CBO PAPER

COMPARING INCOME AND CONSUMPTION TAX BASES

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PREFACE

This Congressional Budget Office (CBO) paper compares how various transactions are taxed under income and consumption tax systems. It describes how the tax base would change under various proposals for restructuring the current tax system. The paper was prepared for the Senate Committee on the Budget at the request of Pete V. Domenici, the Chairman.

Most recent tax restructuring proposals involve shifting from the current income tax system to a consumption tax, either directly or indirectly. In contrast to an income tax, a consumption tax eliminates the tax on the normal returns to saving, and thus should increase economic efficiency. However, changing the tax treatment of saving is only a small part of the story of how the tax base would change under restructuring proposals. As documented in this paper, most of the changes involve expanding the amount of income subject to tax by eliminating implicit or explicit exemptions in the current system.

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SUMMARY

A number of recent proposals to reform the U.S. tax system have focused on shifting the tax base from income to consumption. In theory, the difference between an income-based system and a consumption-based system is whether or not the normal return to saving is subject to tax. In the context of the current debate on tax reform, however, some policymakers also view the shift to a consumption base as a means of expanding the tax base by eliminating many existing tax preferences that are not related to the tax treatment of saving. Reformers want to expand the tax base as a way of lowering tax rates—possibly to a single "flat" rate on all consumption. Merely substituting consumption for income as the tax base will actually shrink the base. Thus, if tax rates are to be reduced, further steps must be taken to expand the tax base.

Using national income and product account (NIPA) data along with information about income tax collections from the Internal Revenue Service (IRS), this paper quantifies how the size of the tax base would change as some of the important decisions about what to include and exclude from the tax base are made in the shift from an income to a consumption tax. Actually, few of those decisions involve the distinction between income and consumption. In fact, most forms of saving (defined as the difference between income and consumption) already receive tax preference under the present income tax system. Rather, the potential for lowering tax rates depends on expanding the amount of income subject to tax, because only those changes can broaden the base enough to permit rates to be lowered.

When analyzing how income and consumption tax bases differ, the key is to consider sales transactions from the perspectives of both buyers and sellers. A consumption tax is imposed on sales as observed from the buyer's perspective—the tax is a certain fraction of the transacted amount. But from the seller's perspective, that simple sales transaction is much more complicated. The revenue that the seller collects is used to pay wages and salaries to employees and returns to the owners, state and local sales taxes, the employer share of Social Security taxes, health insurance for employees, and other costs of doing business that are not neatly characterized as income. Many of those components of the sales price are not taxable under the income tax, but would become taxable under reforms that simply include all sales transactions from the buyer's perspective. Also, nonsales transactions that currently receive tax preference, such as charitable giving and mortgage interest

payments, would lose their preferred status by default under tax reform if no new special considerations were made.

Some of the transactions that would become incrementally taxable under a simple, broad-based consumption tax are both highly visible and quantitatively important. For example, currently tax-preferred forms of employee compensation—such as employer-provided health insurance—amount to over 8 percent of the potential base for a consumption tax. Tax-preferred outlays for charitable giving, mortgage interest payments, and other itemized deductions amount to over 13 percent of the consumption base. Those tax preferences enjoy broad support. But eliminating them may be crucial to ensuring that a flat-rate consumption tax is revenue neutral. Keeping the preferences in place would require a significantly higher tax rate.

Important decisions on multiple layers of taxation and assumptions about tax compliance are also crucial in evaluating alternative tax bases. For example, under most consumption taxes, the existing deduction for employer-paid Social Security taxes would disappear. In dollar value, that deduction accounts for almost 7 percent of a comprehensive consumption tax base. Also, assumptions about tax compliance are both significant and uncertain. The current income tax system collects tax on less than 82 percent of potentially taxable income, and that gap translates directly into a reduced base for a consumption tax if one assumes that the choices of the tax base do not affect compliance. Since most compliance problems arise at the level of reporting business sales, which is the starting point in calculating both income and consumption tax liabilities, most of the same compliance problems that plague the current income tax are likely to remain even if the tax base shifts.

In short, viewing all sales transactions from the perspectives of both buyers and sellers is critical in quantifying how any given proposed reform would affect the tax base. Fortunately, NIPA data are helpful in making such calculations. For every sales transaction in the economy, the NIPA measures both the type of income generated and the type of spending that occurs. The data are therefore useful for measuring the tax base relative to income as it is earned or relative to consumption as it occurs.

The NIPA-based measures also provide helpful insights into the trade-offs involved in the switch from an income-based tax to a consumption-based tax. For example:

- One can measure consumption, and therefore the consumption tax base, in two equivalent ways. A consumption tax can be imposed directly by simply subtracting saving from the income tax base. Alternatively, the consumption tax can be imposed indirectly, using net sales by businesses to nonbusinesses as the base.

- Overall saving in the United States and other countries is only a small fraction of income. Thus, in principle, the wedge between income and consumption tax bases is small. In addition, because most saving already receives tax preference, the direct effect of excluding saving on the tax base should be small.

- The concept of income in the existing income tax base differs significantly from comprehensive income. Many sources of income, such as employer-provided fringe benefits and unrealized capital gains, are not taxed in the current system. Moreover, some sources of income that are subject to tax are not included in comprehensive income.

- Some discrepancies between taxable and comprehensive income will remain unresolved under a consumption tax. For example, how the tax should treat fringe benefits is likely to remain an issue because those benefits represent both income and consumption to employees. Also, discrepancies between comprehensive and taxable income arising from noncompliance by taxpayers are likely to persist under a consumption tax.

- Ultimately, the change in the overall size of the tax base under proposed tax reforms would depend less on the choice of income or consumption as a tax base and more on decisions about whether to change existing tax preferences that are not related to the difference between income and consumption.

Those points are developed further in the discussion that follows.

One can measure consumption, and therefore the consumption tax base, in two equivalent ways. NIPA accounting begins with the principle that every transaction in gross domestic product (GDP), which includes sales of all goods and services, has both a buyer and a seller. Therefore, cash flows under GDP can be measured in terms of either sources or uses of funds. For buyers, the accounts measure what types of products are purchased—the most fundamental distinction is between consumption and investment. For sellers, the accounts measure what types of incomes are generated from a given sale—in this case, the important distinction is

between wages and capital income because capital income represents the return to previous saving. The two sides of the NIPA are also linked together through the accounting requirement that saving equal net investment in all sectors of the economy.

The principle that saving equals investment is important in understanding how income and consumption tax bases are related. The most comprehensive measure of economic income is total GDP less the fraction of GDP that covers the costs of replacing plant and equipment worn out by the production process—or depreciation. The broadest measure of consumption is total GDP less purchases of assets by businesses from other businesses—or gross investment. Thus, the difference between income and consumption equals the difference between gross investment and depreciation—or net investment.

Using those NIPA principles, one can specify a consumption tax base in two distinct ways. Because saving is equal to investment, the base for a consumption tax is equal to an income base with saving excluded—that is often referred to as a direct consumption tax, or a saving-exempt income tax (SEIT). But the equivalence in terms of variables on the product side is also useful: taxing consumption is equivalent to taxing sales of businesses to nonbusinesses because the only sales excluded from the base are from new investment goods. That indirect approach provides the general framework for a number of proposals for a consumption-based tax under consideration, including the value-added tax, the retail sales tax, and the flat tax.

Overall saving in the United States and other countries is only a small fraction of income. Because the difference between income and consumption represents saving, and because saving is only a small fraction of income, the difference between income and consumption tax bases is not, in fact, very large. In 1994, combined revenues from corporate and personal income taxes represented 13.4 percent of comprehensively measured income, which was $5,502 billion. A comprehensive consumption tax base equal to the comprehensive income base less saving would have been $5,128 billion. To put the difference between the tax bases in perspective, combined corporate and personal income tax receipts would have made up 14.4 percent of comprehensively measured consumption in 1994.

Preferences for certain types of saving built into the existing tax base further reduce the differences between income and consumption tax bases. The reason is that only the share of saving currently subject to tax would constitute a net exclusion from a consumption tax base. For example, pension-fund and other retirement-

oriented saving already receive the same treatment under the existing income tax as they would under a consumption tax: taxes are shifted from the point in time when the income is earned (and contributed to the fund) to the point when it is consumed (when the pension benefit is received). In 1994, the net difference between inflows and outflows of private pensions and other retirement accounts was $193 billion, while total personal saving was $205 billion.

The concept of income in the existing income tax base differs significantly from comprehensive income. In the NIPA, the broadest definition of income is the value of goods and services produced (GDP) less depreciation. But many components of GDP that are not depreciation are also excluded from the existing income tax base—for example, pension-fund savings, fringe benefits provided by employers, activities of nonprofit organizations, the implicit income from owner-occupied housing, and most business-level taxes.

Capital gains and losses are not included in the NIPA comprehensive income. Nevertheless, they are generally included in the broad concept of income that economists use and that underlies the legal definition of income in the existing income tax. That concept of income, labeled economic or accrual income, is a measure of the amount a person could spend down during a year and still leave the total amount of his or her wealth unchanged. To the individual, a capital gain or loss certainly represents a real change in wealth. Gains and losses are not measured in the more narrow concept of the NIPA income because they are not payments that result from current production. The current income tax base, which includes only realized capital gains, does not strictly follow the approach of either economists or the NIPA in measuring income when it comes to capital gains.

The current income tax base also includes other sources of income such as the interest that households pay to business and government transfers that are not part of GDP. As in the case of capital gains, those income flows do not reflect value derived from the current production of goods and services. Consequently, they are not part of income as measured in the NIPA, but are included as part of economic income. Finally, income in the form of corporate dividends is part of both the corporate and personal income tax bases and is therefore subject to two layers of taxation.

Some discrepancies between taxable and comprehensive income will remain unresolved under a consumption tax. Some other components of comprehensive income are excluded from the existing base for reasons that have nothing to do with the distinction between income and consumption. One example is the current tax preference for fringe benefits provided by employers such as health insurance, which

amounted to approximately 10 percent of the existing income tax base in 1994. Health insurance provided by employers is both income and consumption to employees. True, health insurance provided by employers would be part of a comprehensive consumption tax base, but it also would be part of a comprehensive income tax base. The arguments in favor of excluding fringe benefits from the income tax base are equally valid in the case of a consumption tax base.

