

Enterprise Economics II: Comparing Tax Burdens

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Introduction

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This monograph is the second in a new series of tax policy studies sponsored by the Progressive Foundation's Project on Tax Reform and Economic Growth and the Progressive Policy Institute. The Project's mission is to identify and design a growth-oriented tax reform program -- consistent with a progressive distribution of the tax burden -- that would help promote higher national savings and investment, stronger job and business formation, and higher economic productivity. The essays in this series include analyses of alternative approaches to reform of the personal income tax, payroll taxes and business taxes, and new examinations of pollution taxes and value-added taxes. This volume, prepared by Perry Quick and Tom Neubig, compares various aspects of the tax burden under the American tax system with those in other advanced economies.

This interest in reforming the tax code is part of a commitment by the Progressive Foundation and the Progressive Policy Institute to help develop a new Enterprise Economics that places the valid insights of both traditional liberal and conservative economics in the new global economic context. This approach seeks to focus policy not simply on financial capital or aggregate demand, but on the resources for greater innovation and higher efficiency and productivity by American firms and workers. In addition to tax reform, the policy agenda of Enterprise Economics includes budget reform to restrain the growth of public spending while revitalizing genuine public investment, and strategies to strengthen market competition by phasing out subsidies for particular industries and unproductive economic regulation. Through far-reaching reforms in labor-market policies, education, and training, Enterprise Economics also seeks to endow America's workers with the skills and opportunities they need to create their own economic security in an era of dynamic global competition.

Two basic conclusions can be drawn from a serious analytic comparison of the tax systems of the world's major industrial economies. First, the overall American tax burden is relatively moderate: Government at all levels in the United States collects a significantly smaller portion of the nation's wealth in taxes than does government in any of the other major industrial economies of the G-7 except Japan. Second, despite the lower overall tax burden, the U.S. imposes heavier taxes on capital than most other advanced countries. In a world of mobile international capital, we should expect this disparity to dampen investment on the margin in the United States.

Economists have long considered the tax burden to be an important subject of study, but do not agree as to its overall economic significance. They tend to agree, however, that in most cases, a lower tax burden is better for an economy than a higher one -- so long as sufficient revenues are raised to finance necessary public spending in non-recessionary times.¹ Most of the political and economic issues implied by tax burdens arise from the particular ways a specific tax targets certain activities or objects.

The economic significance of a tax's burden depends on several distinct factors. First, what activities or objects are included in the tax base, and what -- if any -- activities or objects that generically belong to this base receive special exemptions? The economic effects of a tax on consumption, for example, will be very different from another tax aimed at investors' capital gains. Moreover, if certain goods such as food or medical care are exempt from a consumption tax, a substantial tax burden will channel demand to these favored goods. Another important matter is how easily taxpayers can redefine their activities or incomes in order to escape or reduce the burden of a tax. For example, income received in kind rather than in cash -- such as fringe benefits -- may escape income and payroll taxes entirely or in part, indirectly increasing the tax burden on those persons, occupations, and industries least able to convert compensation to benefits.

In addition, the relationship between the tax rates for various taxes can affect real tax burdens. For example, some corporations will reorganize themselves as non-corporate businesses, which are subject to the personal income tax, when the corporate rate rises significantly above the top personal rate. Even the uses for the revenues raised by a tax can affect its real burden. For example, the pledge of retirement benefits for everyone paying payroll taxes reduces private savings for retirement, which in turn raises the cost of capital while increasing consumption.

The general proposition that the economy or society would benefit from a lower tax burden provides little practical guidance without knowing the economic or social value of the spending supported by the taxes. However, comparisons with the tax burdens of other major industrial nations can provide a useful benchmark. With increased international competition for capital and investment, a country with unusually high tax burdens on the factors of production will suffer a competitive disadvantage. Moreover, while any country may foolishly adopt a dysfunctionally high or otherwise inappropriate tax burden, usually in pursuit of a social policy goal, common sense indicates that it is unlikely that all or even most countries will make the same mistake. The comparative analyses of tax burdens in the G-7 countries presented here, therefore, help direct our attention to the elements of our tax system which require closer analysis and possible reform.

