as the smaller stock of capital would result in smaller earnings and an increase in the net inflow of payments (outside of trade). These last effects would be small but permanent and offset in present value the initial short run effect.

In addition, tax reforms which increase the overall efficiency of the U.S. economy will ultimately have a positive effect on this nation's terms of trade. Defined simply, terms of trade reflect the amount of domestic resources that have to be given up in order to acquire a given quantity of imported goods. If a nation's terms of trade improve, it gives up fewer domestic resources to acquire the same level of imports. If its terms of trade deteriorate, then it gives up more domestic resources to acquire the same level of imports.⁴

Taxes distort the allocation of resources in the economy. If tax reforms reduce the distorting effects of the tax system, then resource allocation will become more efficient which will increase domestic economic welfare.

When the allocation of domestic resources is less distorted, domestic goods can be produced at a lower total resource cost than they could before the tax reforms. So,

⁴ See CRS Report RL32591, *U.S. Terms of Trade: Significance, Trends, and Policy*, by Craig Elwell, for a discussion of the concept.

to acquire the same amount of imported goods, the nation gives up fewer domestic resources, which represents an improvement in the U.S. terms of trade. The gain, however, is likely to be small.

Finally, tax policy can and does affect the composition of trade. For example, if the tax change increased the tax burden of some firms relative to others, then those firms with an increased tax burden might see their market share and their exports decline. On the other hand, those firms that experienced a relative decline in their tax burden might see their market share and their exports increase. These relative shifts in the inter-firm tax burdens, and the resultant shift in market output, could affect the composition of both exports and imports. Indeed, the purpose of allowing rebates of value added taxes is to prevent one country's pattern of differential consumption taxes from being imposed on another by stripping out the relative taxes on exports and allowing the importing country to impose their own pattern of taxes.

How Will Different Economic Sectors be Affected?

The proposed tax reforms would affect the allocation of economic resources. Some sectors, generally those that are capital intensive and growing, will gain. Slower growing firms will lose. Other sectors that might be adversely affected by broadening the base to more fully reflect income and by removing itemized deductions are the non-profit sector, the state and local sector, the residential real estate industry, and the health care sector. These are sectors that receive special benefits under the income tax.

Proposals to shift the tax base from an income base to a consumption base (most proposals), while generally increasing business investment, would differentially affect firms, depending on their growth rate, capital structure, and employee benefit structure. They would also make investment in pensions, insurance policies, owner-occupied housing, and tax-exempt bonds relatively less attractive, and investments in ordinary stocks and bonds more attractive.

Sector Effects

Firms and sectors that would be adversely affected by tax change may face a difficult transition period, which could lead to some economic disruption. Moreover, for certain types of tax structures, there would be a need for a major one-time price inflation to avoid an economic contraction. Some tax revisions present design challenges regarding the treatment of some industries, such as financial institutions.

These firms and sectors are likely to be opposed to this type of tax shift:

State and Local Governments. Most states rely on the federal government for income tax administration and compliance, and to some extent conform to the federal tax base. States would either face increased enforcement costs and lost revenues if they retained current rules, or they would have to adapt their systems to the federal system. Also, for the reform proposals that do not tax capital income, tax-exempt bonds would become less attractive, and borrowing by states and

municipalities more costly. Also, proposals that disallow the deductibility of state and local taxes would make increases in these taxes more costly to taxpayers. Finally, for some proposals state and local governments would need to remit taxes on employee fringe benefits.

Owner-Occupied Housing. Generally, businesses include receipts in income and deduct costs. Owner-occupants of housing do not include the imputed income (rental value of living in the house), while mortgage interest and property taxes remain deductible. Thus, the federal income tax favors owner-occupied housing. Changes in the tax structure that restrict deductions of interest and taxes or that exempt income from new investments from tax would divert investment out of this sector and into the business sector. The likely magnitude of this effect is uncertain.

Non-Profit Institutions. Proposals that would eliminate the charitable contributions deduction could decrease charitable giving to some degree. The incentive for higher-income individuals (and, hence, charitable giving to the recipients of their contributions) would be most affected, since they are the ones who itemize. Non-profit institutions might also need to remit taxes paid on fringe benefits for their employees under some proposals.