Noncompliance also drives a large wedge between comprehensive income and the actual tax base. In 1994, according to the NIPA estimates, the combined corporate and personal income tax base totaled $3,824 billion. In fact, taxpayers reported less than 82 percent of that amount ($3,128 billion) to the Internal Revenue Service. Although unresolved differences in how to measure income account for some of the difference, noncompliance makes up most of the total gap between the NIPA and IRS totals. Estimates suggest that over 80 percent of the gap (15 percent of the potential tax base itself) stems from noncompliance of one form or another. Many estimates of the size of consumption tax bases assume that the noncompliance problem will disappear. Unfortunately, the incentives for misreporting will persist under any tax system. Thus, a realistic comparison of tax bases should include some adjustment for underreporting.

Ultimately, the change in the overall size of the tax base under proposed tax reforms depends more on decisions about whether to change existing tax preferences that are not associated with the difference between income and consumption than on the choice between income and consumption as an underlying tax base. The tax rate and what the tax base includes ultimately determine the ability to achieve a given revenue target. A broad-based consumption tax system that excludes only investment and imputed consumption could, in theory, achieve revenue targets with a flat tax rate of about 20 percent, as proponents suggest.

However, the 20 percent tax rate assumes, first of all, that multiple layers of taxation will be added to the existing system. Businesses currently exclude employer-paid payroll, sales, and the excise taxes they remit when calculating their income taxes. Imposing a tax on the dollar value of their sales implicitly imposes a tax on top of those other taxes. The adjustments needed to avoid multiple taxes alone could change the tax base—and hence the tax rate needed to achieve revenue targets—by a significant amount.

Second, if the highly visible tax preferences for things like employer-provided health insurance in the current system get the same treatment under a consumption tax, the implied tax rate rises further. Proponents of one type of

consumption tax—the flat tax—argue that because the family allowances are more generous, the existing preferences will not be necessary under the new system. Whether or not a new tax system can be designed that excludes some or all of the existing preferences remains to be seen. In a revenue-neutral world, however, a consumption-based tax with generous allowances and a low flat rate will clearly not be able to coexist with the tax preferences currently in place.

Finally, the calculation for the 20 percent tax rate assumes a 100 percent level of taxpayer compliance that does not exist in the current system. As noted above, the actual taxpayer compliance rate under the income tax is less than 82 percent. Given that the incentive to underreport business receipts and other forms of cash flow will not change under a consumption tax, one can reasonably assume that some level of noncompliance will also remain. As a result, before any discussion of multiple layers of taxation and existing tax preferences even takes place, the starting point for setting the (revenue-neutral) tax rate will be higher than the 20 percent that is often cited.

CHAPTER I
INCOME AND CONSUMPTION IN THE NATIONAL INCOME AND PRODUCT ACCOUNTS

The national income and product accounts (NIPA) are a useful framework for comparing income and consumption tax bases. They are based on the principle that one can measure the value of goods and services produced in two ways. Gross domestic product (GDP) is both the sum of incomes received and the sum of products purchased (consumption and investment). The income and product sides of GDP are also linked together by the relationship between investment and saving in the accounts. Investment on the product side is paid for out of saving, and saving in turn equals the difference between income and consumption. Thus, the saving and investment balance in the NIPA can be used to calculate the consumption tax base in two distinct ways—as total income less saving or as the total of products purchased less investment.

THE INCOME AND PRODUCT SIDES OF GROSS DOMESTIC PRODUCT

Examining the various components of GDP on both the income and product sides is sufficient to show the basic relationship between income and consumption tax bases (see Table 1). Total production of goods and services in 1994 amounted to $6,936 billion—the amount business received from the sale of goods and services (the product side of the accounts) and the amount businesses paid out in wages, interest, dividends, and other expenses (the income side).[1]

Of the total $6,936 billion in GDP that businesses paid out, $679 billion was needed to replace depreciation of existing private capital stocks—the decrease in value of plant and equipment used in production. In addition, $140 billion in production was needed to replace depreciation of government-owned capital. Finally, the flows of international wage and capital income showed a difference of $4 billion in 1994. U.S. businesses paid out $167 billion in wages, interest, and dividends to non-U.S. residents, while U.S. residents earned $163 billion from their overseas activities.

Subtracting depreciation and net income payments to the rest of the world from GDP yields net national product (NNP), which amounted to $6,113 in 1994. NNP is the most comprehensive measure of income in the NIPA because it reflects the resources that U.S. citizens have available to consume, while leaving themselves

1. The data for 1994 are used throughout this paper because they represent the latest available detailed tax information from the Internal Revenue Service.

TABLE 1. THE INCOME AND PRODUCT SIDES OF GROSS DOMESTIC PRODUCT
(In billions of 1994 dollars)

Category	Value 1994
Income Side	
Gross Domestic Product	6,936
Less	
Depreciation of Existing Private Capital	679
Depreciation of Existing Government Capital	140
Net Payments of Wage and Capital Income to the Rest of the World	4
Equals	
Net National Product	6,113
Components of Net National Product	
Wages and other labor compensation	4,010
Profits, interest, rents, and other capital income	1,492
Indirect business taxes and net government subsidies	577
Discrepancy between income and production measures[a]	34
Product Side	
Gross Domestic Product	6,936
Components of Gross Domestic Product	
Personal consumption expenditures	4,702
State and local government purchases	798
Federal government purchases	516
Net exports of goods and services	-94
Gross private domestic investment	1,014

SOURCE: Congressional Budget Office based on data from the national income and product accounts.

a. The discrepancy arises because different statistical sources are used to estimate the values of the income and product sides.

as well off (that is, with the same capital stock) as they were in the previous year. Having accounted for worn-out plant and equipment, NNP measures the resources available for either consumption or net increases in the capital stock.

The net national product has three main components. Wages and other labor compensation account for about 66 percent of NNP; profits, interest, rents, and other nonlabor income account for about 24 percent; and business-level (sales, excise, and property) taxes and net government subsidies account for the remaining 10 percent. A small residual (discrepancy) entry on the income side is also used to equate estimates of the product and income sides. In 1994, the discrepancy was $34 billion—or about 0.5 percent of GDP.

On the product side, GDP is allocated among purchases by the five main sectors of the economy. Expenditures for personal consumption (mostly household spending) are the largest component of business sales, accounting for about 68 percent of GDP. State and local government purchases account for about 12 percent of GDP, and federal spending on goods and services adds another 7 percent. The net export entry on the product side is the difference between sales of U.S. businesses to the rest of world ($719 billion) and purchases by U.S. residents from foreign businesses ($813 billion). Thus, in 1994, net exports were negative because U.S. exports to other countries were less than its imports from trading partners.

The last component of GDP on the product side is gross private domestic investment, which was $1,014 in 1994. Gross investment measures all new purchases of plant and equipment by the private sector, as distinct from government capital outlays, which are included in government purchases. At nearly 15 percent of GDP, gross investment exceeded depreciation of existing capital ($679 billion). Hence, in 1994, net investment was positive, and the stock of private capital grew.

Net investment is gross investment less depreciation of existing capital. Private and government investment combined amounted to $1,227 billion in 1994, but after subtracting depreciation of $819 billion, the net increase in capital equaled $408 billion, or 5.9 percent of GDP (see Table 2). Sources of funding for investment are personal (household-level and pension-fund) savings; corporate-retained earnings; the current surplus or deficit in combined federal, state, and local government budgets (government saving); and any net funds that foreigners supply for investment in the United States. The discrepancy between the income and product side is entered to balance flows of saving and investment.

TABLE 2. BALANCE BETWEEN SAVING AND INVESTMENT IN THE NATIONAL INCOME AND PRODUCT ACCOUNTS (In billions of 1994 dollars)

Category	Value 1994
Private and Government Investment	
Gross Investment	1,227
Private	1,014
Government	212
Less	
Depreciation of Existing Capital	819
Private	679
Government	140
Equals	
Net Investment	408
Private	336
Government	72
Sources of Saving Across Sectors	
Personal Saving[a]	205
Plus	
Corporate Retained Earnings	123
Net Investment in the United States by Foreigners	136
Combined Government Surplus or Deficit	-90
Discrepancy Between Income and Production Measures	34
Equals	
Net Saving Across Sectors	408

SOURCE: Congressional Budget Office based on data from the national income and product accounts.

a. Includes wage accruals less dispersals.

TWO WAYS TO MEASURE AND TAX CONSUMPTION

Using the concept "consumption base" broadly to include both personal consumption and government purchases, consumption can be measured either as income (NNP) less saving or total sales (GDP) less gross investment. Thus, the base for a consumption tax is equal to the base for an income tax that allows deductions for saving or replaces depreciation of capital investment with immediate expensing of all investment. A better way to express the second relationship is to say that the base for a consumption tax encompasses all sales of businesses to nonbusinesses, which is just GDP less investment.

Comprehensive consumption can be determined by subtracting saving from income sources (see Table 3). That approach underlies the individual portion of the recently proposed Unlimited Saving Account (USA) tax system.[2] Comprehensive income is measured as the sum of the two principal components of NNP—labor compensation and the various forms of capital income. Together they accounted for $5,502 billion in 1994, which was about 80 percent of GDP. Subtracting the four types of savings, as shown in Table 2, from comprehensive income yields the first measure of consumption, which was $5,128 billion in 1994.

Comprehensively measured consumption was approximately 93 percent of comprehensively measured income in 1994; thus, net saving amounted to 7 percent of income. The differences between the bases for income and consumption taxes are—at least in theory—not that significant because saving is only a small fraction of both. To help put that in perspective, total corporate and personal income tax receipts in 1994 came to $739 billion, which was 13.4 percent of comprehensively measured income and 14.4 percent of comprehensively measured consumption. Hence, a shift from a comprehensive income tax base to a comprehensive consumption tax base would not carve out a very significant reduction in the size of the tax base.

The current income tax base, however, does not include all of comprehensively measured income, and alternative consumption bases will probably not include all of comprehensively measured consumption. In 1994, combined corporate

2. S. 722 was introduced by former Senator Sam Nunn and Senator Pete V. Domenici in April 1995. The Unlimited Saving Account (USA) tax is a specific proposal in the general class of saving-exempt income taxes (SEIT). See Congressional Budget Office, *Estimates for a Prototype Saving-Exempt Income Tax*, CBO Memorandum (March 1994). See also Joint Committee on Taxation, *Description and Analysis of Proposals to Replace the Federal Income Tax* (June 1995).