Executive Summary

Over the past two decades, the United States has followed a different fiscal course from most other G-7 nations. In 1970, government in all of the major industrial countries claimed roughly 30 percent of their national incomes in taxes; today American government at all levels still takes about 30 percent of Gross Domestic Product (GDP) in taxes, while the average for other G-7 countries has reached nearly 38 percent. None of these governments collects as much revenues as it spends, but America's status as the lowest taxing country in the G-7 does not reflect a greater propensity to run deficits instead of raising taxes. Spending has grown in all the G-7 countries, but U.S. public spending is still at the low end of the G-7: The three levels of government in the United States claim about 34 percent of GDP for public purposes, as compared to an average of about 46 percent for the other G-7 countries.

The United States taxes differently than other G-7 countries, as well as less. Compared to other major industrial countries, America's personal income taxes account for more of total revenues and corporate taxes for less; similarly, consumption taxes in the United States contribute much less and property taxes more to government's resources, compared to the others in the G-7. The only point of convergence in the tax burdens of all seven countries is payroll taxes: They account for roughly 28 percent of all revenues in each country.

The American tax system also has the lowest top marginal income tax rate, the lowest consumption tax rates (in state and local sales taxes and federal excise taxes), and the second lowest payroll tax rate. Only in the area of corporate taxation do U.S. marginal tax rates approximate those elsewhere. Similarly, the current American tax system generally boasts effective tax burdens (measuring how much is actually raised relative to the tax base; also called average tax rates), below those of most other major economies. The exception is income taxes, personal and corporate, which collect just under 14 percent of all income in the United States, roughly average for G-7 nations. Yet, because income taxes play a larger role in our revenue system than elsewhere, American tax burdens in other areas are well below average. Payroll taxes claim less than 13 percent of all payroll here, as compared to about 22 percent in the rest of the G-7. Similarly, consumption taxes here collect revenues equal to just over 6 percent of all consumption, as compared to about 17 percent in the other major industrial countries.

In one important respect, the United States breaks this pattern of relatively low taxes: We tax capital more heavily and more inappropriately than other G-7 countries. Our high taxes on capital not only dampen U.S. domestic investment, they also positively favor foreign investors and foreign firms. We tax the domestic earnings of American corporations more heavily than other G-7 countries tax the U.S. earnings of their own companies, so foreign firms have a tax advantage in the American market. We also tax the foreign earnings of U.S.-owned firms more heavily than foreign countries tax the domestic earnings of their corporations, so foreign firms also have a tax advantage in their own markets. Every G-7 country except America taxes its domestic investment more lightly than investment from abroad; similarly, all the G-7 countries except the United States and the United Kingdom tax investment at home less than investment abroad.

The international comparisons described and analyzed in this monograph suggest the first priority for tax reform should be the current tax treatment of capital, both as savings and investment. Relative to most other large countries, Americans are not taxed very heavily; but relative to these other countries, the American economy is not taxed very efficiently, either.

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Notes

1. Beyond a few basic functions -- national defense, law enforcement, the administration of justice, legislative operations, basic public education, and the administration of the money system -- there is no consensus about the proper extent of necessary public spending. Within broad parameters, these are questions of social policy, not economics, and economic reasoning cannot determine what share of a nation's wealth used for public or common purposes will produce the strongest or most stable economy.

Comparing Tax Burdens in the United States and the Other G-7 Countries

Perry Quick and Tom Neubig

Introduction

This report compares certain tax burdens in the United States to those found in the other major, advanced economies of the G-7: Canada, France, Germany, Italy, Japan, and the United Kingdom. The data presented are intended to highlight the major features of the different tax systems; the report does not attempt to answer all of the issues facing tax policymakers regarding economic efficiency, fairness, simplicity, and administration.

The first section describes the overall tax burden on each country's economy and its relationship to the public spending it finances. The next section presents the composition of tax revenue by type of tax. The last sections report the average and marginal tax rates imposed on different types of economic activities. In each section, limitations to the data for international comparisons and policy analysis are discussed.

Highlights

Taxes in the United States are lower as a percentage of Gross Domestic Product (GDP) than in the other G-7 countries. Taxes as a percentage of GDP in the United States were 30 percent in 1991 compared to an average 38 percent for our major trading partners. Public spending in the United States is also lower than in the other G-7 countries.

