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ECONOMIC ISSUES RELATING TO THE HOUSE-PASSED TAX REFORM BILL (H.R. 3838)

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INTRODUCTION

This pamphlet,[1] prepared by the staff of the Joint Committee on Taxation, provides a discussion of various economic issues relating to the tax reform bill passed by the House of Representatives. The Senate Committee on Finance has scheduled public hearings on January 29–30 and February 4–6, 1986, on the House-passed tax reform bill (H.R. 3838). The primary purpose of these hearings is to examine the economic effects of H.R. 3838 on international competitiveness and capital formation.

This pamphlet discusses six economic-related aspects of the House tax reform bill: (1) savings, investment, and capital formation; (2) employment; (3) international competitiveness of the U.S. economy; (4) innovation and technological change; (5) tax evasion; and (6) economic growth.

[1] This pamphlet may be cited as follows: Joint Committee on Taxation, *Economic Issues Relating to the House-Passed Tax Reform Bill (H.R. 3838)* (JCS–2–86), January 29, 1986.

I. SAVINGS, INVESTMENT, AND CAPITAL FORMATION

House bill

The tax reform bill passed by the House in December 1985 (H.R. 3838) contains a number of provisions that affect the tax burden on income from capital and, consequently, the cost of capital. The provisions with the most wide-ranging impact across all sectors of the economy are summarized below.

Capital cost recovery.—The present law Accelerated Cost Recovery System (ACRS) is replaced by new depreciation rules, referred to as the Incentive Depreciation System (IDS). Under IDS, assets are grouped into 10 classes (compared to 5 classes under present law) and generally are depreciated over longer lives than under present law. The method of depreciation is changed from 1.5 to double declining balance (switching to straight-line) for equipment, and from 1.75 declining balance to straight-line for structures. Beginning in 1988, depreciation deductions will be indexed for half the inflation rate in excess of 5 percent. The substitution of IDS for ACRS is estimated to increase tax revenues by $25.0 billion over fiscal years 1986–90.

Investment tax credit.—The regular investment credit is repealed. The repeal of the investment tax credit is estimated to increase tax revenues by $120.3 billion over fiscal years 1986–90.

Tax rates.—The top corporate tax rate is reduced from 46 percent to 36 percent. The top individual income tax rate is reduced from 50 to 38 percent. The reduction in corporate tax rates is estimated to decrease tax revenues by $87.8 billion over fiscal years 1986–90. Individual rate reductions reduce tax revenues by $134.2 billion over the same period.[1a]

Capital gains.—The capital gains deduction for individuals is reduced from 60-percent of long-term capital gain to 42 percent; this produces a maximum long-term capital gain tax rate of 22.04 percent (58 percent of 38 percent), compared to the maximum 20-percent rate under present law. The 28-percent alternative tax rate for net capital gains of corporations is increased to 36 percent—the regular tax rate applicable to large corporations.

Relief from double taxation of corporate dividends.—Under the House bill, corporations generally would be allowed a deduction for 10 percent of dividends paid out of corporate earnings that have been subject to tax. The deduction is phased-in over a 10-year period. The dividends paid deduction is estimated to decrease tax revenues by $2.4 billion over fiscal years 1986–90.

Minimum tax.—The individual minimum tax rate is raised from 20 to 25 percent and new preferences are added to the tax base in-

[1a] These estimates include the effects of changes relating to capital gains, as well as the interactions between rate changes and other provisions of the bill.

cluding incentive depreciation deductions. A credit for the minimum tax paid in earlier years is allowed against regular income tax. The 15-percent corporate add-on minimum tax is replaced with a 25-percent alternative minimum tax, similar to the individual minimum tax. The minimum tax changes are estimated to increase tax revenues by $24.9 billion over fiscal years 1986–90.

Dividend exclusion for individuals.—The present law exclusion of the first $100 of certain dividends received by an individual shareholder ($200 for a joint return) is repealed. This change is estimated to increase tax revenues by $2.6 billion over fiscal years 1986–90.

Pensions.—Under the House bill, the annual elective deferral under all qualified cash or deferred arrangements and tax-sheltered annuities is limited to $7,000 per employee. In addition, an individual's IRA deduction limit is reduced, dollar for dollar, by the amount of the individual's elective deferrals under a qualified cash or deferred arrangement or tax-sheltered annuity. Other changes limit the overall contributions that may be made to certain plans. These pension changes are estimated to increase tax revenues by $6.6 billion over fiscal years 1986–90.

In addition to these provisions, the House bill contains numerous provisions that directly affect only taxpayers in specific sectors of the economy, such as insurance, banking and natural resource production.

Cost of capital and aggregate investment

Many are concerned that the House bill would raise the cost of capital to U.S. business, thereby decreasing the incentive to save and invest. This could reduce economic output in the future and impair the international competitiveness of the U.S. economy. The President has stated that he will veto any tax reform bill that does not provide "basic tax incentives for American industries including those which depend upon heavy capital investment in equipment and machinery . . .". [2]

To assess the effect of the House bill on the cost of capital for new investments, it is necessary to account for the income tax rates of corporations and individuals, the capital cost recovery rules, and the tax treatment of dividends and capital gains. A complete picture of the House bill cannot be obtained by looking at any particular provision in isolation. In evaluating the capital income provisions of the House bill, it is also necessary to make judgments regarding future interest and inflation rates, and to estimate the rate at which the productivity of different types of plant and equipment decline with respect to age. One measure of the tax burden on new investment which takes all these factors into account is the "effective tax rate," which measures prospectively the portion of the pre-tax rate of return that is necessary to cover income taxes on an incremental investment. Effective tax rates are often used as a measure of investment incentives in lieu of the user cost of capital upon which it is based. Tax changes that increase the user cost of capital also increase the effective tax rate. Similarly, tax

[2] Letter from President Reagan to Rep. Jack Kemp (December 16, 1985).

changes that reduce the user cost of capital also reduce the effective tax rate.

Two recent studies, one by the Congressional Research Service (CRS) and the other by the American Enterprise Institute (AEI), estimate the effective tax rate under present law, the President's tax reform proposal, and the House bill.[3] In these studies, the effective tax rate is computed for plant, equipment, inventory, and land. The aggregate effective tax rate for the U.S. economy is determined by averaging the effective tax rates for each asset type, using the amount of U.S. net investment in each asset as weights.