TABLE 3. TWO METHODS FOR MEASURING CONSUMPTION IN THE NATIONAL INCOME AND PRODUCT ACCOUNTS (In billions of 1994 dollars)

Category	Value 1994
Income Less Saving	
Wages and Other Labor Compensation	4,010
Plus	
Profits, Interest, Rents, and Other Capital Income	1,492
Equals	
Comprehensive NIPA Income	5,502
Less	
Personal Saving[a]	205
Corporate Retained Earnings	123
Net Investment in the United States by Foreigners	136
Combined Government Surplus or Deficit	-90
Equals	
Comprehensive NIPA Consumption	5,128
Sales of Businesses to Nonbusinesses	
Personal Consumption Expenditures	4,702
Plus	
State and Local Government Purchases	798
Federal Government Purchases	516
Net Exports of Goods and Services	-94
Less	
Net Payments of Factor Income to the Rest of the World	4
Government Investment Purchases	212
Indirect Business Taxes and Net Government Subsidies	577
Equals	
Comprehensive NIPA Consumption	5,128

SOURCE: Congressional Budget Office based on data from the national income and product accounts.

NOTE: NIPA = national income and product accounts.

a. Includes wage accruals less dispersals.

and personal taxable income totaled $3,128 billion—only 57 percent of comprehensive income. The income tax base falls short of the comprehensive base for many reasons that are discussed in later sections, but note for now that a base for a consumption tax is conceptually less than a base for an income tax if saving is positive. Yet a given consumption base can exceed the existing income base if some of the underlying divergence between taxable and comprehensive income is eliminated. Whether or not the gap between taxable and comprehensive income is in fact eliminated will depend on the details of a given proposal for a consumption tax.

The second approach to measuring consumption in the NIPA is to add up all sales of businesses to nonbusinesses. That approach is the basis for the various proposals for a value-added tax (VAT), retail sales tax (RST), and flat tax.[3] Total production in a given year is GDP, and the fraction that is sold to nonbusinesses includes personal consumption and government purchases net of foreign transactions. A few adjustments to final sales are needed to arrive at comprehensive consumption. Those adjustments include removing net foreign factor payments (which represent income, but not production, and therefore not consumption), government investment (which is part of government purchases), and business-level (sales, excise, and property) taxes and subsidies.

To understand why alternative consumption tax systems—the saving-exempt income tax, value-added tax, retail sales tax, and flat tax—are equivalent, think of all saving as coming from households and all investment goods as being purchased by businesses. In that case, because saving equals investment, it is easy to show that a tax system in which businesses can deduct all new investment is equal to a tax system in which households can deduct all new saving. But the details on the equivalent tax bases, as shown in Table 3, illustrate that this simple characterization of household saving and business investing is only part of the story. Thus, details about the actual tax treatment of various transactions could matter.

Taxing corporate saving would not be an issue under any of the proposals for a consumption tax that have been put forth, since business and personal taxes would

3. For a description of various approaches to the value-added tax, see Congressional Budget Office, *Effects of Adopting a Value-Added Tax* (February 1992). The flat tax variation of the VAT generally refers to a VAT with separate wage and pension taxation that allows fixed personal deductions and exemptions. See Robert Hall and Alvin Rabushka, *The Flat Tax* (Stanford, Calif: Hoover Institution Press, 1995). The flat tax approach underlies the proposal put forth by Congressman Richard Armey in H.R. 2060 in July 1995. See also Joint Committee on Taxation, *Description and Analysis of Proposals to Replace the Federal Income Tax* (June 1995), pp. 1-42.

be completely integrated when the corporate tax is abolished. Once that occurs, it will not matter if people save directly or through corporate-retained earnings—the tax implications will be the same in either case. Thus, in the matter of corporate saving, the choice between a saving-exempt income tax (SEIT),VAT, RST, and flat tax base would not be an issue.

In the long run, the effect of foreign investment on the tax base would not depend on the specific consumption tax system put in place. But in the transition from an income- to a consumption-based tax system, certain transactions would generate different apparent effects, depending on the particular system. Under an indirect tax such as a VAT, RST, or flat tax, foreigners who purchase equipment in the United States would be entitled to immediate expensing, whereas U.S. residents who purchase capital overseas would not.[4] Under a direct tax such as a saving-exempt income tax, U.S. residents who save and invest overseas would still be able to deduct their saving. As a result, the tax benefit would not necessarily be limited to capital invested domestically. The apparent differences are negated in the long run, however, because investment that is not entitled to up-front expensing generates nontaxable returns, whereas the returns to expensed investment are taxable.

The same distinction between apparent short-run differences and long-run equivalence applies to government saving. The combined government (federal, state, and local) budget deficits indicate that in 1994, governments borrowed $90 billion more overall than they lent, drawing away that amount of saving from other sources. The NIPA-based federal deficit for 1994 was $190 billion, and offsetting state and local surplus totaled $100 billion. Under a saving-exempt income tax, if government ran a deficit, the tax base would shrink if private saving had to fund it. Private saving would then get preferential treatment. But under a VAT, RST, or flat tax system, because neither total sales nor gross investment would change, the tax base would stay the same. In the long run, however, the returns to government debt holders are taxable under a SEIT, but not under a VAT, RST, or flat tax system, which negates the apparent difference.

Whether or not government investment goods are taxed raises another interesting distinction between saving-exempt and business-sales approaches to consumption taxes. Under a VAT, RST, or flat tax, if government investment is to

4. This statement assumes that the current approach to taxing corporate—as opposed to individual—income is the basis for implementation. Under the existing individual tax and standard bilateral tax treaties, income earned by residents abroad is taxed here, and income earned by foreigners in the United States is taxed in their home countries. Corporations generally pay tax in the country in which they are doing business.

be tax-exempt as is private investment, sales of capital goods from business to government would have to be made tax-exempt. Under a SEIT, if government invests, no immediate offset occurs.

A final important detail is the treatment of indirect business taxes. The income tax system generally excludes the nearly 10 percent of net national product that is paid at the business level in the form of sales, excise, customs, and other related taxes. Allowing deductions for taxes at the business level is certainly consistent with principles of a tax based on income—namely, taxes collected at the point of sale should be deductible expenses under an income tax because they do not in any sense reflect income to the business that collects the tax.[5] But note that the income tax treatment of business-level taxes is, in an important sense, quite arbitrary. For example, including those taxes as part of an income flow at the point of sale and then lowering income tax rates just enough to keep the seller's after-tax income constant would be entirely possible. That point is more than academic—some proposals for a consumption tax would include some business-level taxes in the base (that is, they would not be deductible from cash flow). Hence, a comprehensive comparison of the current income base and proposed consumption bases should acknowledge whether business-level taxes are subject to tax or not.

5. Indeed, the national income and product accounts' concept of "national income" is derived by excluding business-level taxes from net national product. In the context of tax bases, working with NNP is useful because the level of real economic activity is not affected by the composition of tax collections between income and business-level taxes.

CHAPTER II

DIFFERENCES BETWEEN COMPREHENSIVE AND TAXABLE INCOME

In the national income and product accounts, everything that is produced generates to someone some form of income that is either saved or consumed, which implies that the only difference between an income and consumption tax base is saving itself. But the tax treatment of saving is only part of the story about how alternative tax bases differ. In fact, most of the complications involved with specifying a consumption tax base are linked to complications in the existing income tax base—not allocating income between consumption and saving.

TAXABLE COMPONENTS OF NET NATIONAL PRODUCT

Information from several NIPA tables is combined to break down net national product into taxable and nontaxable income sources (see Table 4 for the differences between comprehensive income as measured in the NIPA and potentially taxable incomes according to the definition in the current tax code). In 1994, the potentially taxable components of net national product under the personal income tax system added up to $3,893 billion, which was about 64 percent of the total. In addition, about 9 percent of NNP ($532 billion) was taxable under the corporate income tax system. That amount included $200 billion in dividends paid to households that was taxable under both the personal and corporate tax systems. Of the excluded pieces of comprehensive income, $832 billion was in various business-level taxes and $856 billion was in various other types of adjustments.

The three main components of net national product—labor income, capital income, and indirect business taxes—can be further broken down to highlight the taxable and nontaxable components. The nontaxable components include business-level taxes, certain types of tax-preferred saving, tax-preferred types of employee compensation, and types of imputed income that are counted in the NIPA but excluded from the tax base.

The largest component of both comprehensive and potentially taxable income is wages. In 1994, total wages paid accounted for about 53 percent of NNP. The nontaxable components of wages include employee pension contributions, which totaled $47 billion in 1994, and deductible individual retirement account (IRA) and

TABLE 4. THE INCOME-SIDE COMPONENTS OF THE NATIONAL INCOME AND PRODUCT ACCOUNTS (In billions of 1994 dollars)

	Components of Net National Product	Taxable Components of Personal Income	Taxable Components of Corporate Income
Net National Product	6,113	3,893	532
Wages	3,257	0	0
Employee 401(k) and other pension contributions	47	0	0
Employee net deductible IRA/Keogh transactions	27	0	0
Employee-paid social insurance taxes	278	278	0
Cash wages	2,905	2,905	0
Nonwage Employee Compensation	753	0	0
Employer-provided health insurance, other fringes	315	0	0
Employer-paid social insurance taxes	255	0	0
Private employer pension contributions	88	0	0
Government employer pension contributions	95	0	0
Corporate Income	530	0	530
Corporate profits tax	195	0	0
Corporate-retained earnings	126	0	0
Economic adjustment to corporate profits	-2	0	2
Corporate dividends paid to government	11	0	0
Corporate dividends paid to households	200	200	0
Noncorporate Business Income	567	0	0
Imputed owned-housing income	56	0	0
Economic adjustment to proprietor, rental income	-11	0	0
Proprietor and rental income	522	522	0
Net Interest Paid by Business	395	0	0
Net interest paid to pension funds	212	0	0
Net interest paid to nonprofit groups and fiduciaries	50	0	0
Imputed financial services	146	0	0
Net interest paid by business to households	-13	-13	0
Indirect Business Taxes and Net Government Subsidies	577	0	0
Discrepancy Between Income and Production Measures	31	0	0

SOURCE: Congressional Budget Office based on data from the national income and product accounts.

NOTE: IRA = individual retirement account.