Taxes (and public spending) have been relatively constant as a percentage of GDP since 1970 in the United States. In contrast, taxes have increased from 30 to 38 percent of GDP in the other G-7 countries as public spending has become a larger share of their economies.

The United States relies more heavily on individual income taxes and less on consumption taxes than do the other G-7 countries. The United States uses the individual income tax to collect 42 percent of its total revenues, compared to 36 percent in the other G-7 countries. The other G-7 countries collect 26 percent of total revenues from consumption taxes compared to only 17 percent in the United States.

Payroll taxes have increased in importance in all of the G-7 countries. In the United States, payroll taxes have increased from 5.6 percent of GDP in 1970 to 8.9 percent in 1991. Their share of total government revenues increased from just under 20 percent in 1970 to almost 30 percent in 1991.

Consumption taxes in the other G-7 countries have remained relatively stable as a percentage of GDP with value-added taxes substituting for reduced excise taxes. In the United States, federal and state excise tax revenues

have declined as a percentage of total revenues, while state and local sales taxes have increased.

Average tax rates on payroll and consumption in the United States are lower than the average rates for the other G-7 countries; this is consistent with the lower share of GDP claimed by taxes (i.e., the tax ratio) in the United States. Although the United States has a relatively low top statutory income tax rate, the average U.S. individual and corporate income tax rate is close to the average rate of the other G-7 countries because of both the broader tax base and double taxation of corporate dividends in the United States.

Effective marginal tax rates on labor income are lower in the United States than in the other G-7 countries due to relatively low payroll tax rates. Since payroll tax rates are generally used to fund government-financed retirement and health benefits, the lower taxes reflect, in part, lower expected benefits.

Effective marginal tax rates on capital income show that the United States taxes new corporate investment more heavily than do most of our major trading partners. U.S. corporations must earn a higher pre-tax rate of return than their foreign competitors to invest in the United States and other countries. The higher effective tax rate on capital income in the United States is partially attributable to America's unique double taxation of corporate dividend income.

Implications

The tax burden in the United States should not be considered in isolation or relative to only the tax burden in other countries, since taxes are necessary to finance government spending. The level of the tax burden is related to the level of government spending. The statistics presented here do not reveal whether government spending is effective or efficient. A low tax burden to finance ineffective or inefficient government programs may be more detrimental to economic growth and well-being than a high tax burden to finance effective and efficient government programs.

This review of the G-7 countries tax systems shows that countries do have choices in the composition of their tax bases. All of the G-7 countries rely on income, payroll, and consumption taxes for most of their revenues, but have different degrees of reliance on each type of tax. Differences in tax bases can affect economic growth and well-being. Income, payroll, and consumption taxes have different effects on labor supply, savings, and investment. In some cases, the economic effects may be due more to special rules (e.g., tax treatment of fringe benefits versus wages or the tax depreciation rules across assets) than to the choice of the tax base.

Taxes as a Percentage of the Economy

Highlights

Taxes in the United States -- including federal, state, and local taxes -- represent a smaller percentage of economic activity as measured by gross domestic product (GDP) than in the other G-7 countries (Canada, France, Germany, Italy, Japan, and the United Kingdom).

Taxes as a percentage of GDP, hereon referred to as the tax ratio, were 29.8 percent for the United States in 1991 compared to an average 37.9 percent in the other G-7 countries.

The tax ratio in the United States has been relatively stable since 1970, ranging between 27.7 percent and 29.9 percent. By contrast, the average tax ratio in the other G-7 countries has increased from 30.3 percent in 1970 to 37.9 percent in 1991. Since 1970, the tax ratio has increased in all of the other G-7 countries except the United Kingdom.

The lower tax ratio in the United States is consistent with its lower spending ratio -- that is, public expenditures as a percentage of GDP. The U.S. spending ratio was 34.2 percent in 1991, compared to 45.6 percent for the other G-7 countries.