Health Care. Health insurance fringe benefits are favored under current tax law, which allows firms a deduction for contributions but does not include benefits in employees' income. Flat-tax proposals that would eliminate the employer deduction might discourage firms from offering health insurance. Indeed, proposals that provide wage exemptions would make health plans overtaxed relative to wages for low-income individuals who have not exhausted a wage exemption.

Sales tax and VAT structures might, however, exempt medical care from the base, lowering its relative price. It is extremely difficult, however, to exempt a product under a subtraction-method VAT. A subtraction method VAT taxes income minus intermediate goods, so that any tax paid in the intermediate states of production would still affect the tax on the final product. Credit-invoice methods, where firms pay a tax (which could be zero) on total receipts and get a credit for previous taxes can be used to vary tax rates and exempt goods and services. The VAT proposals have been for subtraction method approaches.

Pensions/Insurance. Pensions are favored under current tax law because they are effectively tax exempt (treated on a consumption-tax basis). While firms would still have reasons to provide pensions, proposals that would extend this treatment to all investments would make pensions relatively less attractive, and might discourage their use. If some individuals now save more through a pension plan than they would on their own, overall savings could be adversely affected as well. Currently tax-favored insurance policies (e.g., whole life insurance) would also become relatively less attractive.

Differential Effects on Firms

A consumption tax would encourage investments in business equity capital. In the case of the flat tax, or a VAT, the firms would not be allowed interest deductions

and new investments would be expensed rather than depreciated. Firms that are growing slowly, or contracting, would find expensing of new investment to be of little benefit over annual depreciation deductions. Firms that rely more heavily on debt would also find their tax bills rising. Investment would be favored under a sales tax because investment goods are exempt.

Some proposals would tax certain employee fringe benefits, which would increase the relative cost of compensation for firms that have a large share of these fringe benefits in their benefit package.

Growing firms that rely heavily on equity and offer few fringe benefits would be the beneficiaries of these tax revisions.

Special Problems

The financial sector (banks, insurance companies, investment brokers), currently accounting for substantial corporate tax, is difficult to tax under a consumption base. Owner-occupied housing cannot be taxed directly, but can be accommodated easily by leaving it out of the system.

Transition Costs and Macroeconomic Adjustments

One of the most difficult issues to address in considering a shift to consumption taxes is the transition from the current system to the new tax regime.⁵ While all shifts to a consumption tax cause some common transitional disturbances and windfall gains and losses, the most serious problems arise from a shift to a national retail sales tax or to a value added tax. In these cases, a tax formerly largely collected from individuals is now collected at the firm level — either from retailers on total sales or from both final and intermediate producers' value added. Flat taxes avoid this problem but can result in confiscatory taxes on existing assets.

Price Accommodation and Short-run Contractions Under a Retail Sales Tax or VAT

Holding prices fixed, these firms would need to reduce payments to workers to retain profit levels. In fact, many firms would not have enough of a profit margin to pay the tax without something else — either prices or wages — adjusting. Consider, for example, a grocery retailer that may have a 1% or 2% profit margin now owing a tax equal to 20% of receipts. This firm simply does not have the cash to pay the tax. If it is difficult to lower wages (and presumably it would be), a significant one-time price inflation, to allow these costs to be passed forward in prices instead, would be required to avoid a potentially serious economic contraction. Note that the price increase, were it possible to implement correctly and precisely, would solve the

⁵ See CRS Report 98-901, *Short-Run Macroeconomic Effects of Fundamental Tax Reform*, by Jane G. Gravelle and G. Thomas Woodward for a more detailed discussion of these issues.

transition problem because although prices would rise, individuals would have more income to purchase the higher priced goods — and demand would not fall. It is difficult, however, for the monetary authorities to engineer such a large price change. Moreover, even with the monetary expansion in place to do so, the imposition of such a tax would be disruptive if firms are reluctant to immediately raise prices, again leading to an economic contraction. That is, firms could contract their business, or even close down, until output had contracted enough to raise prices.

These disruptions are not minor in nature — imagine the difficulties of engineering and absorbing a one-time price increase that is likely to be close to 20% (the level, approximately, that might realistically be needed to replace the income tax).⁶ Even if such an inflation could be managed, there are always concerns that any large inflation could create inflationary expectations — it's hard to manage a single one-year price increase. In fact, economists who judge a consumption tax to be superior to an income tax may nevertheless be skeptical about the advisability of making the change because of these transition effects.