Keogh contributions, which came to $27 billion.[1] Thus, the income tax base included the lion's share of wages paid ($2,905 billion in cash wages and $278 billion in employee-paid social insurance taxes). Indeed, wages alone accounted for about 72 percent of all taxable NNP components in 1994.

The income tax base generally excludes nonwage employee compensation in the NIPA, which accounts for a significant share of NNP. The sum of employer-provided health insurance and other fringe benefits, employer-paid social insurance taxes, and employer pension contributions in 1994 was $753 billion—about 12 percent of NNP.

The largest piece of nonwage compensation is health insurance provided by employers and other fringe benefits.[2] Those fringe benefits provided by employers account for over 40 percent of all nonwage compensation and nearly 10 percent of total wages paid. Fringe benefits simultaneously represent income to employees and consumption by those employees. Therefore, any rationale used to exclude health benefits from the income base could apply equally to excluding those benefits from a consumption base. For example, some analysts believe that employer-provided health insurance should be tax-free because it encourages coverage for people who would otherwise go without protection. But of course that same principle could be used to justify excluding expenditures on health insurance from a consumption tax base as well as an income tax base.

The remaining components of nonwage compensation include social insurance taxes paid by employers ($255 billion) and pension contributions by employers ($88 billion from the private sector and $95 billion from government). The social insurance taxes paid by employers are, in a sense, similar to pension contributions sponsored by employers, since "contributions" to a retirement plan are excluded from the tax base. But the way that social insurance and pension benefits are taxed differs significantly.

Pension benefits are taxable when received. Hence, the tax is just shifted from the time when the contributions are made to the time when the pensioner begins to receive the contributions (plus interest). That shift is how all saving would be

1. These estimates are based on unpublished data from the national income and product accounts. The $27 billion in deductible individual retirement accounts and Keogh contributions is the net difference between deductible contributions and taxable withdrawals from those accounts.

2. The nonhealth components of fringe benefits include group life and other forms of insurance. The health component accounted for about 85 percent of the total in 1994.

treated under a consumption tax that exempted saving. In short, pension saving under the income tax already receives the same treatment as it would under a consumption tax.[3]

In contrast, social insurance benefits, are generally not taxable when received. Only higher-income retirees pay tax on their benefits, and only a portion of the benefit (50 percent or 85 percent, again depending on income) is included in the tax base. Thus, social insurance taxes paid by employers are taxed less than they would be under a consumption tax for beneficiaries whose benefits are not subject to tax. For beneficiaries who are taxed on 50 percent of their benefits (representing the one-half of benefits financed by employer contributions), current tax treatment is equivalent to the tax treatment under a consumption tax.

Virtually all of the remainder of the taxable component of NNP comes from corporate and noncorporate business income. Because of the corporate income tax, distinguishing between corporate and noncorporate business incomes is essential. Total corporate profits were $530 billion in 1994, virtually all of which was potentially included in the corporate income tax base.[4] The $200 billion paid by corporations as dividends to households was also taxed at the personal level.

Noncorporate business income is taxable only at the personal level. Sole proprietors and other small businesses earn most noncorporate income. As with corporate incomes, the taxable portion of noncorporate receipts includes an adjustment for differences between economic and accounting depreciation.

The major difference between comprehensive and potentially taxable non-corporate income is the imputed return to owner-occupied housing. Imputed rent measures the difference between the estimated rent a homeowner could earn on his or her home, less the costs (mortgage interest, property taxes, depreciation, and up-keep) of maintaining the home. Imputed rent is included in comprehensive income because the gap between the rent owners would have paid and the actual cost of maintaining their home represents real economic value to the owner. The net result of all the adjustments to comprehensive noncorporate business income is that the

3. The tax treatment of pension saving under the income tax is identical to the treatment of all saving under the general principles of the saving-exempt income tax. The other condition for equivalence between consumption taxes, such as the SEIT and the value-added tax, is that the tax rate faced when the pension contribution is made matches the rate when the benefits are received.

4. One exception is notable: profits of Federal Reserve Banks are not taxable under the corporate income tax.

individual tax base includes about 92 percent of the total—$522 billion out of $567 billion.

The last major component of NNP is net interest, which amounted to $395 billion in 1994. Net interest reflects only payments of interest on funds borrowed by business and then used to produce goods and services—the return to lending as a factor of production. Net interest is gross interest that business pays to a households on assets such as savings accounts and corporate bonds, less interest flowing from households back to business on credit cards, car loans, and other nonhousing liabilities. Since nothing is produced with the funds borrowed on a consumer loan—the NIPA does not measure the time value of money—interest flows on those loans are subtracted from gross payments of interest by business to households.[5]

The taxable component of net interest is significantly less than the total for two reasons. First, the income tax base excludes interest paid to pension funds, nonprofit organizations, and fiduciaries. The second adjustment to net interest is for "imputed financial services," which at $146 billion in 1994 accounted for about 37 percent of the total. Imputed financial services measure the value of potential interest earnings that customers of banks and other financial institutions forgo in return for checking and other account-maintenance services. Imputed financial services are not included in the income tax base: noncash incomes are generally not taxable in the current system, and no one is quite sure of how to estimate their value. Imputed financial services also enter the NIPA on the product side as a form of consumption.

The result of subtracting imputed financial services and interest earnings of pension funds, nonprofit groups, and fiduciaries from total net interest leaves taxable net interest of negative $13 billion. In other words, interest payments from businesses to households are smaller than payments from households to business. Specifically, in 1994, households paid businesses $117 billion in interest on credit cards, bank loans, and other liabilities, while businesses in turn paid households $104 billion in interest on corporate bonds, bank accounts, and other financial instruments.

Indirect business taxes, which include all forms of sales, excise, and property taxes, also account for a significant share (about 9 percent) of NNP. One needs to keep the tax treatment of indirect business taxes in mind when comparing the current

5. Interest paid by the government is the other component of total interest flowing to households ("personal interest income" in the national income and product accounts) that is not counted as part of net interest paid by government. As with consumer loans, government interest paid does not reflect a return to production and hence is not part of gross domestic product. But, as with consumer interest, some government interest payments are in the income tax base.

income tax system with proposed alternatives based on consumption. A consumption tax that is levied on income less saving might or might not include indirect business taxes in the base for a consumption tax. If firms can deduct indirect business taxes built into the price of goods and services they sell—as they do now under income tax rules—those taxes would not be included in the consumption tax base. But a consumption tax on the product side (VAT, RST, or flat tax) that uses total business receipts as a starting point for computing the tax base would include indirect taxes in the base.

OTHER SOURCES OF INCOME SUBJECT TO TAX

The potentially taxable sources of income in net national product represent about 72 percent of the total. But the current income tax base includes another $709 billion that does not reflect economic returns for contributions to current production. Those potentially taxable sources include some part of pension and Social Security benefits, unemployment insurance benefits, interest paid on government debt, the difference between gross and net interest paid by business to households, and realized capital gains (see Table 5 for a breakdown of other taxable income sources).

Roughly half of all total additions to taxable income ($709 billion) comes from private pension benefits ($163 billion), government pension benefits ($113 billion), and taxable Social Security benefits ($47 billion). Those three types of income share an important trait: retirement benefits paid to recipients are taxable, whereas contributions—and interest earned on retirement assets—are not. Once again, the pattern is identical to the treatment of saving under a saving-exempt income tax. If the benefits were not taxed, pension contributions would be tax-free rather than just receiving consumption tax treatment.

The difference between the total and taxable pension benefits stems from the deduction for pension benefits that reflects recapture of previous after-tax contributions by employees. The difference between total and taxable Social Security benefits arises because only 50 percent (for higher-income recipients, up to 85 percent) of benefits are subject to tax, and only if non-Social Security income exceeds certain limits. As a result, only about 15 percent ($47 billion out of $312 billion total) of Social Security benefits are included in the tax base.

Unemployment insurance benefits paid ($24 billion in 1994) are all included in taxable income, even though, like pension benefits, the income does not reflect a return to current production activities. Unemployment insurance is one of the few

TABLE 5. OTHER SOURCES OF INCOME SUBJECT TO TAX (In billions of 1994 dollars)

Source of Income	Total	Taxable Component
Private Pension Benefits	179	163
Government Pension Benefits	126	113
Social Security Benefits	312	47
Unemployment Insurance Benefits	24	24
Interest Paid on Government Debt	152	103
Interest Paid by Households to Business	117	117
Realized Capital Gains[a]	n.a.	142
Total	n.a.	709

SOURCE: Congressional Budget Office based on data from the national income and product accounts and the Internal Revenue Service.

NOTE: n.a. = not applicable.

a. The estimate of total gains is not reported in this table because it varies significantly from year to year.

forms of government transfers (except for the taxable part of Social Security) that is included in the tax base.[6] Whereas other forms of cash benefits paid out under other transfer programs are "means-tested"—that is, eligibility and the amount of benefits received depend on having income below certain limits—unemployment insurance is not. If unemployment insurance is the only form of income an individual receives, the personal exemptions and standard deductions are high enough to preclude taxing the benefit. But some recipients are unemployed for only a small part of the year or have sufficient income from other sources so that their income is high enough to warrant filing a tax return (in other words, it exceeds the personal exemption and standard deduction). The amount of unemployment insurance benefits received (net of taxes) is thus tied to total income earned during the year through the tax system, introducing an element of means-testing to the program.

Taxable interest paid by governments to households ($103 billion in 1994) is another component of taxable income that does not reflect a payment for current production services. That flow represents the difference between total government interest payments to households reported in the NIPA ($152 billion) and the tax-exempt portion on state and local government issues ($49 billion).[7] Although interest on government bonds is certainly a form of income to the recipient, it is not part of NNP because the interest paid does not reflect the return to lending as a factor of production.

Rather than taxing the interest paid on its own borrowing, the government could pay nontaxable interest (as is now done for state and local government debt) at a below-market interest rate. As a whole, the household and government sectors would be as well off if the reduced tax collections exactly matched the reduced interest paid on the debt. Like the issues involving multiple layers of taxation and government benefits, only the net flow really matters. A progressive tax structure presents an issue of fairness to taxpayers, however, because the benefit of not taxing interest receipts would go disproportionately to those with higher marginal tax rates.

6. The other exceptions are federal employee and military pensions, which are both taxable and classified as transfers in the national income and product accounts.