The CRS study concludes that the House bill, disregarding the effect of individual income tax changes, results in a 4 percentage point increase in the effective tax rate on new investment, and increases the user cost of capital.[3a] Including the effect of individual rate reductions, the bill slightly reduces the cost of capital from present law, according to the CRS analysis. This result implies that the House bill does not discourage investment over the long run.

The AEI study concludes that the House bill would raise the tax burden on corporate investments relative to present law. This conclusion is entirely attributable to the bill's impact on debt-financed investment. According to the AEI analysis, the House bill does not change the effective tax rate on equity-financed corporate investment relative to present law. In this study, the House bill is estimated to reduce the gap between the average rate at which interest payments are deducted and interest income is taxed, which decreases the advantage of debt financing.

With respect to noncorporate investment, the AEI study concludes that the House bill raises the effective tax rate by less than one percentage point. The House bill also is estimated to increase the effective tax rate on owner-occupied housing by about 1.5 percentage points. The AEI study estimates that the House bill would increase the overall effective tax rate on investment (including corporate, noncorporate, and owner-occupied housing investment) by four percentage points. Thus, unlike the CRS study, the AEI analysis indicates a net increase in the cost of capital under the House bill, which could reduce long-run aggregate investment (particularly for debt-financed corporate investment).

The conclusion of both the CRS and AEI studies are subject to a number of qualifications: (1) many provisions of the House bill, such as the accounting changes, the expanded minimum tax, and the foreign provisions are not taken into account; (2) the analyses are based on the House bill as fully effective; and (3) the conclusions depend on estimates of anticipated inflation, interest rates, and other factors that are difficult to measure. Also, as shown in the CRS study, the effect of the House bill varies considerably from one industry to another.

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[3] See, Jane Gravelle, "Effective Tax Rates in the Ways and Means Committee Tax Proposals: Updated Tables," Congressional Research Service, Library of Congress (December 2, 1985), and Yolanda K. Henderson, "Investment Incentives Under the Ways and Means Tax Bill," *Tax Notes* (December 9, 1985) pp. 1059–1062.

[3a] To calculate the exact increase in the user cost of capital requires a measure of either the average pre-tax return or the assumed average after-tax return at the corporate level. Neither the CRS study nor the AEI study provides the information necessary for this computation.

The House bill is estimated to increase corporate income taxes by $139 billion over the fiscal year 1986–1990 period, and to decrease individual income taxes by a similar amount. (Under the President's proposal, the revenue shift is estimated to be $122 billion over this period.) If the House bill is revenue neutral in the long-run, as well as over the next 5 years, then the tax burden on income from capital must increase both in the 1986–1990 period and in the later years, because tax rates on labor income are reduced. This appears to be consistent with the AEI analysis, which shows a long-term increase in the effective tax rate on investment.

Some are concerned that the shift in the burden of the income tax onto corporations will reduce investment. One way to assess the potential impact of the House bill on investment is to examine the historical relationship between corporate taxes and investment. Table 1 shows that corporate income taxes have dropped dramatically over the last 35 years from about 30 percent of total tax receipts in 1950–54 to less than 10 percent in 1980–84. Corporate tax liability also has declined as a percentage of gross national product (GNP), from 5.4 percent in 1950–54 to 1.8 percent in 1980–84. Corporate investment generally increased from 1950 through the late 1960s, from 7.5 percent to 9.0 percent of GNP. However, corporate investment has gradually declined since then to 8.6 percent of GNP in 1980–84, despite the sharp decline in corporate taxes. These data suggest that corporate investment is influenced by a variety of factors, such as interest rates and aggregate demand, in addition to the corporate tax burden. The House bill is estimated to increase corporate income taxes as a percent of total budget receipts and GNP to levels that prevailed in 1980. The historical record in Table 1 does not support the view that this would result in a large decline in corporate investment.

TABLE 1.—CORPORATE INCOME TAX AND INVESTMENT

Fiscal year	Corporate income tax as a percent of budget receipts		Corporate income tax as a percent of GNP		Corporate investment as a percent of GNP [1]
	Present law	House bill	Present law	House bill	
1950–54	29.7	NA	5.4	NA	7.5
1955–59	25.7	NA	4.5	NA	7.7
1960–64	21.4	NA	3.9	NA	7.5
1965–69	21.0	NA	4.0	NA	9.0
1970–74	15.4	NA	2.9	NA	8.7
1975–79	14.4	NA	2.7	NA	8.7
1980–84	9.0	NA	1.8	NA	8.0
1980	12.5	NA	2.5	NA	8.4
1981	10.2	NA	2.1	NA	9.2
1982	8.0	NA	1.6	NA	7.5
1983	6.2	NA	1.1	NA	7.8
1984	8.5	NA	1.6	NA	10.0
1985	8.4	NA	1.6	NA	NA
1986 (est.)	9.3	11.2	1.8	2.1	NA
1987 (est.)	10.1	12.8	1.9	2.4	NA
1988 (est.)	10.0	13.0	1.9	2.5	NA
1989 (est.)	9.8	13.0	1.9	2.5	NA
1990 (est.)	9.0	12.7	1.7	2.5	NA

[1] Calendar year basis. Corporate investment includes plant and equipment residential structures, inventory investment, and mineral rights from U.S. government.

Source: Office of Management and Budget, *Historical Tables, Budget of the U.S government, Fiscal Year 1986*, pp. 2.1–2.2, and Council of Economic Advisers *Economic Report of the President* (February 1985), p. 333. Present law percentages for 1986–1990 are based on Congressional Budget Office, August 1985, projections House bill projections are calculated by the Joint Committee on Taxation using the CBO baseline.

The increase in corporate income taxes and the decrease in individual income taxes under the House bill may, to a substantial degree, offset one another in the case of U.S. investors. However, in the case of foreign investors in U.S. corporate assets, the House bill is likely to increase the U.S. effective tax rate, since foreign investors do not directly benefit from individual tax reductions. Thus, one consequence of the House bill could be to reduce foreign investment in U.S. corporate assets.