Despite the extensive analysis of the economic effects of fundamental tax reform, however, little attention has been devoted to potential short-run contractionary effects, particularly of proposals that would shift the liability for tax payments from individuals to businesses. One may note, however, that when a major macroeconomic forecaster (Roger Brinner from DRI/McGraw-Hill) modeled a VAT replacement in a Joint Committee on Taxation study, he found output falling over the first five years, reaching a height of 12.5 % in the fourth year.⁷ (The other forecaster did not simulate a VAT, but only a flat tax which does not require this price accommodation; the remaining modelers had full employment models).

Although the short run disruption from the retail sales tax and the VAT is most pronounced, any shift to a consumption tax will likely cause short term economic contraction due to sectoral shifts. In the Joint Committee on Taxation study, both macroeconomic modelers who used cyclical models (that permitted unemployment) projected the flat tax, which continues to tax individuals on their wages, to cause contractions (albeit smaller) in the short run.

Windfall Losses for Equity Investments Under the Flat Tax

The flat tax also produces some transitional effects on cash flow that can be quite severe for owners of assets because it does not require a price accommodation. A consumption tax can also be characterized as a wage tax plus a lump sum tax on old capital. That is, it taxes the sources of income used, sooner or later, for consumption purposes. (Individuals will eventually consume out of new assets but

⁶ The rate would depend on whether and the extent of any family exemption. A 20% tax exclusive rate would correspond to a tax inclusive rate between 16% and 17%.

⁷ U.S. Congress, Joint Committee on Taxation, *Tax Modeling Project and 1997 Symposium Papers*, committee print, 105th Cong., 1st sess., Nov. 20, 1997, JCS-21-97 (Washington: GPO, 1997), p. 24.

the cost of those new assets will also have been deducted from income when acquired.)⁸

One explicit manifestation of this effect is that businesses that have already purchased assets and inventories, in the expectation of being able to deduct their costs over a period of time (under a fixed depreciation schedule for plant and equipment and when sold for inventories), will no longer be able to take such deductions. If a firm is constantly growing, then the ability to deduct new investments in full will more than compensate for this loss of old deductions, on a cash flow basis (although the value of the firm will still fall). But for a firm that is not growing, or is liquidating, or for an investor who wishes to shift from a physical ownership (such as real estate) to financial asset, tax liability could rise dramatically.

Consider the following example. Suppose an investor purchases a building for \$450,000, with a mortgage of 95% (\$427,500). Two years later, the price has increased to \$500,000 and he has taken \$23,000 of depreciation deductions; to simplify suppose he has refinanced to maintain the same mortgage. He decides to sell and use the proceeds to buy a financial asset (such as a corporate stock). Under current law, he would measure gain subject to tax as the sales price of \$500,000 less the basis (original cost of \$450,000 less \$23,000 in depreciation, or \$427,000). This gain would amount to \$73,000 which is the sum of the appreciation in the property of \$50,000 and the depreciation he has already taken. Assuming for simplicity a 20% tax rate, he would pay capital gains tax of \$14,600. He pays the mortgage of \$427,500, and is left with net cash of \$57,900.

Suppose, however, that a flat tax (consumption tax) had been enacted in the interim at the same rate. Under the flat tax, he would pay a 20% tax on \$500,000, or \$100,000. One can see that this tax is more than confiscatory: after repaying the mortgage of \$427,500 and paying the tax of \$100,000 he has a loss in cash flow of \$27,500.

Why does this happen? It happens because the flat tax is collected in a way that does not require a price increase and the lump sum tax on assets falls solely on the equity claim to an asset. The holder of the mortgage has had no loss in value. With either a retail sales tax or a VAT and price accommodation, the investor would be left with \$73,000 in cash, whose purchasing power has decreased by 20%.⁹ The

⁸ Physical business assets (equipment, structures, and inventories) would be deducted from income as an intermediate good under the flat and VAT approaches and not subject to the retail sales tax. Sales of business assets, whether new or used, would be taxed under the VAT and flat tax. Owner occupied housing would presumably be an exception because the stream of imputed rental income is not taxed; newly constructed housing would presumably be subject to the retail sales tax and the purchaser would not be allowed a deduction or credit under a flat tax or VAT. Existing housing would presumably be neither taxed nor eligible for deduction. The return to this new housing would still be exempt from tax, but the method of doing so would be different.