7. The tax-exempt estimate is based on unpublished national income and product accounts sources.

In fact, one could reasonably expect that taxpayers in low brackets would never hold government debt under those circumstances.[8]

Households are taxed on the gross amount of interest they receive from businesses. Because only net interest payments are counted in comprehensive income, interest paid by households to businesses ($117 billion in 1994) on non-mortgage loans represent another source of taxable income in the current system that is not part of the taxable components of NNP. Before 1987, interest paid on nonmortgage consumer loans was deductible, but that provision was ultimately repealed. Part of the reason for repeal was the issue of arbitrage. If the proceeds from consumer loans were invested in an asset that enjoyed tax-preferred treatment, taxpayers could make money by borrowing and lending the same amount, which does not change net saving.

The tax-arbitrage problem still exists in the current income tax system to some extent because of the deductibility of mortgage interest and tax preferences for saving. A person with both a mortgage and access to a tax-deferred retirement plan such as a 401(k) account can effectively borrow against a home and save through the tax-preferred account, enjoying both deductibility of saving and ongoing deductibility of interest on the loan.

Realized capital gains, which were $142 billion in 1994, are the last major source of taxable income not included in NNP. The amount of gains included in taxable income represented about one-fourth of annual (accrued) capital gains in the economy in 1994.[9] Because most assets increase in value but are not sold in any given year, realized gains represent only a small fraction of total accrued gains. Also, capital gains on assets such as owner-occupied housing or assets passed to heirs are generally not subject to tax. The "stock" of capital gains that could be realized in any given tax year has generally grown over time because the additions to the stock (accrued gains during the year) exceed the reductions (realized gains and tax-exempted gains during the year).

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8. See, for example, John Karl Scholz, "Portfolio Choice and Tax Progressivity: Evidence from the Surveys of Consumer Finances," in J. Slemrod, ed., *Tax Progressivity and Income Inequality* (New York: Cambridge University Press, 1994). The relationship between tax-exempt debt and tax rates is not perfect, however, because a significant share of tax-exempt debt is held by taxpayers who are not in the highest tax brackets. See Daniel R. Feenberg and James M. Poterba, "Which Households Own Municipal Bonds? Evidence from Tax Returns," *National Tax Journal* (December 1991).

9. The estimated capital gains are from the Federal Reserve Board's flow-of-funds accounts.

One factor determining capital gains is the amount of earnings retained by corporations. If capital gains based on corporate-retained earnings were assessed and taxed every year, then retained earnings would be taxed twice, like dividends: once at the corporate level through the corporate income tax and again at the household level through the tax on accrued gains. To some extent, that process occurs under the current income tax when realized gains are taxed. However, unrealized gains receive tax deferral like pension saving, and unrealized gains held to death are never taxed.

Under a comprehensive income tax, all capital gains (whether realized or not) are theoretically taxable when they occur because that is when the owner's wealth increases. Under the existing income tax, realized gains are included in the base, but unrealized gains held until death are "stepped-up" in basis, which means that the gains are not taxed. Hence, returns made by dint of effort and luck that are reflected in capital gains can escape taxation altogether. That possibility creates an arbitrage problem: taxpayers have an incentive to put their efforts into gains-producing activities and then borrow against unrealized gains for present consumption to avoid paying taxes.

The tax treatment of capital gains is much simpler in a consumption-based tax system because gains do not enter the tax base. Accrued gains that are not realized represent both income and saving, and so would not be included in the base. When gains are realized, the sale of assets is the taxable event. However, the up-front deductibility when acquiring assets guarantees that the normal return to the asset is not being taxed. Thus, as long as the consumption tax base only allows deductions for net saving, the arbitrage problem goes away.

DEDUCTIONS AND EXEMPTIONS IN THE PERSONAL INCOME TAX

The current income tax allows certain deductions and exclusions that further reduce the income tax base. Among them are personal exemptions and either standard or itemized deductions. The sum of all income from potentially taxable sources was $5,134 billion in 1994, but after deductions and exemptions, only about 75 percent of that income found its way into the tax base. Taxpayers claimed $494 billion in itemized deductions, $397 billion in standard deductions, and $563 billion in personal exemptions in 1994 (see Table 6). For some taxpayers, the value of deductions and exemptions actually exceeds their adjusted gross income. Since taxable income cannot be negative, those "unused" deductions and exemptions have to be added back in the total. Unused deductions in 1994 were $144 billion, bringing

TABLE 6. DEDUCTIONS AND EXEMPTIONS IN THE PERSONAL INCOME TAX BASE (In billions of 1994 dollars)

	Total	Deductible from Base
Itemized Deductions	0	494
Out-of-pocket medical spending	224	26
State and local income and personal property taxes	129	105
Property taxes for owned housing	84	63
Mortgage interest for owned housing	221	186
Charitable contributions	131[a]	71
Other itemizable expenses, net of limit	n.a.	43
Plus		
Standard Deductions	0	397
Personal Exemptions	0	563
Less		
Unused Deductions and Exemptions	0	144
Equals		
Total Deductions and Exemptions	0	1,310

SOURCE: Congressional Budget Office based on data from the national income and product accounts and the Internal Revenue Service.

NOTE: n.a. = not applicable.

a. Total spending by religious and welfare organizations.

net deductions to $1,310 billion, which offset more than 25 percent of all taxable income sources.

Taxpayers are entitled to the greater of their itemized or standard deductions in the current income tax. The standard deduction varies by demographic characteristics—marital status, age, and whether or not the taxpayer is a "head of household" who is responsible for the care of children or other dependents. The value of the standard deduction in 1994 ranged from $3,800 for a single taxpayer to $6,350 for a married couple, with somewhat higher amounts for taxpayers age 65 and older or blind or both. Over 70 percent of taxpayers took the standard deduction in 1994.

The alternative to claiming the standard deduction is to itemize deductions. Itemizable expenses include certain medical and dental expenses ($26 billion in 1994), mortgage interest on owned housing ($186 billion), charitable contributions ($71 billion), and taxes paid to state and local governments ($168 billion, of which $105 billion was in income and personal property, and $63 was in owned-housing property taxes). Taxpayers also claimed various other deductible expenses—$43 billion net of limits imposed on high-income taxpayers under current law.[10]

Another important issue is how the various itemized deductions relate to the corresponding underlying spending for those items as measured in the NIPA. For example, deductible medical expenses ($26 billion) represented only about 12 percent of total out-of-pocket medical spending in the NIPA, which came to $224 billion in 1994. Yet taxpayers claimed as itemized deductions significant shares of state and local income taxes (81 percent), owned-housing property taxes (75 percent), and owned-housing mortgage interest (84 percent). Those highly visible deductions are likely to figure prominently in any debate over the structure of a consumption tax base, just as they have in debates over income tax reform in the past.

At $71 billion, the amount of charitable contributions itemized on tax forms in 1994 was also significant. The NIPA does not treat charitable contributions as a form of consumption, though the principal use of those contributions—purchases of goods and services by religious and welfare organizations—is counted. Religious and welfare spending included in the NIPA totaled $131 billion in 1994, nearly twice the amount claimed on tax forms. The NIPA has no categories with which to compare other itemized deductions.

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10. In 1994, taxpayers had their itemized deductions reduced by 3 cents for every dollar that their adjusted gross income exceeded $111,800.

COMPARING TAXABLE INCOME AND NET NATIONAL PRODUCT

When comparing alternative consumption tax bases to the existing system, a summary snapshot of differences between net national product and potentially taxable income is useful (see Table 7). The combined personal and corporate income tax base as measured by the Internal Revenue Service in 1994 was $3,128 billion, which came to 51.2 percent of NNP.

A number of adjustments are needed to reconcile taxable income and NNP. At $1,310 billion, deductions and exemptions on personal income are far and away the largest subtraction from NNP. The other downward adjustments are just the NNP components that are not taxable under the income tax. The various pension inflows and (contributions to and interest earned by pension funds) are combined into one number to generate a comprehensive value for the exclusion of pension and retirement saving. Benefits paid by pension funds ($276 billion) are combined and shown with the other increments to taxable income.

In addition, a new balancing entry captures the remaining difference between comprehensive and taxable income. The sum of taxable NNP components ($3,893 billion individual, $528 corporate) and other taxable incomes ($709 billion) less deductions and exemptions ($1,310 billion) is $3,824 billion. The actual tax base measured by the Internal Revenue Service was $3,128 in 1994, a difference of $696 billion. That difference consists of income not reported to the IRS and a few remaining conceptual differences between economic and taxable income.

The conceptual differences between economic and taxable income are a fairly small share of the difference between the NIPA and IRS estimates of the tax base. Those differences include alimony flows, accrued but unpaid wages, food and shelter provided by employers, differences in the accounting treatment of select commodities, and the like. NIPA statisticians estimate that the share of the gap between the NIPA and IRS estimates of the tax base accounted for by conceptual differences is just over 10 percent in any given year.[11]

Most of the gap between the NIPA and IRS estimates of taxable income can be characterized as taxpayer noncompliance. The estimates of noncompliance built into the NIPA reconciliation are taken from audit-based studies of taxpayer behavior

11. Thae S. Park, "Relationship Between Personal Income and Adjusted Gross Income," *Survey of Current Business* (May 1996), pp. 78-92.

TABLE 7. RELATIONSHIP BETWEEN TAXABLE INCOME AND NET NATIONAL PRODUCT

	Billions of 1994 Dollars	Percentage of Net National Product
Net National Product	6,113	100.0
Combined Personal and Corporate Income Tax Base as Measured by the Internal Revenue Service	3,128	51.2
Adjustments That Lower the Income Tax Base Relative to Net National Product	3,197	52.3
Personal income deductions and exemptions (Table 6)	1,310	21.4
Indirect business taxes and net government subsidies (Table 4)	577	9.4
Inflows to pension and other retirement accounts (Table 4)	469	7.7
Employer-provided health insurance, other fringes (Table 4)	315	5.2
Employer-paid social insurance taxes (Table 4)	255	4.2
Housing and financial service imputations (Table 4)	190	3.1
Nonprofit and fiduciary interest receipts (Table 4)	50	0.8
Discrepancy between income and production measures (Table 4)	31	0.6
Adjustments That Raise the Income Tax Base Relative to Net National Product	909	14.9
Benefits paid by pension funds (Table 5)	276	4.5
Double taxation of corporate dividends (Table 4)	200	3.3
Realized capital gains (Table 5)	142	2.3
Nondeductibility of interest paid by households (Table 5)	117	1.9
Taxable government interest payments (Table 5)	103	1.7
Taxable government transfer payments (Table 5)	71	1.2
Unreported Income and Other Differences Between National Income and Product Accounts and Internal Revenue Service	696	11.4

SOURCE: Congressional Budget Office based on data from the national income and product accounts and the 1994 Statistics of Income.

conducted by the IRS.[12] Noncompliance includes underpayments arising both from taxpayers electing not to file and underreporting of income by other taxpayers who do file. But underreporting is far and away the dominant category. The IRS estimates that overall noncompliance accounts for about 17 percent of potentially taxable income. Thus, the estimated noncompliance for 1994 using the NIPA-calculated expected tax base ($3,824 billion) is $650 billion. That method is consistent with characterizing most of the net difference between the NIPA and IRS estimates of the tax base ($696 billion) as originating from noncompliance.