The effect of the House bill on long-run aggregate investment in the United States may be quite different from the effect in the short-run, and from the effect within particular sectors of the economy. Much of the corporate revenue increase is attributable to provisions that apply only to specific sectors of the economy. For example, the rules regarding the expensing of intangible drilling costs only directly affect the tax burden of firms engaged in oil and gas exploration and development. Also, some of the provisions of the House bill raise more (or lose less) revenue in the short-run than in the long-run. Examples include many of the accounting

changes, the phase-in of the corporate dividend deduction, and the delayed effective date of the tax rate reductions. Also, as discussed below, it may take the economy several years to adjust to the substantial changes in tax rules contained in the House bill.

Allocation of capital

The output of the economy depends not only on the size of the capital stock but also on its composition. In the absence of taxes, the operation of a competitive economy causes capital to flow to sectors where it is expected to earn the highest rate of return. This results in the allocation of investment that produces the largest amount of national income. However, if non-neutral taxes are imposed, potential output may be reduced because too much capital will tend to accumulate in lightly taxed sectors, and too little capital will be invested in highly taxed sectors. Thus, in evaluating the effects of tax reform on capital formation it is necessary to examine both the level and allocation of investment.

Under present-law rules, the combination of the investment tax credit and accelerated depreciation for property in the 3- and 5-year classes are roughly equivalent, in present value, to deducting the full cost of the property in the year of acquisition (expensing). Expensing treatment effectively eliminates corporate-level tax on income from equipment investments. The accelerated capital cost recovery rules partially are responsible for the drop in the corporate share of total tax revenues from 12.5 percent in fiscal year 1980 to 8.4 percent in 1985. The House bill, by repealing the investment credit and stretching out depreciation deductions, would reduce the value of the capital recovery provisions to less than expensing treatment. As a result, the effective corporate-level tax on equipment would increase from zero to a level that is more in line with the statutory corporate rate (36 percent) in the bill. Thus, as a result of the House bill, the tax rate on equipment is likely to be more nearly equal to that on nonresidential structures, inventory, and land.

By equalizing the effective tax rates among assets, the House bill may increase the amount of national income that can be produced from the capital stock. The Council of Economic Advisers concluded that improvements in the allocation of investment under the President's proposal could result in a long-run increase in the annual level of the gross national product of about one percent.[4]

Some do not believe that increasing the effective tax rate on equipment to a level more nearly equal to that on other types of business assets will improve the allocation of capital in the economy. Since the House bill does not repeal the interest deduction for mortgages on owner-occupied homes, it is argued that the bill would increase the disparity between the taxation of business equipment and housing. This could exacerbate the bias in present law for investment in housing compared to business equipment. Others argue that the House bill diminishes the incentives to purchase debt-financed housing because of the reduction in individual tax rates, which lowers the value of interest deductions. Also, the

[4] Council of Economic Advisers, "The Economic Case for Tax Reform," (September 24, 1985).

change in the bad debt reserve provisions in the House bill could reduce the amount of residential mortgage lending by thrift institutions.

In summary, to the extent that the House bill more nearly equalizes tax burdens across assets, the output of the economy will increase. (This conclusion applies to aggregate investment: The House bill likely will increase investment in some sectors and decrease investment in other sectors.) Thus, even if the House bill reduces the aggregate level of investment, improvements in the composition of investment may offset, at least in part, the decline in aggregate investment.

Transitional issues

The short-run effect of the House bill could differ considerably from its effect on the economy in the long-run, after all provisions become fully effective, and taxpayers have fully adjusted. First, uncertainty over the pending tax legislation may encourage accelerated investment in 1986 if it is anticipated that the effective dates of the investment-related provisions in the bill will be changed to January 1, 1987. As a corollary effect, investment in 1987 could fall due to accelerated investment in 1986.

Second, enactment of comprehensive changes in the tax code, such as contained in the House bill, can cause a temporary disruption in the economy. The House bill substantially reduces taxes in some sectors, and sharply raises taxes in other sectors of the economy. Industries with increased effective tax rates under the bill likely will experience decreased investment and slower growth if it is enacted. The House bill already may be having effects on investment decisions in anticipation of its possible enactment. Over time, the resources freed from industries that lose tax benefits will flow to sectors whose tax situation is improved by the bill. However, the reallocation of capital and labor will not occur instantly nor without economic and social costs. These transitional costs are hard to measure, but cannot be neglected in evaluating the desirability of tax reform provisions.

Investment incentives

Some argue that it is important to retain a capital cost recovery system that is at least as generous as present law, particularly with respect to heavy equipment. Any scaling back in the capital cost recovery provisions in the Economic Recovery Tax Act of 1981 is opposed on the grounds that investment and the growth of the economy will decline, and international competitiveness will be impaired. In addition, some attribute a significant portion of the rebound in investment during 1984–85 to the 1981 Act, and argue that scaling back ACRS would cause a recession.

These criticisms raise important issues regarding the proper role of investment incentives in fiscal policy. For example, the general investment tax credit, first enacted in 1962, has been viewed as a tool of macroeconomic stabilization in attempts to mitigate economic recessions. However, since the 1960s, skepticism about the ability of government to fine-tune the economy has increased.

By contrast, the enactment of ACRS in 1981 was viewed as a permanent incentive for capital intensive industry, and as a rough

mechanism for compensating for inflation. However, there is considerable controversy over the efficacy of such incentives.

Although investment recovered impressively in 1984–85, it is not clear whether this was attributable to the investment incentives in the 1981 Act or to a demand-led recovery stimulated by large budget deficits. A study by Michael Boskin concluded that 20–25 percent of the increase in business fixed investment in the 1982–84 period was attributable to the 1981 Act.[5] In another study of the investment recovery, Barry Bosworth found that office equipment and automobiles account for 93 percent of the growth in equipment spending since 1979. This raises questions about the contribution of the 1981 Act to the recovery in equipment investment, since the Act did not appreciably change the tax treatment of automobiles, and increased the effective tax rate on computers.[6] The author did not conclude that changes in tax incentives are inconsequential for investment, rather that they can be blunted by increases in interest rates and the acquisition price of capital goods.

In summary, there is disagreement whether investment incentives such as provided by ACRS and the investment tax credit are effective in stimulating substantial amounts of new investment per dollar of tax revenue loss.[7]

Many supporters of the 1981 Act believe that income from capital should be excluded from the tax base on the grounds that the taxation of income from capital encourages consumption relative to savings. Under this view, the proper tax base is labor income or a tax on consumption.