⁹ The price level in the economy would increase by 25%. Why 25% rather than 20%? This is simply the difference between the tax inclusive rate of 20% and the tax exclusive rate of 25%. (The tax exclusive rate is $t/(1-t)$ where t is the tax inclusive rate). If prices go up by
(continued...)

mortgage holder's asset would also lose 20% in value. Thus, the lump sum tax is allocated to both debt holders and equity holders.

The problem with the flat tax would not occur under another form of consumption tax that does not require a price accommodation — a direct tax on consumed income. Under this approach, individuals would begin with the income tax base, and deduct net investment or add net withdrawals of investments to income. With this type of tax, both financial and physical investments would be included in the calculation, and the individual would be able to deduct the mortgage repayment as an investment. The direct tax on consumed income has not proven to be very popular, however, as it would complicate rather than simplify tax calculations for the individual and require unfamiliar and probably unpopular tax rules, such as including loans in taxable income.

One could avoid this cash flow problem under the flat tax by allowing the recovery of depreciation, inventory and basis. Such revisions would be costly to include, and would require much higher tax rates, perhaps for a long period of time. They would also zero out the tax for many firms. The lump sum tax on old capital is an important contributor to the projected efficiency gains for switching to consumption taxes, the major reason that so many economists favor a consumption base.

Stock Market Effects

Note also that these physical effects on capital, and their variations across types of assets, should also be transmitted to stock prices. If a tax is levied at a 20% rate, with inflation to fully accommodate, all consumption prices would rise by 25%. A dollar of financial (or physical) assets can purchase only 80% of the real consumption goods it could purchase in the past. If there is no inflation, the nominal price of consumption goods should be constant and debt retains its purchasing power, but since new assets can be purchased at a 20% discount, the value of a firm's old capital would fall by 20%. If the firm has no debt, the stock should fall by 20%; if a third of its assets are financed by debt (typical of the economy) the stock should fall by 30%; if half is debt, the stock should fall by 40%. Individuals who have borrowed to buy stock could be significantly affected.¹⁰

⁹(...continued)

25% you lose 20% of purchasing power. That is, an \$80 basket of goods would now cost 25% more, or \$100 and you spend \$100 to purchase goods that are worth only \$80 — your \$100 has lost 20% of its purchasing power. In our example, in the case of the retail sales tax, the individual keeps \$72,500 (the \$500,000 sales price less the mortgage repayment, which is \$72,500). He implicitly pays a tax of 20% because this amount can only purchase \$58,000 of goods before the application of a 25% retail sales tax. In the case of a VAT, the price of the building would rise by 25%, to \$625,000, and after paying a 20% tax on receipts, the investor would have \$500,000 less the mortgage payment — with the same results ensuing.

¹⁰ Some people disbelieve that this price effect would occur, but if it did not, then in effect the tax is not acting as a consumption tax and none of the investment incentives would work.

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Effect on Tax Administration and the Underground Economy

The complexity and cost of the current tax system is one of the most potent arguments used by the tax reform advocates. Each of the proposals discussed in this paper is advertised to be simpler and less costly to comply with and to administer than the current income tax. Even tax evasion is sometimes blamed on the complexity of the income tax.

Taxpayer Compliance

Easing the burdens of taxpayers in complying with the tax system is one of the biggest selling points for the “flat tax” and other tax simplification proposals. The current system is said to be a nightmare of complexity, requiring taxpayers to read and understand volumes of tax law, regulations, and instructions, and to complete page upon page of complicated forms.

The Internal Revenue Service (IRS) itself says it takes taxpayers an average of 13 hours and 29 minutes to prepare an individual income tax return (Form 1040).¹¹ The cost in taxpayer time and expenditures for the individual income tax has been estimated at \$67 billion to \$99 billion.¹² Costs to big business have been estimated at \$2 billion.¹³ The complexity is accused of contributing to the perception of unfairness, since the rich are seen as able to hire experts to help them escape their fair share.

Two issues immediately present themselves: (1) how much of a burden is the current system, and (2) to what extent would the tax reforms currently contemplated relieve this burden?