Estimates of how a consumption tax would change the tax base have to address the issue of taxpayer compliance. If noncompliance went to zero under the consumption tax base, the implied increase in the tax base (17 percent) would clearly dominate the elective changes that are likely to be debated—for example, incrementally taxing fringe benefits. The effect of noncompliance on implied tax rates is significant: if a tax rate of 20 percent is sufficient to meet revenue targets under a consumption tax with perfect compliance, a rate of more than 24 percent would be needed to meet those targets with the same level of compliance (83 percent) as under the current income tax.

Estimating how compliance is likely to change under a consumption tax is problematic. Most proposals involve several simultaneous changes. One important step would be to lower marginal tax rates to reduce the incentive to evade taxes (under both income and consumption taxes). Some idea of the likely effects can be estimated by considering how the point of tax collection would change. For example, under some proposals, the point of collection for wages and pensions would still be at the family level. Therefore, aside from any response to lower tax rates, wage and pension noncompliance (about 35 percent of all noncompliance) would change little.

Under most proposals, the point of collection for noncorporate business and property income would shift from families to businesses. But that shift does not necessarily imply that compliance will change. Under the current income tax, businesses pay taxes on the difference between sales and costs. That fundamental relationship would not change under any of the proposed consumption taxes based on cash flow. Underreporting sales (holding costs constant) would still lower tax liability for any given business. Some policymakers would argue that a tax based on

12. See, for example, Department of the Treasury, Internal Revenue Service, *Federal Tax Compliance Research: Individual Income Tax Gap Estimates for 1985, 1988, and 1992*, Publication 1415, Catalog No. 10263 (April 1996).

cash flow encourages self-enforcement among firms—one firm cannot claim a purchase from another unless the second records it as a sale—but that principle exists under the income tax as well.

The remaining noncompliance (about 25 percent of the total) has to do with various forms of property income—rents, interest, and dividends. Compliance for those categories would no longer matter because those flows are not counted in the base of the consumption tax. But it is also true that the cash flow base will incrementally include all asset sales—not just capital gains—so that total compliance will improve only if the compliance on asset sales is better than compliance on property incomes.

In short, compliance is unlikely to improve significantly under a consumption tax base. The lion's share of noncompliance (over 75 percent) is usually associated with incomes for which the point of tax collection will not change under a cash flow system. Even though income from property is not directly taxed under a cash flow system, taxation of the sales of assets may give rise to a new form of noncompliance. Hence, the potential for improved compliance will come primarily from reducing tax rates, which will weaken the incentive to evade taxes.

CHAPTER III

ALTERNATIVE BASES FOR CONSUMPTION TAXES

The only difference between comprehensive income and consumption tax bases is whether the tax base includes net investment (which equals saving). A comprehensive income tax base subtracts only replacement investment (depreciation) from the total value of production, whereas a consumption tax base subtracts all new investment. That relationship exists under a direct consumption tax system in which the tax base is income minus saving (saving-exempt income tax) and also under an indirect consumption tax in which the base consists of the sales of businesses to non-businesses (value-added tax or the retail sales tax) or a mixed approach that has both direct and indirect elements (flat tax).

Exempting net investment (or saving) from taxation would, however, be only a small part of the change in the tax base when shifting from the current income tax to a comprehensive consumption tax. Most of the differences between a comprehensive income tax base and the actual income tax base discussed in Chapter II will remain at issue under a consumption base—to wit, exclusions such as employer-provided fringe benefits represent both income and consumption. Therefore, they could be excluded from the consumption base for the same reason that they are excluded from the income base. The difference between the income and consumption bases depends to a significant degree on the ways in which both systems depart from comprehensive measures.

EXCLUDING SAVING FROM THE INCOME TAX BASE

One type of consumption tax begins with an income tax base and then excludes saving. That direct approach to taxing consumption at the household level is often referred to as a saving-exempt income tax. The approach of a SEIT represents the way that saving through pension funds and other retirement-oriented accumulations, such as individual retirement accounts and Keoghs, currently receive consumption tax treatment in the existing income tax system. Under a SEIT, taxpayers deduct savings from their taxable income when computing tax liability. But the tax on saving is not forgiven, only deferred—withdrawals from tax-preferred accounts are included in the tax base.

The SEIT approach to taxing consumption offers an advantage that indirect taxes levied on sales of businesses to nonbusinesses (value-added taxes and retail sales taxes) do not—the ability to maintain a multiple bracket and rate structure as

in the existing income tax. Indirect taxes levied at a flat rate would impose the same proportional burden on all spending. By contrast, a direct consumption tax with multiple brackets and rates would allow different burdens based on differences in families' economic circumstances. In fact, much of the popularity enjoyed by the flat tax version of the indirect consumption tax has to do with its exemption for a portion of earnings at the family level, which introduces progressivity to the system.

Yet the advantage of being able to establish multiple brackets and rates in a SEIT comes at the expense of administrative complexities that accompany direct consumption taxes. Direct consumption taxes are more complex than indirect consumption taxes—such as VATs and RSTs—in two ways. First, since income is the starting point in calculating the SEIT base, any complications from measuring the income tax base automatically pass through to the SEIT base. Second, identifying the appropriate amount of saving to exempt from the tax base is complicated by offsetting transactions in household balance sheets.

Any discussion of the appropriate income measure to be used as a starting point for a SEIT tax base will, by definition, parallel the discussion of what income tax base is appropriate. For example, a consumption tax base that simply exempts new saving from the existing tax base will inherit all of the divergence between actual and comprehensive income described at length in the last section. Some of that divergence between comprehensive and taxable income can simply be relabeled as divergence between comprehensive and taxable consumption—employer-paid health insurance is both income and consumption to the employee. Other adjustments do not lend themselves to various interpretations of consumption, but are still at issue in determining the appropriate base. An example would be whether and how Social Security benefits and other transfers are included.

All of the gaps between comprehensive and taxable income in the current system would also characterize a SEIT base if the only change in the current system is to exempt net saving. Changes to the existing income base that could arguably simplify the system—for example, making employer-provided health benefits taxable or eliminating itemized deductions—are actually changes that could be debated in the context of income tax reform. Thus, that first set of complications in calculating a SEIT are actually problems that exist under the income tax.[1]

1. Indeed, the Unlimited Saving Account tax proposal put forth by former Senator Sam Nunn and Senator Pete V. Domenici involves significant income tax reform, including expanding the income tax base and integrating the corporate and personal income tax systems.

Beyond problems identifying the appropriate income base, computing the appropriate level of saving to exempt under a SEIT also poses formidable complications. The similarity between direct and indirect consumption tax bases relies on the balance between saving and investment—a SEIT should exempt only the saving that corresponds to business-level investment. Even a simple breakdown of saving by economic sector points to the potential difficulties of identifying the appropriate level of saving to exempt from taxation.

Personal saving—the amount that should be deducted from income under a SEIT—is the difference between offsetting household investment and borrowing. That distinction raises an important issue in formulating a SEIT: if households can subtract the cost of acquiring financial assets from their tax base but do not include proceeds of new borrowing, they can systematically drive down their SEIT tax base to zero. Given any level of income with which to start calculating the tax base, a family need only deposit that amount in a bank account to get complete exemption, then borrow the amount back from the bank to buy consumption goods without paying any tax. Clearly, prohibiting offsetting transactions is a crucial issue in designing a SEIT.[2]

The problem of offsetting transactions is already an issue under the existing income tax. In 1994, the amount of personal saving in pensions and other accounts receiving tax preferences ($193 billion) was less than half of the total assets acquired by households. But, because of household borrowing, tax-preferred saving accounted for nearly all of net personal saving in the national income and product accounts ($205 billion).[3] Thus, the exemptions for personal saving in the current tax system in 1994 were already basically equal to the exemptions under a consumption tax such as the SEIT that would use the existing income tax base as a starting point.

THE BASES FOR VALUE-ADDED AND RETAIL SALES TAXES

An alternative to the saving-exempt income tax approach that also generates a consumption tax base is simply to tax all sales of businesses to nonbusinesses. That type of indirect consumption tax underlies the value-added tax and retail sales tax

2. In the Unlimited Saving Account tax proposal, families can borrow limited amounts for certain purposes without including the loan proceeds in their tax base. Borrowing beyond the limits offsets positive saving in calculating the tax base.

3. Total acquisition of household assets is measured using the Federal Reserve Board's flow-of-funds accounts data.

systems used in many countries and at the state level in the United States. Under VATs and RSTs, only businesses remit tax payments. The tax base for any given firm under a VAT is equal to its total sales less its purchases from other businesses, whereas under the RST, the tax base is equal to its total sales to consumers.

Nevertheless, the VAT and RST tax bases are basically the same. The RST imposes a tax on businesses that sell to nonbusinesses—by definition, households and government. A VAT imposes taxes on all business sales—even to other businesses—but then effectively eliminates the tax on nonretail sales by allowing firms to claim a credit for any tax included in the price of goods they purchase from other firms.[4] Subtle differences between VATs and RSTs would affect the choice between the two approaches, but for the purpose of measuring tax bases, it is fitting to discuss them together.[5]

Proponents of indirect consumption taxes often point to simplicity as one of the reasons to consider a VAT or RST. The taxes are regarded as simple because all taxation occurs at the business level. Individuals do not pay taxes directly. Furthermore, subtracting new investment is the only adjustment to sales by businesses (gross domestic product) in computing the tax base. Consequently, the relationship between GDP and the indirect consumption base appears much simpler than the relationship between GDP and the income tax base, which involves subtracting depreciation, indirect business taxes, and the host of other adjustments described in the previous section.