Consider a simple example in which two taxpayers each earn $100 of wages. One consumes his after-tax income immediately, while the other invests it at 10 percent, and consumes the proceeds the next year. Under an income tax with a 50-percent rate, both taxpayers would pay $50 in the first year, but the saver would pay an additional $2.50 on his $5 of interest income in the second year. Thus, the present value of the saver's tax liability exceeds that of the nonsaver.

Under an income tax limited to labor income, both taxpayers would pay $50 of tax in the first year, so that their tax burdens would be identical in each year. Alternatively, under a consumption tax, the saver would pay no tax in the first year and $55 in the second year (50 percent of $110 of consumption); thus, the present value of the saver's tax liability is the same as that of the nonsaver ($50). Under both a consumption tax or a labor income tax the present value of tax liability is the same for the saver and the nonsaver.

Others argue that excluding nonlabor income from the tax base would be inequitable since high income individuals with large

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[5] Boskin, Michael J. (Stanford University) "The Impact of the 1981–1982 Investment Incentives on Business Fixed Investment," Prepared for the National Chamber Foundation (July, 1985).

[6] Bosworth, Barry P. (Brookings Institution) "Taxes and the Investment Recovery," *Brookings Papers on Economic Activity* 1985:1.

[7] One study that estimated the effectiveness of investment incentives using six major macroeconomic forecasting models found that, on average, the models projected that larger investment tax credits would increase fixed investment by only 76 cents for each dollar of revenue loss. See, Robert S. Chirinko and Robert Eisner, "Tax Policy and Investment in Major U.S. Macroeconomic Econometric Models," *Journal of Public Economics,* Vol. 20, 1983, pp. 139–166.

amounts of dividends, interest, rents, and other types of capital income would pay relatively small amounts of tax. Also, reducing the share of capital income in the tax base may cause a large revenue loss (as has been the case under the 1981 Act), or necessitate higher tax rates on labor income to achieve revenue neutrality. Taxes on labor income may affect workers' decisions about how much labor to supply, and these distortions may be as consequential as the reduction in the savings rate attributable to taxing income from capital.

II. EMPLOYMENT

The House bill is estimated to reduce the marginal tax rate on individuals by 12 percent, from an average of 21.1 percent to 18.6 percent.[8]

The marginal rate reductions under the bill differ among income groups and among individuals. For example, the marginal rates of individuals in the highest bracket will decline from 50 percent to 38 percent. Other taxpayers currently benefiting from the use of the two-earner deduction may receive smaller marginal rate reductions. On an additional dollar of income, the amount retained by the taxpayer after income tax is estimated to increase on average by between 3 percent and 4 percent under the House bill.[9]

Theoretically, the effect of an increase in the after-tax wage on the quantity of labor supplied is ambiguous. The higher net wage has two distinct effects on the supply of labor, each operating in an opposite direction.

The *substitution effect* of the higher net wage is to induce more labor to be supplied. As the after-tax wage increases, people have a greater incentive to work additional hours.

The *income effect* of the higher net wage may cause a decrease in the quantity of labor supplied. The higher net wage increases the income of the consumer. As incomes increase, consumers demand more of most goods, including leisure. The increased desire for leisure requires a decline in the quantity of labor supplied.

Some empirical estimates of the effect of a change in net wages on the supply of labor find the supply of labor for primary workers is on average relatively insensitive to variations in the net wage. The substitution effect is roughly cancelled by the income effect. The supply of labor for secondary workers, however, is shown in most studies to be positively related to the net wage rate.[10]

Leaving aside for the moment provisions in the bill affecting corporate tax liability, these studies suggest that the House bill may moderately increase the labor supply of some workers. Even in the absence of any change in the aggregate labor supply, however, the reduction in marginal tax rates yields an efficiency gain to the economy. Lower marginal tax rates reduce the influence of the tax system in workers' labor decisions.

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[8] The average marginal tax rate was calculated by examining the tax liability increase that results if all items of income increase by a small, uniform percentage on all tax returns. The increase in tax liability resulting from this income increase is divided by the income increase to derive the marginal tax rate. Certain itemized deductions are adjusted in this calculation.

[9] The precise percentage change in after-tax wages is dependent additionally on the level of State and local income taxes, whether these taxes are deducted by the taxpayer for Federal income tax purposes, and whether the Social Security tax is perceived as a tax, or a payment for future retirement benefits.

[10] A survey of recent estimates of labor supply elasticities is presented in Don Fullerton, "On the Possibility of an Inverse Relationship between Tax Rates and Government Revenues," *Journal of Public Economics*, 1982.

When the corporate tax provisions are considered, greater increases in labor supply may be predicted. Because the House bill is revenue neutral, it may be appropriate to disregard the income effect in calculating the labor supply response. Corporate tax increases may offset individual income tax reductions, leaving consumers' total incomes unchanged.[11] Because the substitution effect of the marginal rate reduction is an unambiguous increase in the labor supply, the labor supply response may be larger than would be predicted by estimates that do not consider the effect of the corporate tax provisions on individuals.

Another feature of the House bill that may affect labor supply is the taxation of all unemployment benefits. Under present law, these benefits are not taxable to recipients with an adjusted gross income of less than $18,000 for a joint return or $12,000 for a single return. The full taxation of unemployment benefits may provide an incentive for unemployed workers to find employment sooner than they would otherwise. One study concludes that the taxation of unemployment benefits, which was introduced in 1979, was effective in reducing the duration of unemployment spells for a sample of high-income recipients.[12]

It also should be noted that there are other possible impacts of marginal tax rates on the net compensation received by workers. For example, it has been argued that high marginal tax rates induce employees to demand a larger portion of their compensation in untaxed forms than would be the case with lower marginal rates. This substitution of tax-favored compensation for cash may affect the efficiency with which the economy satisfies employees' needs. To the extent that such effects exist, they might be somewhat lessened by the rate reductions contained in the bill.

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[11] Many economists believe the economic incidence of the corporate income tax is on capital income. Others believe the incidence of the corporate income tax is on workers, through reduced wages, or on consumers, through higher product prices. Thus, the increase incorporate income taxes may offset the decline in individual taxes in several ways; by reducing investment income, lowering wages, or raising prices.