The difference between the tax (plus other receipts) and spending ratios is the deficit ratio -- that is, the deficit as a percentage of GDP. The U.S. deficit ratio was 3.4 percent in 1991, compared to 3.6 percent for the other G-7 countries. Deficit financing imposes "implicit taxes" on the economy by drawing economic resources from the private sector for governmental uses.

Tax and spending ratios are not a complete measure of the economy's resources that are reallocated or redistributed by government. Government also may use credit policy, tax expenditure policy, and regulatory policy to finance, subsidize, or mandate particular activities.

Tax Ratios

The Organisation for Economic Co-operation and Development (OECD) has collected standardized statistics on the tax revenues of its 24 member countries since 1965. This information shows that the United States has lower total tax revenues as a percentage of GDP than some of our major trading partners (see Figure 1). The U.S. tax ratio, in fact, is the lowest of all G-7 countries. In 1991, the United States had a tax ratio of 29.8 percent, compared to an unweighted average for the other G-7 countries of 37.9 percent (see Table 1). Tax ratios for the other G-7 countries ranged from 30.9 percent in Japan to 44.2 percent in France.

The U.S. tax ratio has remained relatively constant at just under 30 percent since 1970, which was shortly after the enactment of Medicare and Medicaid in 1965 and the Vietnam War surcharges in the late 1960s (see Figure 2). In contrast, the average tax ratio of the other G-7 countries grew from 30.3 percent in 1970 to 37.9 percent in 1991. Among the G-7 countries, only the United States and the United Kingdom have maintained a relatively stable tax ratio during the past 20 years.

Spending and Deficit Ratios

Tax ratios are closely related to spending ratios -- that is, public spending as a percentage of GDP -- in the G-7 countries. The two ratios are not the same, however, for two reasons. First, governments often run deficits and borrow money to finance current spending instead of raising taxes. All the G-7 countries have run deficits at some point during the period, imposing "implicit taxes" on the economy by drawing economic resources from the private sector for governmental uses. Second, the tax ratio does not include noncompulsory receipts collected by government, such as payments for specific services.

The United States has the second lowest spending ratio of the G-7 countries, 34.2 percent in 1991; Japan has the lowest, 31.4 percent (see Table 2). The U.S. spending ratio has increased from 27.9 percent in 1965 to 34.2 percent in 1991. Approximately one-half of this increase occurred between 1965 and 1970; the other half occurred between 1980 and 1991. Other G-7 countries have experienced large increases in their spending ratio, with the average increasing from 34.9 percent in 1965 to 45.6 percent in 1991. Only the United States and the United Kingdom limited their growth in spending to less than 7 percent of GDP during this period.

Changes in the Composition of Public Spending

The growth of government spending during this period is largely attributable to the growth in health and public pension entitlements. In all of the G-7 countries, public expenditures on health and pensions increased from an average 8.6 percent of GDP in 1965 to 14.8 percent in 1985 (see Table 3). The growth of government pensions and health programs is partially attributable to the aging of the G-7 countries populations. The percentage of the population age 65 and over increased from an unweighted average of 9.4 percent in 1960 to 13.3 percent in 1991 (OECD 1988a). In addition, in all of the G-7 countries, health costs have increased faster than the general price inflation (OECD 1993b).

The composition of government spending can affect the tax system, both in terms of the total tax ratio and the composition of tax revenues, since payroll taxes are often earmarked to finance public retirement and health programs. For instance, in France payroll tax contributions are a revenue source not only for the elderly's pensions but also for unemployment and health care for the general population. In the United States, payroll taxes are used to finance public retirement benefits (Old-Age, Survivors, and Disability Insurance) plus hospital insurance at the federal level, as well as unemployment and workers compensation benefits. (The next section discusses changes in the composition of tax revenues that are partially attributable to the changing composition of government spending.)

The United States spends roughly the same share of GDP in public spending on health care as other G-7 countries, even though the government health spending in the other G-7 countries represent a larger portion of their total health expenditures (75 percent compared to 42 percent in the United States; OECD 1993b). Adjusting the tax or spending ratios for differences in public health expenditures would not change the below-average tax and government spending ratios of the United States relative to the other G-7 countries.