What is the Current Burden? Certainly the current system is complex. The Internal Revenue Code is thousands of pages long, and the regulations interpreting it run to tens of thousands of pages. The taxpaying public must file hundreds of

¹⁰(...continued)

It is the fall in the price of stock that makes investment in corporate equity more attractive and it corresponds to the ability, when directly investing, to deduct the cost of capital acquisitions.

¹¹Instructions for Form 1040 (2003), p. 77.

¹² Statement by Janet Holtzblatt in a presentation to the American Enterprise Institute, reported in Brandt, Goldwyn, “Tax Administration Service Estimates Tax Compliance Costs at \$99 billion for Individuals in Year 2000,” *Bureau of National Affairs Daily Tax Report*, no. 23, Feb. 5, 2004, p. G-2. The range reflects a value per hour between \$15 and \$25.

¹³ Joel B. Slemrod and Marsha Blumenthal, “The Income Tax Compliance Cost of Big Business,” *Public Finance Quarterly*, vol. 24, Oct. 1996, pp. 411-438.

different types of forms and schedules; time spent on taxes has been estimated at 2-8 billion hours for individuals and 800 million hours for businesses.¹⁴

These kinds of numbers are a bit misleading, however, because they do not apply to most taxpayers.

Most of the complex issues are of no concern to most taxpayers. Fewer than 35% of individual taxpayers itemize deductions. (The “very popular” mortgage interest deduction is claimed on less than 29% of returns and the charitable contribution deduction on about 31%.)¹⁵

Fewer than 16% of individual returns report business or farm income or loss, fewer than 8% rental income or loss, and fewer than 5% partnership or S-corporation income or loss.¹⁶ (These percentages overlap.)

Businesses do face more complexity and compliance burden under the tax system than do most individuals, but it is hard to know its real extent.

Would Tax Reform Relieve the Burden? A national sales tax or value-added tax that collected all taxes from businesses would obviously relieve the compliance problems of individual taxpayers, since they would need to file no returns at all.

Business taxpayers would not necessarily have compliance costs reduced by a VAT, however; depending on how the taxes were structured, businesses might find themselves facing two largely incompatible accounting systems. For financial purposes, creditors and stockholders would still require net income calculations, with depreciation, inventories, and all the other accrual accounting conventions. At the same time, the tax system would require value-added computations on a cash-flow basis.

A flat tax with a single rate would not, by itself, do much to simplify things for most individual taxpayers. In fact, for many individuals, the current system *is* a flat tax with a single rate and a large exemption. Almost 41% of all individual income tax returns currently either owe no tax or are taxed at a 10% rate.

The flat tax, therefore, would not represent much of a simplification for many individual taxpayers, who are already subject to a similar system, nor for larger businesses, which would be relieved of only the marginal accounting costs associated specifically with the income tax. Its simplifications would mostly benefit smaller businesses and individuals with more complex income tax filings. Individuals with

¹⁴For a survey of estimates, see Joel Slemrod, “Which Is the Simplest Tax System of Them All?” in Henry J. Aaron and William G. Gale, eds., *The Economics of Fundamental Tax Reform* (Washington: The Brookings Institution, 1996), pp. 367-368.

¹⁵“Individual Income Tax Returns, Preliminary Data, 2002,” *SOI Bulletin*, Winter-Spring 2003-2004, Internal Revenue Service, 2003.

¹⁶*Ibid.*

businesses, however, would be required to file two returns, one for the business and one for their wage income.

If a VAT or retail sales tax were to provide a mechanism to relieve the burden for the poor, though a credit system, as many propose, individuals would still have to file returns to claim the credit.

Administrative Costs

The current tax system relies heavily on the uncompensated (“voluntary”) labor of the taxpaying public, which reduces the government’s administrative costs considerably. In FY2003, IRS collected around \$1.9 trillion with a budget of about \$9.8 billion, or a cost of less than ½ cent per dollar collected (not counting costs to taxpayers).¹⁷

Most of the proposed tax reforms appear to rely even more heavily on “voluntary” taxpayer efforts. Many proposals contemplate a reduced IRS presence in taxpayers’ lives, and some even suggest abolishing the IRS altogether. Except for the national sales tax proposals that would be collected by the states, no proposal has specified how collection and enforcement activity is to be reduced.