[12] Gary Solon, "Work Incentive Effects of Taxing Unemployment Benefits," *Econometrica*, March 1985.

III. INTERNATIONAL COMPETITIVENESS OF THE U.S. ECONOMY

During 1985, Congressional committees considered a number of lls designed to reduce the nation's rapidly growing balance of ade deficit. In addition, the President last year announced a mber of new trade initiatives. Thus, as Congress considers tax form proposals, an important issue is the potential effect of the x code on the competitiveness of the U.S. economy in the world arketplace.

scal policy and trade

Fiscal policy can influence the trade balance through a variety of annels. Large budget deficits financed by government borrowing ay boost real interest rates, although the magnitude of this effect uncertain. At higher dollar interest rates, the dollar is a more luable investment, and its price, in terms of foreign currencies, es. An increase in the value of the dollar raises the price of U.S. ports and reduces the price of imports.

Fiscal policy also can affect trade through the use of tax incenes designed to increase savings and investment. To the extent at tax incentives are effective in increasing investment in indus- ies producing tradable commodities, the trade balance may im- ove. However, under the present system of flexible exchange tes, such trade gains may be temporary. All other factors held ual, the price of the dollar is likely to increase as foreign dollar serves are drained to pay for additional purchases of U.S. com- odities. The rise in the dollar is compounded if foreign demand r the dollar increases because foreign investors are able to benefit rectly, or indirectly, from U.S. tax incentives. Dollar appreciation creases U.S. demand for imports and reduces foreign demand for xports. Thus, tax incentives may improve the trade balance in tar- eted sectors at the expense of increased imports or reduced ex- orts from sectors that do not benefit from tax preferences.

The tax code also influences trade generally through rules re- arding the taxation of foreign investments in the United States nd the taxation of U.S. investment abroad. In a regime of flexible xchange rates, tax policies which increase the attractiveness of .S. investment may have the unintended effect of increasing the alue of the dollar and discouraging exports. Similarly, tax policies hich increase the attractiveness of investing abroad tend to educe the value of the dollar and encourage exports.

In assessing the impact of the House bill on trade, commentators ave expressed concern about a number of provisions, including: (1) ne level of investment incentives; (2) the corporate share of the ax burden; (3) the taxation of U.S. citizens working abroad; (4) the oreign Sales Corporation (FSC) rules; and (5) the source of income ules. Each of these issues is discussed below.

Investment incentives and trade

Some argue that the House bill will discourage domestic savin and investment. Only with sustained investment in U.S. manufa turing, it is argued, will improvements in productivity and techno ogy keep pace with foreign competition. A number of comment tors have argued that the the high investment rate and rapi growth of the export sector in Japan are attributable to investmer incentives in the Japanese tax system.

One way to evaluate these arguments is to compare the econom performance of countries whose tax codes contain varying degre of investment incentives. Such a comparison is contained in recent study of four developed countries: the United Kingdon Sweden, West Germany, and the United States.[13] Table 2 show that West Germany, which had the highest effective tax rate i 1970 and 1980, and the second highest in 1960, also was the countr with the highest rate of output and investment growth over th 1960-1980 period. Conversely, the United Kingdom, which slashe its effective tax rate from 53.8 percent in 1960 to 3.7 percent i 1980, was the country with the lowest rate of output and inves ment growth.[14] These data suggest that the level of effective ta rates may not be the most important determinant of national ec nomic growth.

TABLE 2.—TAX RATES AND ECONOMIC PERFORMANCE

Country	Effective tax rate			Average annual growth of real GDP [1] 1960–80	Averag annual growth of real corpo- rate capital 1960–8
	1960	1970	1980		
United Kingdom....	53.8	33.6	3.7	2.3	2.
Sweden.....	33.9	41.6	35.6	3.2	4.
West Germany.....	52.5	49.1	48.1	3.7	5.
United States.....	48.4	47.2	37.2	3.5	3.

[1] GDP denotes gross domestic product.
[2] Excludes non-financial corporations.

Source: Mervyn A. King and Don Fullerton, *The Taxation of Income Fro Capital*, 1984, Table 7.14.

It is also of interest to compare the level of investment incentive in the U.S. and Japanese tax systems, since Japan generally is re garded as one of the most effective competitors in world trade. In recent study, George N. Hatsopoulos found that the cost of capita in Japan is significantly less than that in the United States as result of differences in the U.S. and Japanese tax systems, an

[13] Mervyn A. King and Don Fullerton, *The Taxation of Income from Capital*, 1984.
[14] King and Fullerton observe that the causality could be reversed; that is, countries with fai ing economies may reduce effective tax rates hoping to stimulate economic performance.

reater reliance on debt in the financial structure of Japanese corrations.[15]

However, other examinations of this issue have reached a differt conclusion. Jane Gravelle found that the effective tax rate on anufacturing is one-third less in the United States compared to ıpan.[16] Including the taxation of income by subnational governents, Gravelle found that the gap between the U.S. and Japanese x rates widened. Albert Ando and Alan Auerbach of the Univerty of Pennsylvania used financial market data to measure the st of capital for a representative sample of 19 U.S. and 21 Japaese firms.[17] Ando and Auerbach conclude that "Even a cursory mparison of before-tax and after-tax rates of return shows that it Japanese not American firms that are taxed more heavily on eir real income."

In summary, comparative studies of tax policy and economic perrmance do not appear to provide conclusive evidence that counies with low effective tax rates achieve greater growth and instment than countries with high effective tax rates.

ɔrporate share of the tax burden

One view of the corporate income tax is that it is shifted forward consumers in the form of higher product prices. If this is the ıse, then increased corporate taxes could reduce exports by raisg the price of corporate output.[18] One way to evaluate this issue to examine the relationship between the corporate tax burden ıd export competitiveness in different countries.

Table 3 shows corporate taxes as a share of gross domestic prodct (GDP) and of total taxes for large Organization for Economic ɔoperation and Development (OECD) countries. In 1982, the couny with the second largest trade surplus, Japan, had the highest ıte of corporate taxation measured both as a portion of gross doestic product (5.4 percent) and of total tax revenues (19.7 perent). Conversely, the country with the largest trade deficit, rance, relied the least on corporate taxes as a revenue source. hile no firm conclusions can be drawn from one year of trade and x statistics, it is not clear from the data in Table 3 that reliance ı the corporate income tax is injurious to trade.