Unfortunately, the case for simplicity of indirect consumption taxes is not quite as compelling when the sorts of adjustments needed for a realistic tax base are incorporated. One example of that point is the matter of disaggregating sales by type of transaction from the product side of the NIPA. GDP is the sum of business sales to the personal (household) sector, state and local governments, the federal government, net exports to other countries, and gross private investment. In principle, sales of businesses to nonbusinesses includes all but the investment component on the product side. In practice, however, even the broadest possible VAT or RST tax base would be much smaller.

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4. This statement describes the so-called "credit-method" value-added tax used in most countries. For a description of other VAT systems that generate the same tax base, see Congressional Budget Office, *Effects of Adopting a Value-Added Tax* (February 1992).

5. Ibid. Also see Joint Committee on Taxation, *Description and Analysis of Proposals to Replace the Federal Income Tax* (June 1995), pp. 1-42.

A VAT or RST can include various types of consumption in the base. Consider two bases as examples (see Table 8).[6] The first is the "broad" base, which includes every transaction that could readily be taxed on the product side. The broad base excludes consumption that is hard to value—such as financial services that consumers do not purchase directly or the yearly value of services from owner-occupied housing. The "narrow" base excludes certain additional transactions, showing the effect on the size of the tax base if preferences were to carry over from the current income tax system and if some items were excluded to limit the tax burden on low-income families. The broad base ($4,645 billion in 1994) is somewhat larger than the combined personal and corporate income tax base ($3,128 in 1994). But the narrow base ($2,823 billion) is somewhat smaller. In calculating both bases, most of the adjustments are in the area of personal expenditures for consumption. Taxable spending by government is included in both bases, and net exports are excluded from both bases.[7]

The largest exclusions from the broad base are for the two components of housing expenditures—imputed rent on owned housing and tenant-paid rent. The imputed rent for homeowners is virtually impossible to tax because the value of services from owner-occupied housing is difficult to measure. Thus, the base calculations assume that the tax will be imposed on new residential construction rather than the ongoing stream of housing services (see Box 1). Since all residential construction is taxable, tenant-paid rent is also excluded from the base to avoid double taxation.

The next item in expenditures for personal consumption excluded from the broad base is the imputed value of financial services. That entry corresponds to the charge on the income side that was also excluded from the income tax base. The charge is an estimate of the value of the financial services that banks provide to customers in lieu of paying interest on deposits—families accept the reduction in interest on their accounts in exchange for free check clearing and other banking services. No cash flow accompanies those services (cash flow occurs only if the bank pays interest and families pay directly for check clearing). Hence, no easily measured transaction can be taxed under either an income or a consumption tax.

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6. The two tax bases in Table 8 roughly correspond to the tax bases developed in Congressional Budget Office, *Reducing the Deficit: Revenue and Spending Options* (August 1996).

7. These statements assume that all exports are zero rated and all imports are subject to tax. In 1994, because imports exceeded exports, net exports actually increased the indirect consumption tax base by $94 billion.

TABLE 8. COMPONENTS OF GROSS DOMESTIC PRODUCT IN VALUE-ADDED OR RETAIL SALES TAX BASES (In billions of 1994 dollars)

	Components of Gross Domestic Product	Taxable Components of Broad Base	Taxable Components of Narrow Base
Total Tax Base	6,936	4,645	2,823
Personal Consumption Expenditures	4,702	3,751	2,823
Food purchased for off-premise consumption	405	405	0
Meals and beverages at restaurants	258	258	258
Clothing, accessories, and jewelry	311	311	311
Imputed space rent on owned housing	508	0	0
Tenant-paid rent	198	0	0
Furniture and other household equipment	147	147	147
Utilities and other household operation	381	381	381
Employer-provided medical care	315	315	0
Government-provided medical care	327	327	0
Out-of-pocket medical care purchases	192	192	0
Imputed value of financial services	146	0	0
Brokerage and banking services	138	138	0
Local transit, tolls, and bridges	8	8	0
Other transportation expenditures	529	529	529
Clubs and fraternal organizations	12	12	0
Other recreation expenditures	363	363	363
Private education and research	105	61[a]	0
Religious and welfare activities	131	76[a]	0
Other consumption expenditures	228	228	228
State and Local Government Purchases	798	298[a]	298[a]
Federal Government Purchases	516	308[a]	308[a]
Net Exports of Goods and Services	-94	0	0
Gross Private Domestic Investment	1,014	0	0
Business investment	727	0	0
Residential investment	288	288	0

SOURCE: Congressional Budget Office based on data from the national income and product accounts.

a. Excludes compensation of employees.

BOX 1.
TAXING HOUSING CONSUMPTION UNDER THE
VALUE-ADDED TAX OR RETAIL SALES TAX

In the national income and product accounts (NIPA), consumption of housing services is measured in two parts that correspond to residences occupied by owners and those occupied by tenants. Measuring consumption when tenants pay rent is straightforward because the value of housing services consumed is the rent itself. Even though owners do not pay an explicit rent, the NIPA uses estimates of the rent that would be paid on the home to measure accurately the value of housing that is produced in a given year. If the NIPA statisticians had not included the imputed value of housing, the total value of housing services produced would alter if any structure changed from owner-occupied to rental status, even though real housing services in the economy would not be affected.

Although economically meaningful, taxing the imputed value of housing services is not practical. Even if the rental value of a given home could be accurately calculated for tax purposes, including that sort of transaction in the tax base would be unprecedented. Under a consumption tax, it is simpler to tax new housing construction. In terms of current value, taxing new residential construction is equivalent to taxing the flow of housing services that will be produced by those structures while they are used.

Comparing the tax treatment of housing under the indirect consumption tax with the tax treatment of housing under comprehensive and actual income taxes is extremely useful. Under a comprehensive income tax, owners would pay tax on the difference between their business "receipts," which is imputed rent ($508 billion), and the "costs" of producing the housing services. Those costs (as measured in the NIPA) include mortgage interest ($221 billion), property taxes ($84 billion), maintenance expenses ($65 billion), and depreciation of housing stock ($82 billion). The difference between "receipts" and "costs" ($56 billion) is exactly the component of noncorporate business income excluded when comparing net national product and taxable income.

The current system does more than just forgive taxes on owned-housing income. In addition to not taking the $56 billion difference between receipts and costs in owner-occupied housing, the current system also allows deductions for mortgage interest ($186 billion) and property taxes ($63 billion)—an overall deviation of about $300 billion from a comprehensive income tax base. Thus, moving from the current system to an indirect tax in which new residential construction ($288 billion) was added to the base and deductions for mortgage interest and property taxes were not allowed would cause a swing of nearly $600 billion in the tax base.

Under an indirect consumption tax such as a VAT or RST, private education and research organizations, religious and welfare organizations, and all levels of government would be treated as consumers rather than businesses. Such organizations have a common feature—that is, they generally do not charge direct fees for their services. Consequently, taxing them on the value of what they produce is difficult. Instead, by treating nonprofit and government organizations as final consumers, the value of the tax is built into the prices of goods that they purchase from businesses, as it is for households. But, unlike households, the value of GDP attributable to the nonprofit and government sectors includes what they buy from businesses and what they pay to employees. Thus, by treating nonprofit organizations and government the same way as households, the tax base excludes the cost of employee compensation in those organizations.

One component of the indirect tax base is federal government purchases. The $308 billion that the federal government spent for purchases from businesses in 1994 is assumed to be included in the indirect base, even though the tax is paid by the organization (the federal government) that will also collect the proceeds. In other words, the federal government will pay the tax on the goods it purchases, rather than exempting itself from paying the tax, even though the impact of doing so has no net effect on the budget deficit.

In addition to the adjustments made to the broad base, the narrow indirect tax base excludes certain items that could continue to receive preferences in the current income tax, as well as other items that are typically excluded to reduce the tax burden on lower-income families. Categories of spending that are difficult to tax are also not included in a narrow base.

The narrow base excludes all medical care. The share of employer-provided fringe benefits ($315 billion) is already excluded from the income tax base, as is the government-provided share ($327 billion, mostly from Medicare and Medicaid). If all medical spending is exempt, the remaining share that families pay directly ($192 billion) would also be excluded. The narrow base excludes spending on clubs and fraternal organizations ($12 billion) and the purchases of private education and research ($44 billion) and religious and welfare organizations ($55 billion).

The largest exclusion, introduced solely to reduce the tax burden on lower-income families, is food purchased for off-premise consumption. Notice that the narrow base still includes meals and beverages at restaurants, as in most state-level sales tax bases. Local transit, tolls, and bridges ($8 billion) are much smaller, but are excluded for the same reason. The last adjustment is for brokerage and financial

services ($138 billion), which are excluded because the transactions are difficult to tax.

In sum, the narrow indirect consumption tax base is $2,823 billion—about 60 percent of the broad base and only 40 percent of GDP itself. The narrow base is not put forth as a more likely or more desirable indirect consumption base. Instead, it emphasizes that adding up all the exclusions that are likely to be discussed under realistic proposals could change the size of the base very quickly. Some of those exclusions, such as food, would help ease the regressivity of the indirect tax.[8] The distributional issues, as well as the problems of taxing government and nonprofit organizations, would be somewhat mitigated under the mixed direct and indirect flat-tax system.

THE FLAT TAX BASE

The consumption base of the flat tax is arrived at by using the VAT or RST approach as a starting point. Like indirect taxes, the base of the flat tax includes all sales of businesses to nonbusinesses, which in a comprehensive consumption tax system equals GDP less new investment. The only difference under a flat tax is the way that wages and pensions are taxed. In the VAT and RST, there is no personal tax—all taxes are collected at the business level through the cash flow principle. The flat tax works the same way as a VAT at the business level, with one exception: businesses can deduct contributions for wages and pensions in addition to purchases from other businesses. Under a flat tax, households pay taxes directly on their wage and pension income.

Replacing the business-level tax with a direct tax on wages and salaries overcomes two potential problems that arise under the VAT and RST systems. (A third advantage is often cited, having to do with the effect on the price-level; for more details, see Box 2.) First, the share of GDP accounted for by the compensation of government and nonprofit employees—which is sizable—can be brought directly into the tax base because those employees will file tax returns. That move expands the tax base significantly, implying that the overall tax rate needed to achieve revenue targets will be lower than under a pure indirect consumption tax.