Table 4 adjusts the public spending ratios to exclude public health care expenditures. Government spending on non-health-care programs in the United States has fallen slightly, dropping from 29.0 percent in 1970 to 28.3 percent in 1991. It is clear, then, that the growth in government spending from 31.7 percent of GDP in 1970 to 34.2 percent in 1991 is attributable to increased public spending on health care. Moreover, this increase has been driven mainly by the rapid rate of growth in all health expenditures in the United States. In contrast, the growth in the public spending ratio in the other G-7 countries is approximately one-third from public health expenditures and two-thirds from

non-health spending (OECD 1993b).

Data Limitations

Tax ratios are only part of the story of a government's use of economic resources. A government can reallocate and redistribute a nation's resources in a number of ways.

The tax ratio is generally high when government spending is also a high percentage of GDP. The tax ratio is lower than the spending ratio in most countries because governments borrow money from the private sector to finance current spending or have nontax receipts (such as payments for services from government-owned operations). The "implicit taxes" from deficit financing are not included in the tax ratio.

Both the tax and spending ratios are lower in countries that use tax expenditures to achieve objectives that could also be achieved through direct government spending. Tax expenditures reduce total taxes and are not included as government spending. An example of a tax expenditure in the United States is the low-income housing tax credit, which is similar to a direct government spending program for construction of low-income rental housing except that it is run through the tax system. A recent General Accounting Office study reported that aggregate tax expenditure revenue losses totaled \$402 billion in 1993 (GAO 1994). Tax expenditures must be financed by spending restraint on other programs, higher tax rates, or higher deficits.

Governments also can reallocate resources through government credit programs and regulatory policy. Loan guarantees and below-market interest rate loan programs can reduce the cost and provide incentives for citizens to undertake favored activities, without direct expenditures or tax financing. Similarly, government objectives also can be achieved through regulatory policy, such as minimum wage laws, environmental regulations, or employer-mandated health insurance coverage.

The United States attempts to measure the costs of some of these other resource allocation policies. The "tax expenditure budget" and the "credit budget" issued annually by the Office of Management and Budget attempt to account for these indirect spending programs in a manner consistent with the way in which the costs of direct spending programs are measured. These programs, however, are not consistently measured for all of the G-7 countries.

Composition of Tax Revenues

Highlights

All of the G-7 countries rely on income, payroll, and consumption taxes for at least 85 percent of their total revenues.

The United States relies more heavily on income and payroll taxes than the other G-7 countries, with the exception of Japan. Income and payroll taxes accounted for 70 percent of the U.S. tax revenues in 1991, compared to an average 64 percent in the other G-7 countries.

Over the past 25 years, payroll taxes have increased the most as a proportion of total tax revenues across all G-7 countries. Payroll taxes share of total revenues increased from 22.1 percent in 1965 to 29.8 percent in 1991 in the G-7 countries (OECD 1993d). Payroll taxes typically are earmarked to finance public retirement and health programs which have increased as a share of government spending in the past 25 years.

In the United States, as well as other G-7 countries, the share of GDP represented by consumption taxes remained roughly constant from 1970 to 1991, while declining as a share of total revenues (OECD 1993d). The decline in consumption taxes has two components. First, specific excise taxes fell sharply during this period as a percentage of total revenues. Many specific excise taxes were repealed; others declined in importance, since many excise taxes are set at a specific amount, rather than as a percentage of the price. Second, value-added taxes (VATs) have increased in all of the G-7 countries except the United States, as these countries have replaced specific excise, turnover, and other taxes with a VAT. (The fourth monograph in this series will contain two papers examining value-added taxation.)

The change in the composition of U.S. revenues partially reflects the change in the federal and state/local governments' reliance on certain taxes. The federal government has reduced its reliance on income taxes (particularly the corporate income tax) and has substituted payroll tax revenues. State governments have reduced their reliance on goods and services taxes, substituting higher individual income taxes. Finally, local governments have reduced their reliance on property taxes and increased their use of goods and services taxes.

The composition of its tax base is one of a country's most important policy decisions. The degree of reliance on different types of taxes is often affected by the degree to which a specific tax is linked to certain government spending, the degree of redistribution through the tax system, the emphasis on saving, investment and labor supply decisions, and the intergovernmental structure of the country.