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[15] Hatsopoulos, George N. "High Cost of Capital: Handicap of American Industry," American ısiness Conference (April 26, 1983).

[16] Gravelle, Jane. "Comparative Corporate Tax Burdens in the United States and Japan and ıplications for Relative Economic Growth," Congressional Research Service, Library of Coness (September 6, 1983), p. 9-10.

[17] Ando, Albert and Auerbach, Alan. "The Corporate Cost of Capital in Japan and the U.S.: A ɔmparasion," mimeo., (May, 1985).

[18] If corporate taxes are shifted forward, then the corporate income tax has no direct effect on e after-tax rate of return on corporate investment.

TABLE 3.—CORPORATE TAXES IN LARGE OECD COUNTRIES

Country	Corp. income tax as a % of GDP, 1982	Corp. income tax as a % of total taxes, 1982	Surplus o current transactio as a % o GDP, 198
United States	2.1	7.0	−0
Japan	5.4	19.7	0
West Germany	1.9	5.1	0
France	2.2	5.1	−3
United Kingdom	3.8	9.6	1
Italy	3.2	8.3	−1
Canada	2.8	8.0	0

Source: OECD, "Revenue Statistics of OECD Member Countries, 1965-1983," 19 and OECD, "The OECD Economic Outlook, Vol. 38, (December 1985).

The potential impact of forward shifting of corporate taxes trade also can be assessed by examining the cost structure of non nancial corporations. In 1983, only 4 percent of total value added nonfinancial corporations is attributable to equipment.[19] Thus, for example, tax changes increase the rental rate of equipment 25 percent, the net increase in the price of corporate output is most 1 percent (25 percent of 4 percent), assuming all corpora taxes are shifted forward. Under plausible assumptions, the effe of the House bill on the rental rate of equipment (primarily as result of repeal of the investment credit) is likely to be an increa of less than 25 percent.[20] While an increase in product prices one percent could have an adverse effect on trade (if the exchan rate does not adjust), the effect is small relative to daily fluctu tions in the value of the dollar of several percentage points.

Taxation of U.S. citizens working abroad

Under present law, U.S. citizens who reside in a foreign counti generally are allowed to exclude annually up to $80,000 of foreig earned income from gross income. The exclusion amount is sche uled to increase to $95,000 in 1990. Under the House bill, the excl sion amount would be capped at $75,000. In addition, the amount foreign earned income excluded is treated as an alternative min mum tax preference item. (Deductions and foreign taxes paid wit respect to such income can be taken into account in determinir the amount of minimum tax liability.) This provision has bee criticized on the ground that it would adversely affect U.S. export

In situations where a U.S. company exports goods and servic using a U.S. sales force that is located overseas, the foreign earne

[19] Henry J. Aaron, "Statement to the Committee on Ways and Means, House of Represent tives," June 11, 1985, p. 7.

[20] The rental rate or user cost of capital is equal to the pre-tax cost of funds used to acqui the property plus the property's decline in value due to depreciation. The after-tax cost of fun is equal to the pre-tax rate of return multiplied by 1 minus the effective tax rate. Assuming th the House bill increases the effective tax rate on equipment from 0 to 36 percent, the after-t rate of return is 4 percent, and a representative economic depreciation rate for equipment is percent, then the rental rate of equipment increases from 14 to 16.25 percent under the Hou bill. This is an increase of 16 percent.

ıcome exclusion benefits the company to the extent that relocated .S. workers demand lower salaries. Under the general tax rules, a .S. citizen is taxed on his worldwide income, with the allowance f a credit for foreign taxes paid on foreign income. Consequently, ıe exclusion is valuable to taxpayers only where the additional .S. tax burden, absent the exclusion, is greater than the foreign ıx burden on the excluded income. Thus, the foreign earned ıcome exclusion primarily benefits taxpayers residing in low-tax ›reign jurisdictions.

Reducing the level of the exclusion may increase the tax burden f taxpayers with over $75,000 of annual income who work in low-ıx countries. Treating excluded income as a minimum tax prefer-ıce item may increase the tax burden of individuals with over 30,000 of preference income ($40,000 for married couples) in low ıx countries. However, the reduction in income tax rates will in ıany cases more than offset the additional tax resulting from the ›wer exclusion level and the minimum tax inclusion. To the ‹tent that the reduced exclusion raises the tax burden on some ıxpayers, this could result in fewer U.S. citizens working in low ıx foreign countries, or in higher salaries for such workers. A re-uction in the number or quality of U.S. workers abroad could hurt r help net exports, depending on whether such workers are em-loyed by U.S. manufacturers or their foreign competitors. The for-ign earned income exclusion benefits U.S. taxpayers who promote ıe sale of domestic goods as well as those who sell foreign-made roducts. The exclusion also may make it more attractive for U.S. ›mpanies to shift manufacturing operations overseas.

oreign Sales Corporations

Foreign Sales Corporations (FSCs) typically are foreign incorpo-ated subsidiaries of U.S. parent corporations engaged in exporting. Inder special pricing rules, 16 percent of income from export ransactions in which a FSC participates effectively is exempt from .S. tax (15 percent for corporate shareholders). The House bill re-uces the amount of exempt income from export transactions to 14 ercent (13 percent for corporate shareholders).

FSC can be viewed as a reduction in the statutory tax rate on xports. Thus, in the case of corporations, FSC currently reduces ıe tax rate on export income from 46 percent to 39.1 percent (85 ercent of 46 percent). Under the House bill, FSC reduces the tax ate on export income from 36 percent (the top corporate rate) to 1.3 percent (87 percent of 36 percent). Thus, while the value of the xport incentive is reduced, the net tax rate on export income is educed since the cutback in the FSC exemption is more than ffset by the reduction in income tax rates in the House bill. How-ver, to the extent that other features of the House bill are deemed › reduce net exports, and FSC is thought to be an effective export ıcentive, it may not be desirable to reduce FSC benefits.