8. Excluding necessities such as food, housing, and utilities only slightly reduces regressivity. See Congressional Budget Office, *Effects of Adopting a Value-Added Tax.*

BOX 2.
CHANGES IN THE LEVEL OF PRICES UNDER THE FLAT TAX

Switching to an indirect consumption tax such as the value-added tax (VAT) or the retail sales tax (RST) will probably cause a one-time jump in the price level. In contrast, a direct consumption tax such as the saving-exempt income tax (SEIT) or, in part, the flat tax would probably have little effect on prices. Under a VAT or RST, all taxes are remitted by businesses. Businesses are likely to add the VAT or RST directly to the price of goods they sell, and thus consumers pay the tax through higher prices. Under a flat tax, because the lion's share of the base is in wages and pensions that are taxed directly, only a small fraction of the tax is reflected in higher prices.

How prices will change under various consumption taxes is not an issue when estimating the size of various tax bases since the base estimates assume fixed real behavior. But the effects on levels of prices may be important when considering how the overall economy will adjust when a new tax system is introduced. The outcome depends on assumptions about the flexibility of wages and prices in the presence of nominal shocks. Also, changes in the level of prices will be important for understanding how the value of existing capital is affected under the shift in the tax base.

Although businesses are likely to raise prices under a VAT or RST, they could respond by lowering nominal wages. Consider an employee with $30,000 income who faces a $3,000 income tax liability. The indirect tax rate needed to replace the income tax revenue is 10 percent. When the income tax is removed, the employee is suddenly $3,000 richer. But businesses will raise prices by 10 percent when the indirect tax is imposed. As a result, the $30,000 in income will only pay for $27,000 worth of goods. Alternatively, the employee and employer could agree to reduce the nominal salary by 10 percent (to $27,000) and not raise prices. In that case, the employee is just as well off, and the firm can use the $3,000 salary reduction to pay the indirect tax. Most economists believe because employees are likely to resist cuts in nominal wages, that outcome is less likely.

The other reason that changes in price levels may be important is the effect on the prices of various assets. A consumption tax base excludes new saving, but the returns to existing capital are taxed. Thus, the value of existing capital will fall if a consumption tax is introduced. As in the case of wages, that decline will occur if prices rise (the stock market would be unaffected), but the increase in the price level will cause a real decline. If prices were fixed, however, the stock market actually would fall as a result. Those two possible outcomes may cause different macroeconomic results.

The second advantage of the flat tax is the possibility of incorporating family exemptions, thus introducing progressivity directly. Under a VAT or RST, the only way to affect the distribution of tax burdens among different types of households is to exclude certain types of goods from the base. For example, since lower-income families spend a higher share of their budget on food, excluding food from the base (as in the narrow indirect tax base) would benefit those families disproportionately.

However, excluding certain types of goods from a VAT or RST base has relatively small effects on the distribution of tax burdens because the budget shares devoted to excluded goods do not vary much among income groups. The approach of the flat tax is much more direct—a certain level of wages spent on any goods is exempted from tax. That exemption can vary with family size and other characteristics. The single flat tax rate applies only to wages above the exempt level so that average tax rates rise with income.

If increasing progressivity is the goal, then the benefit of exempting a given amount of wages in the flat tax system can be generalized even further. The flat tax system could involve three or more brackets and rates, not just two as in the basic proposal. Wages just above the basic exemption could be taxed at a lower rate than wages earned by families with income well above the threshold.

The principal difference between an indirect and a flat tax base is the net difference between adding compensation that was not taxable under a VAT or RST and subtracting the family allowances under the flat tax. The additional compensation includes $500 billion for state and local employees, $208 billion for federal employees, $44 billion for employees at private education and research facilities, and $55 billion for religious and welfare employees. The total, $807 billion, would make the base for the flat tax some 20 percent larger than the broad indirect tax base.

A number of specific flat tax systems have been suggested, each with different exemption and deduction levels. Robert Hall and Alvin Rabushka, the architects of the flat tax system, start with standard deductions of $16,500 for married couples, $9,500 for single taxpayers, and $14,000 for single taxpayers who head households. The personal exemptions are $4,500, but unlike the current system, the taxpayer or spouse cannot claim exemptions. Thus, for example, the overall allowance for a traditional family of four is $25,500. Under that set of exemptions

and deductions, about $1.7 trillion of wages and pensions would be excluded from the cash flow tax base.[9]

The net result is that a flat tax base would be approximately $900 billion less than a corresponding indirect tax base. By way of illustration, if one starts with the broad base of $4,645 billion, adds $807 billion in compensation not taxed under the indirect tax, but subtracts $1,700 billion in exemptions, the resulting broad base for the flat tax would be $3,752 billion. Other than a few minor offsetting differences, that amount matches the published estimate by Hall and Rabushka.[10] Of course, any of the items excluded in the move from a broad to a narrow indirect tax base would decrease the flat tax base one for one.

RECONCILING THE DIFFERENCES BETWEEN THE BASES FOR INCOME AND CONSUMPTION TAXES

One of the major themes throughout the discussion of indirect and flat taxes in the previous two sections has been simplicity. Under a VAT, RST, or flat tax, the base consists essentially of sales of businesses to nonbusinesses. From the NIPA perspective, the computations involve subtracting only a few nontaxed items from GDP on the product side. That calculation is in stark contrast to the SEIT computation, which involves starting with an income base and therefore seems inherently more complicated.

Yet, at the same time, a VAT, RST, flat tax, and SEIT all tax consumption, and that similarity has been a recurring point throughout this paper. That is an apparent paradox—the alternative consumption taxes are equivalent, but the SEIT approach is substantially more complicated than the indirect or flat tax approaches. The solution to the paradox involves more than just distinguishing between consumption and income. Understanding why consumption taxes seem less complicated than income taxes requires going back to the underlying discrepancies between the comprehensive and actual income tax bases discussed at length in earlier sections of this paper.

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9. Robert Hall and Alvin Rabushka, *The Flat Tax* (Stanford, Calif.: Hoover Institution Press, 1995).

10. Ibid. In that study, the authors' estimate of excluded imputations is somewhat lower than the value shown in Table 8. Alternatively, they assume that the tax rate will not be applied on top of state and local income taxes, which reduces their base by an offsetting amount.

Many of the discrepancies between comprehensive and taxable income show up as hidden components of total spending on the product side. For example, employer-paid payroll, sales, and excise taxes are built into the price of goods that are sold. The product side only measures total sales. As a result, those taxes are implicitly included in the tax base if no explicit adjustment to subtract them is introduced. In that same way, a consumption tax expands the tax base—more income is being taxed, but only because those income flows are built into product prices.

The difference between the current income tax base ($3,128 billion) and the broad flat tax base ($3,752 billion) is $624 billion, which is mostly a reorganization of the discrepancies between comprehensive and taxable income (see Table 9). Each entry shows the change involved with moving from the existing income tax base to the flat tax base described in the last section.

The pure effect of shifting to a consumption tax, which involves adjustments for saving and capital income, only lowers the flat tax base by $125 billion relative to the existing base. The net effect of adding multiple layers of taxation and eliminating the tax on government transfers is to expand the base by $658. The reduction in net taxes on housing and financial imputations lowers the base by $662 billion. Yet that reduction is somewhat overstated because the itemized deductions for housing are not included. They are instead built into the adjustment for personal exemptions and deductions, which lowers the flat tax base by $390 billion relative to the existing income tax base. At $730 billion, the adjustment for noncompliance and other discrepancies is the largest. Eliminating the tax on net exports and the flows for factor income actually raises the base by $98 billion, and taxing employer-provided health insurance raises the base $315 billion.

The base estimates are extremely sensitive to assumptions about what will be taxed. For example, if noncompliance persists under the flat tax, the tax base will actually fall, and combined corporate and personal income tax revenues ($739 billion in 1994) will represent over 24 percent of the base. If the multiple layers of taxation implicit in the indirect approach are removed ($577 billion in indirect taxes and $255 billion in employer-paid social insurance), the base will shrink even further, and the budget-neutral tax rate rises to over 30 percent. Alternatively, the level of deductions and exemptions is well above the amount in the current system, and thus the flat tax base could be expanded by lowering the amounts that are exempt.

TABLE 9. ADJUSTMENTS IN MOVING FROM THE EXISTING INCOME TAX BASE TO THE BROAD FLAT TAX BASE (In billions of 1994 dollars)

Category	Value 1994
Combined Personal and Corporate Income Tax Base	3,128
Flat Tax Base	3,752
Saving and Capital Income Adjustments	-125
Add pension saving, nonprofit, and fiduciary interest receipts	242
Add depreciation allowances	819
Subtract business investment	727
Subtract double-counting of corporate dividends	200
Subtract nondeductibility of interest paid by households to business	117
Subtract realized capital gains	142
Government Tax and Transfer Adjustments	658
Add indirect business taxes and net government subsidies	517
Add employer-paid social insurance taxes	255
Subtract taxable government interest payments	113
Subtract taxable Social Security and unemployment insurance payments	71
Housing and Imputed Consumption Adjustments	-662
Add housing and financial service imputations under income base	190
Subtract housing and financial service imputations under flat tax base	852
Personal Exemption and Deduction Adjustments	-390
Add personal income deductions and exemptions under income base	1,310
Subtract personal income deductions and exemptions under flat tax base	1,700
Conceptual, Nonreporting, and Discrepancy Adjustments	730
Add unreported income and other differences between NIPA and IRS	696
Add discrepancy between income and production measures	34
International Capital Flow and Trade Adjustments	98
Add net factor income	4
Subtract net exports	-94
Employer-Provided Health Insurance, Other Fringes Adjustment	315

SOURCE: Congressional Budget Office based on data from the national income and product accounts and the 1994 Statistics of Income.

NOTE: NIPA = national income and product accounts; IRS = Internal Revenue Service.

Ultimately, the balance of additions to and exclusions from the base will determine the tax rate required to meet revenue targets using a consumption tax base. To some extent, the choice of income or consumption as a tax base affects that balance. Even more important, the choice of whether or not to expand the base to include currently untaxed income flows will determine the size of a given base for the consumption tax.