Many of the problems that create administrative costs in the income tax system, such as verifying inventory or depreciation accounting, would be reduced or eliminated under most proposals, but major ones would still exist. A VAT or partial VAT would involve every business entity, and businesses are the source of most of IRS’s current enforcement costs. Administrative costs often arise from taxpayers’ attempts to avoid paying taxes, and no tax reform will produce a system in which people do not wish to avoid taxes.

The Underground Economy

Another hope for the tax reform proposals is that a new tax structure would reduce transactions taking place outside the tax system. This may depend on what part of the “underground” economy is meant. The “informal” economy, which involves evading taxes on legal activities, is partly a function of tax rates. Reducing rates would reduce the rewards of evasion and thus the incentive to cheat (but some proposals would result in a *higher* marginal rate for most smaller taxpayers, 17% instead of 10%, for example). For the illegal economy, where tax evasion is normally a minor part of the criminal activity, there is no reason to expect any outcome except continued evasion, although a different tax structure would alter the way in and degree to which income avoids tax, and, depending on behavioral responses, the actual burdens. For example, under an income tax, producers in an underground market pay no taxes, while their customers who operate in the legal market do. Under a sales tax, producers effectively pay taxes on income when it is spent in the market; their customers pay no tax on the segment of income that reflects

¹⁷U.S. Department of the Treasury, *The Budget in Brief FY2005*, Feb. 2005. There are some additional costs budgeted under Treasury and Justice Departments and the Judiciary Branch.

value added by the illegal part of the market (although tax is paid on intermediate inputs).

In many ways certain forms of value added taxes and, to a greater extent, retail sales taxes increase the incentive for firms to avoid tax. For a retailer with, say, a 2% profit margin, the benefit of avoiding a profits tax is less than one percent of profits. If the retailer stands to save 20% of each dollar, the incentive to avoid tax is much greater. That is the reason that many tax administrators would recommend the invoice credit form of the VAT used by Europeans (so that firms present evidence on their intermediate purchases which helps to monitor the behavior of the seller) rather than the subtraction method, where firms subtract from intermediate purchases from their tax base. It is also a reason that many tax scholars doubt that a high retail sales tax is feasible, and indeed no such high rate of the retail sales tax exists anywhere.

How Would the Distribution of the Tax Burden and the Level of Tax Revenues be Affected by a Different Tax System?

Many of the tax reform proposals have not been subject to detailed analysis. Based on those analyses that have been done, however, a number of the flat-tax proposals could, in their current form, lose revenue, perhaps substantial amounts. They would also reduce the progressivity of the tax.

Revenue Effects

Most proposals have been designed to be revenue neutral, but have not been evaluated by official revenue estimators. The Treasury Department, however, has analyzed a version of the flat tax with a proposed rate of 17%, finding a revenue shortfall. (This estimate, however, was made in 1995 before the major tax cuts were enacted).

The Treasury found that the revenue-neutral flat-tax rate in the proposal, given the level of exemptions (ranging from about \$10,000 for a single individual to about \$30,000 for a family of four), would be around 21% (20.8%), about four percentage points above the proposed permanent rate of 17%.¹⁸

Alternatively, the 17% rate could be maintained and the exemptions cut by over half to maintain revenue neutrality. With neither revision, Treasury estimated the proposal would lose \$138 billion annually.

Other proposals with lower rates and/or more exemptions would presumably lead to larger revenue losses. Adding deductions, such as the payroll tax deduction,

¹⁸U.S. Department of the Treasury, Office of Tax Analysis, *Preliminary Analysis of a Flat Rate Consumption Tax*, Mar. 10, 1995.

or restoring itemized deductions, such as those for mortgage interest and charitable contributions, would cause larger revenue losses.

Value-added taxes or sales taxes (which are equivalent to the flat tax except that they have no exemptions) could presumably raise adequate revenue at lower rates if the base were kept broad. The required rates in other proposals will depend on the base.

Any revenue losses would either lead to higher deficits and debt or require spending cuts; generally the latter option has been proposed. Some proponents have incorporated in their plans the presumption that tax rates can be lowered in the future due to economic growth.

It is important to note that a number of these taxes have a consumption base; thus any growth that arises from increased savings would contract, rather than expand, the tax base in the short run. Increases in labor supply would increase the tax base. Our knowledge of the likely effects on labor supply and savings is very limited, however.