Whether FSC increases exports depends on whether the tax ben-fit is shifted forward to foreign purchasers in the form of lower rices, and the extent to which exchange rate adjustments offset SC. Treasury has examined the operation and effect of the Domes-ic International Sales Corporation (DISC) system of taxation, vhich is the predecessor of FSC. Although FSC and DISC have dif-

ferent structures, it is likely that their efficacy is generally simila
The Treasury study estimates that DISC increased exports in 198
by $7-11 billion, at a revenue cost of $1.7 billion.[21] The Treasur
study may overestimate the export increase attributable to DIS
because it assumes that the effective corporate tax rate is equal t
the statutory rate (46 percent), and it does not account for e
change rate changes, or the effect of tax increases necessary to pa
for DISC.

Source of income rules

Under present law, income derived from the purchase and resal
of inventory-type property is sourced where title to the property
exchanged ("title passage rule"). Under the House bill, such incom
generally is sourced according to the residence of the seller. Unle
the seller has a fixed place of business outside the United State
that materially participates in a sale to an unrelated party, th
sales income will be U.S. source income. In the case of a sale to
related party, the sales income will be U.S. source.

Under present regulations, 50 percent of income derived fro
the manufacture and export of inventory-type property generally
sourced where the manufacturing occurs, and the remainin
income is sourced according to the residence of the seller. Unde
the House bill, the portion of income attributable to sales activit
is sourced according to the residence of the seller (as describe
above, for purchase and sale transactions).

The effect of the House bill is to reduce the proportion of expo
income that is treated as foreign source in situations where no si
nificant selling activity occurs outside the United States. This r
duces the amount of foreign tax credits that may be claimed b
companies that have excess foreign tax credits. The loss of foreig
tax credits is offset by the reduction in the corporate tax rate fro
46 to 36 percent, unless sales income is a large portion of tot
export income (over 22 percent). In this case, the net effect of th
House bill is to increase the corporate tax on export income for co
porations with excess foreign tax credits and insignificant foreig
selling activity.[22] Either export profitability will be reduced or th
price of exports will increase.

Although the sourcing rule changes in the House bill could a
versely affect certain exporters, retention of present law rules be
efits only exporters with excess foreign tax credits. Also, th
present law title passage rule departs from the principle that th
location of economic activity generating any particular incom
should determine its source for tax purposes. The consistent appl
cation of this standard by all taxing jurisdictions results in a worl
wide system of taxation where no income is subject to double ta
and no income escapes tax in all jurisdictions.

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[21] Dept. of the Treasury, *The Operation and Effect of the Domestic International Sales Corp ration Legislation*, 1981 Annual Report, (July 1983).

[22] If selling income is less than 22 percent of total export income, then the effective corpora tax rate currently is more than 36 percent (78 percent nonsales income at a 46- percent statut ry rate).

IV. INNOVATION AND TECHNOLOGICAL CHANGE

In general

The rate of technological change is one of the primary determinants of the growth of per capita income. Thus, the ability of the U.S. economy to produce a rising standard of material well-being depends crucially on the generation and utilization of new technology.

The tax system may affect the rate of technological change through its treatment of research and development expenditures, capital cost recovery, and capital gains, among other provisions. New technology is discovered and adapted to practical application through the process of research and development. Consequently, the tax treatment of research and development expenditures directly affects the profitability of innovative activities. To the extent that technological improvements are embodied in more productive types of machinery, the rate at which new technology is utilized is influenced by general investment incentives in the tax code. Finally, the tax treatment of capital gains is important to the extent that the return to investors in high technology firms is largely in the form of capital gains rather than ordinary income.

Tax treatment of research and development

Under a provision enacted in 1981, which expired on December 31, 1985, taxpayers were allowed to claim a nonrefundable 25-percent income tax credit for the increase in qualified research expenditures over the average amount of such expenditures in the preceding three taxable years. Under the House bill, the incremental research credit is extended for three years at a 20-percent rate subject to certain modifications.

Under present law, taxpayers may elect to deduct currently research and development costs. This is more favorable to the taxpayer than the general rule that business expenditures to develop or create an asset which has a useful life extending beyond a year must be capitalized. (Advertising expenditures that create good will are also exempt from the general rule.) For individuals, the excess of expensing over 10-year amortization of research and development expenditures is a minimum tax preference item. These rules remain unchanged under the House bill.

The net effect of the House bill on the profitability of research and development activities depends on whether the reduction in the incremental research credit are offset by the reduced income tax rates. On the one hand, the reduction in the tax credit rate reduces the portion of research costs reimbursed by the credit. On the other hand, the reduction in tax rates increases the after-tax cash flow resulting from the research and development expenditures.

Preferential capital gains rate

The net effect of the reduction in tax rates and the capital gai deduction under the House bill is to increase the individual max mum tax rate on long-term capital gains from 20 to 22.04 percen Also, the 28-percent alternative tax rate for net capital gains corporations is increased to 36 percent—the regular tax rate app cable to large corporations under the House bill. Some critics of th House bill have expressed concern that this change will discoura the flow of venture capital into risky, high technology industrie In this view, assets that generate capital gains are more produ tive, and should be taxed at a lower rate, than assets that produ ordinary income. Stock, particularly in high technology and star up companies, is often mentioned in this regard. In addition, it pointed out that a recent Treasury study concluded that reducir the capital gains rate may increase tax revenues, at least over th short run.[23] This study found that the 1978 capital gains tax redu tions resulted in "modest increases in economic growth, capital fo mulation, productivity, and long run consumption levels."

While the increase in the capital gains rate under the House bi will increase the tax liability of investors who realize capital gai from investment in successful high technology companies, othe argue that other provisions of the bill may reduce the tax burde on such companies. The reduction in regular income tax rates likely to be particularly important in this regard. Also, the i crease in the capital gains rate does not have a direct effect on th predominant portion of venture capital investments made by pe sion funds, charitable organizations, and other investors that a exempt or partially exempt from tax on capital gains income.[24] However, to the extent that the market price of shares in hig technology companies is determined by taxable investors, the ca ital gains tax rate may affect the price of venture capital share

Supporters of the House bill argue that the capital gains prefe ence is an inefficient mechanism for stimulating venture capital i vestment since only a portion of realized capital gain is attribut ble to stock in high technology companies. In 1981, only 25 percer of net long-term gain was attributable to corporate stock. Cons quently, it is argued, targeted incentives, such as the incrementa research credit, are likely to be more effective in increasing th profitability of high technology investments than a general capita gains preference.