For example, payroll and certain excise taxes (e.g., gasoline taxes) are often earmarked for retirement or infrastructure expenditures. Countries with greater redistribution through the tax system are likely to rely more heavily on income taxes. Countries with greater emphasis on saving and investment may rely less heavily on income taxes, while countries with greater emphasis on labor supply may rely less heavily on payroll taxes. Countries with local taxing authorities may rely more heavily on consumption taxes than countries with a central taxing authority.

The Current Tax Mix

The G-7 countries rely heavily on three types of taxes: income, payroll, and consumption taxes. These taxes account for more than 85 percent of total tax revenues in all of the G-7 countries (see Figure 3).

In 1991, these countries collected approximately 35 percent of total taxes from income taxes, 30 percent from payroll taxes, 25 percent from consumption taxes, and 10 percent from property and other taxes (see Table 5).

Differences from the average tax mix that are worthy of note include the following:

The United States relies more heavily on income taxes (42.2 percent), particularly individual income taxes, and less heavily on consumption taxes (16.8 percent) for its tax revenues; it has no value-added taxes.

Canada relies more heavily on income taxes (46.2 percent of revenues) and least heavily on payroll taxes (15.0 percent).

France relies more heavily on payroll taxes (40.1 percent) and less heavily on income taxes (18.0 percent).

Germany relies more heavily on payroll taxes (37.2 percent) and least on property and other taxes (4.7 percent).

Italy's tax mix is closest to the average for the G-7 countries.

Japan relies most heavily on income taxes (46.9 percent), especially the corporate tax, and least heavily on consumption taxes (13.5 percent).

The United Kingdom relies most heavily on consumption taxes (32.7 percent) and less heavily on payroll taxes (17.1 percent).

Changes in the Tax Mix

Recent tax changes have altered the composition of the U.S. federal tax system. The 1983 Social Security Tax Act significantly increased payroll taxes to finance future retirement benefits through a buildup of the Social Security Trust Fund, which finances a lower deficit on non-social-security programs. The 1986 Tax Reform Act increased corporate income taxes and reduced individual income taxes, while keeping total tax revenues relatively constant. And the 1993 Tax Act significantly increased individual income taxes to reduce reliance on debt finance.

Changes in the composition of tax revenues as a percentage of GDP in the G-7 countries between 1970 and 1991, shown in Figure 4 and the top panel of Table 6, illustrate the differences between the tax policies of the United States and the other G-7 countries. In the United States, the tax ratio remained roughly the same over the period, increasing only 0.6 percent of GDP to 29.8 percent in 1991. In other words, the United States rearranged its tax composition while keeping its tax ratio constant. The federal government increased payroll taxes by 3.3 percent of GDP, which was largely offset by a decline of 1.5 percent of corporate income tax and 1.2 percent of excise taxes.

The other G-7 countries increased their tax ratio from 30.3 percent in 1970 to 37.9 percent in 1991. The increase was largely attributable to an increase in payroll taxes (4.0 percent) and personal income taxes (3.2 percent). In addition, the other G-7 countries reduced their reliance on excise taxes by increasing their use of value-added taxes.

The bottom panel of Table 6 shows the change in the tax revenues of different taxes as a percentage of total revenues. In the United States, payroll taxes rose from 19.3 percent of total revenues in 1970 to 29.8 percent in

1991. Corporate income taxes declined from 12.7 percent in 1970 to 7.3 percent in 1991. Excise taxes fell from 11.3 percent to 7.1 percent.

The other G-7 countries have experienced similar changes. Payroll taxes grew from 25.1 percent of total revenues in 1970 to 29.9 percent in 1991. Corporate revenues declined from 10.9 percent in 1970 to 8.8 percent in 1991. Excise taxes had the steepest drop, from 17.0 percent to 9.8 percent. Unlike the United States, the other G-7 countries increased their reliance on personal income tax from 22.5 percent in 1970 to 27.2 percent in 1991.

Reasons for Changes in the Tax Mix

The changes in the composition of tax revenues since 1970 shows many similarities across the G-7 countries. All of the countries rely more heavily on payroll taxes, which have been used to finance the growth in retirement and health entitlement programs. As these entitlement programs have increased faster than other government programs -- due to their expansion of coverage, aging of the population, and rising health care costs -- payroll taxes have been raised to cover the expected costs.