Distributional Effects

Any flattening of the tax rates would have distributional consequences across income classes. In addition, a switch from an income to a consumption base for taxation could cause large changes in the distribution of taxes across generations and family types as well as income classes.

Income Classes. Holding revenue constant, flat-tax proposals would reduce tax burdens on higher-income individuals; if the earned income tax credit (EITC) is repealed, the burden would rise on low-income individuals, as well as the middle class.

Based on the 21% tax rate, and using percentage change in disposable income as a measure, poor individuals would experience decreases of 6%-7% under the flat tax and middle income individuals decreases about 3% to 5%, while the highest income class will gain about 9%, according to the Treasury analysis (again based on estimates before the recent tax cuts).¹⁹ These effects would be more pronounced if revenue neutrality were achieved through lower exemptions rather than a higher tax rate.

Value-added and sales taxes would reduce tax progressivity further because they do not permit exemptions, unless a credit mechanism were introduced. Proposals with a graduated rate structure would be more progressive than other proposals, but they have not been closely examined by the Treasury or the Joint Committee on Taxation.

Generations. Proposals to shift the tax base from an income to a consumption base (most proposals) would shift the tax burden substantially across generations.

¹⁹ Ibid.

The flat tax, for example, has a consumption base, although it appears to be a wage tax for individuals. The burden of tax would be shifted from wages and capital income to consumption, which is equivalent to wages and old capital (both principal and return). Since older individuals own capital, the burden would tend to be shifted to those individuals.

A Lifetime Perspective. The ways in which a consumption tax burdens old capital are complex, and the incorporation of generations as well as income in distributional analysis is limited at this time. In general, however, younger individuals who are in taxable status and who will save substantial sums over their lifetimes would benefit relatively from the tax, while middle and higher income older individuals consuming assets would bear a greater burden. Wealthy individuals would have their tax burdens reduced over their lifetime if they maintain and increase their assets. Poor individuals with little savings over their lifetime would be relatively unaffected by the change in the base, as long as transfer payments are indexed to changes in the price level needed by a tax revision. The rate structure is more important for these low-income individuals.

Marriage Neutrality. The marriage neutrality of the tax system is a function of the tax structure, not the choice of tax base - income or consumption. Hence, both an income and a consumption based tax can be marriage neutral if the accompanying tax structure is designed appropriately. Marriage penalties and/or bonuses can be avoided if taxes are levied on individual rather than family income or consumption and if standard deductions and tax rate brackets for married couples are twice the size of those for single taxpayers.

Under the current income tax when married couples are compared to single filers, marriage tax penalties are confined to very low-income married couples who claim the earned income tax credit and to high-income married couples above the 25% marginal income tax threshold. All other married taxpayers receive marriage tax bonuses, or at worst, a neutral tax treatment when compared to two singles with the same combined income.

A flat-rate consumption tax, with two filing statuses - married and single, and with a standard deduction for married couples that is twice the size of the standard deduction for a single individual would eliminate all marriage tax penalties and bonuses. The same result, however, could also be achieved under an income tax by adopting a single tax rate and standard deductions that are twice as large for married couples as for single individuals.

There are no marriage bonuses or penalties with a sales or value added tax.

Additional CRS Reports

- CRS Report RL30351. *Consumption Taxes and the Level and Composition of Saving*, by Steven Maguire.
- CRS Report 98-248. *A Federal Tax on Consumed Income: Background and Analysis*, by Gregg A. Esenwein.
- CRS Report 96-379. *The Flat Tax and Other Proposals: Effects on Housing*, by Jane G. Gravelle. (Archived, available from author).
- CRS Report 95-1141. *The Flat Tax and Other Proposals: Who Will Bear the Tax Burden?* by Jane G. Gravelle.
- CRS Issue Brief IB9506. *Flat Tax Proposals: an Overview*, by James M. Bickley. (Archived, available from author).
- CRS Report 98-529. *Flat Tax: An Overview of the Hall- Rabushka Proposal*, by James M. Bickley.
- CRS Report 98-901. *Short-Run Macroeconomic Effects of Fundamental Tax Reform*, by Jane G. Gravelle and G. Thomas Woodward.
- CRS Issue Brief IB91078. *Value-Added Tax as a New Revenue Source*, by James M. Bickley.
- CRS Issue Brief IB92069. *A Value-Added Tax Contrasted with a National Sales Tax*, by James M. Bickley.