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[23] Office of the Secretary of the Treasury, "Report to Congress on the Capital Gains Tax R ductions of 1978" (September 1985).

[24] See *Venture Capital Journal* (January 1985).

V. TAX EVASION

The Internal Revenue Service estimates that tax evasion by individuals in the legal sector of the economy resulted in underpayment of $75.3 billion in taxes in 1981.[25] It is estimated that tax evasion will exceed $100 billion for 1986, or nearly one-half of the estimated budget deficit for fiscal year 1986.[26] Many possible reasons for tax evasion have been suggested, including: perceptions of tax inequity, high marginal tax rates, and the complexity of tax laws. For the most part, the effect of these factors on tax compliance has been difficult to document.

One recent study seeking to examine factors affecting noncompliance has found a significant positive relationship between marginal tax rates and understatement of income.[27] This study suggests that the decline in marginal tax rates in the House bill may reduce tax evasion. A reduction in marginal tax rates reduces the expected return to the understatement of income.

Marginal rate reductions also reduce the advantage from participating in many legal tax minimization activities. The reduction in these activities improves the allocation of investments and increases the output of the economy. Further, to the extent that legal tax minimization declines and certain abuses are eliminated by the House bill, taxpayer attitudes toward the tax system may improve and tax evasion may decline. While further studies examining the significance of these relationships are useful, even a small reduction in tax evasion and tax minimization could have a significant impact on tax collections.

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[25] Internal Revenue Service, *Income Tax Compliance Research: Estimates for 1973–81*, July 1983. This estimate does not include legal tax minimization through tax shelters, or nonpayment of taxes legally due on income earned in illegal activities.

[26] This projection assumes the same annual real rate of growth in tax evasion as experienced from 1973 to 1981.

[27] Charles Clotfelter, "Tax Evasion and Tax Rates: An Analysis of Individual Returns." *Review of Economics and Statistics*, August 1983.

VI. SHORT-RUN ECONOMIC IMPACT

Tax policy affects the performance of the economy through i effect on both aggregate supply and aggregate demand. Aggrega supply is determined by the level of investment and employmer and the allocation of capital and labor among the producing secto of the economy. The demand for domestic goods and services h households, businesses, foreigners, and the government constitu the components of aggregate demand.

To predict the effect of tax legislation on the economy, it is ne essary to take account of the effect of taxes on each of the comp nents of aggregate supply and demand. Table 4 shows the results four forecasting models that have been used to estimate the shor run effects of the House bill. Each of these models predicts a d cline in the level of investment in structures and equipment rel tive to present law. In three of the models the decline in equipmer is larger than structures. Two of the models (Data Resources, In and Wharton Econometrics) predict that the decline in investmer is more than offset by consumer spending, resulting in a net i crease in GNP and employment at the end of the 1986–91 perio

BLE 4.—FORECAST OF THE ECONOMIC EFFECTS OF THE HOUSE BILL [1]

[Percentage change from present law, calendar years]

Forecast/Variable [2]	1986	1987	1988	1989	1990	1991
ase Econometrics:						
GNP	−0.6	−0.4	−0.2	−0.2	−0.3	−0.3
Fixed Investment:						
Equipment	−4.0	−2.4	−2.4	−2.5	−2.8	−3.4
Structures	−8.0	−5.5	−3.3	−4.1	−6.2	−8.5
Unemployment rate [3]	0.2	0.2	0.2	0.1	0.1	0.1
ta Resources:						
GNP	NA	0.2	−0.1	−0.2	0.0	0.5
Fixed Investment:						
Equipment	NA	−0.8	−4.0	−6.1	−5.8	−3.0
Structures	NA	−0.7	−2.2	−2.6	−2.0	−0.8
Unemployment rate [3]	NA	−0.1	0.1	0.1	0.0	−0.3
yer and Associates:						
GNP	−0.2	−0.4	−0.8	−1.4	−1.9	−2.3
Fixed Investment:						
Equipment	−2.4	−6.4	−10.6	−9.0	−16.2	−17.3
Structures	−1.0	−2.5	−4.3	−6.4	−8.3	−10.3
Unemployment rate [3]	0.1	0.2	0.4	0.6	0.9	1.1
iarton Econometrics:						
GNP	NA	0.5	−0.4	0.6	0.4	0.2
Fixed Investment:						
Equipment	NA	−0.1	−1.7	−1.7	−2.6	−2.8
Structures	NA	0.1	−1.3	−0.9	−1.7	−1.7
Unemployment rate [3]	NA	−0.2	0.0	−0.2	−0.3	−0.3

All projections are made in terms of inflation-adjusted prices.
GNP denotes gross national product, equipment measures producer durable ipment, and structures measures nonresidential structures. "NA" indicates that forecast was based on the assumption that the bill will be effective starting uary 1, 1987.
Expressed as absolute increases or decreases in the unemployment rate.

The use of macroeconomic models to evaluate comprehensive tax form proposals such as the House bill raises several issues. First, e short-run projections from commercial forecasting models may derstate the long-run benefit from tax reform proposals which prove the allocation of capital investment by equalizing effective x rates across assets. These benefits of improved capital alloca-on may take a number of years to be fully evident.

Second, macroeconomic forecasts are sensitive to assumptions ade about factors that are determined outside of the model such the behavior of the Federal Reserve Board. If the Federal Re-rve adopts a different monetary policy than assumed in the odel, the forecast may be misleading. Third, forecasting models e the past performance of the economy as a predictor of how the onomy will respond to policy changes in the future. Thus, these odels may be most reliable for predicting the effect of small olicy changes that are not too dissimilar from past experience. A

comprehensive and far-reaching change in tax policy, as wou occur under the House bill, may be difficult to estimate.

An alternative technique for modeling the impact of tax refo is to estimate the change in the long-run equilibrium outcome the economy. Models of this type have been used to evaluate t effect of the President's tax reform proposal. Two such analys show a small long-run increase in per-capita income.[28] The lo run effect of the House bill has not yet been evaluated using t type of model.

[28] See Jane Gravelle, "Effects of Business Tax Provisions in the Administration's Propos Updated Tables," Congressional Research Service, Report #85-783E (June 1985) and Mich Allison, Don Fullerton, and John Makin, "Tax Reform: A Study of Some Major Proposals," working paper No. 2 (February 1985).