Consumption taxes have remained relatively constant as a percentage of GDP since 1970 in the G-7 countries, but their share of total revenues has fallen as payroll taxes have grown. The composition of consumption tax revenues has changed in the G-7 countries, with excise tax revenues replaced with general consumption taxes, particularly -- except in the United States -- with value-added taxes. Revenues from enactment of value-added taxes in five of the G-7 countries during this period typically were used to replace turnover taxes and reduce specific excise taxes.

Reliance on corporate income tax revenues has declined in the G-7 countries as corporate income has fallen as a share of GDP. Corporate income taxes also have fallen as corporate equity has been reduced due to greater reliance on debt finance and share repurchases (Auerbach and Poterba 1987).

Since 1991, the United States has raised both individual and corporate income taxes to reduce the deficit. The top individual income tax rate was raised to 39.6 percent (before various phaseouts), and the top corporate income tax rate was raised to 35 percent. In the other G-7 countries since 1991, corporate income tax rates have been lowered in Canada, Germany, and the United Kingdom, but increased in Italy. The United Kingdom increased its VAT rate in 1991. Japan currently is considering proposals to reduce individual income taxes and increase its consumption tax rate.

Changes in the U.S. Federal and State and Local Tax Mix

In the United States in 1991, the federal government collected two-thirds of total tax revenues, with state governments collecting one-fifth, and local governments collecting one-eighth (ACIR 1993). Since 1970, there has been a small increase in the share of total tax revenues collected by state governments and a small decline in the federal government's share.

Within each of the levels of government, the tax mix has shifted (see Table 7). The federal government has increased its reliance on payroll taxes, with lower shares for corporate income taxes, taxes on goods and services, and individual income taxes. At the state level, individual income taxes have been increased with less reliance on taxes on goods and services and corporate income taxes. Local governments have reduced their reliance on property taxes and increased taxes on goods and services and individual income taxes.

Data Limitations

OECD has standardized international tax statistics to facilitate cross-country comparisons of the composition of tax revenues. Nonetheless, there are several important data limitations.

Just as a country's tax ratio is closely related to its spending ratio, the composition of its tax revenues may also be related to its composition of spending. For example, countries with large public retirement and health programs may have above-average payroll tax ratios because payroll tax revenues have been earmarked for those programs. Above-average payroll tax ratios will reduce the ratios of other taxes.

A tax ratio can decline for several reasons, even if tax policy has not reduced the specific tax. An increase in one tax ratio will automatically reduce other tax ratios. The 1983 Social Security tax increased the payroll tax share in the United States, thereby reducing the other tax ratios. Also, a decline in the share of economic activity on which a tax falls can reduce a tax ratio. For example, corporate income has fallen as a percentage of GDP, thereby reducing

corporate tax collections relative to taxes with bases that have remained constant or grown as a percentage of GDP.

Finally, tax ratios do not tell the complete story about the relative burden of a tax. For example, corporate income taxation is often "integrated" with the individual income tax to mitigate double taxation of distributed corporate income. The other G-7 countries all have some form of corporate integration to reduce the double taxation of corporate dividends. In these countries, the tax relief generally occurs at the shareholder level, rather than at the corporate level. Thus, corporate income tax revenues continue to be collected, but are offset by lower individual income tax collections.

Average Burdens of the Major Taxes

Highlights

The United States has the lowest top statutory or marginal individual income tax rate among the G-7 countries; its corporate tax rate is similar to that of most other countries. The U.S. statutory payroll tax rates are lower than those of the other G-7 countries except Canada.

Top statutory tax rates are only one element of a country's tax system; the breadth of the tax base and tax credits also determine the amount of tax collected. For example, a country's top tax rate may apply to only a few taxpayers, with most taxpayers subject to lower graduated rates. The smaller the tax base, the higher the statutory tax rates must be in order to raise a given amount of revenue. Countries with narrow tax bases are likely to have higher statutory rates than countries with broader tax bases.

Average tax rates for income, payroll, and consumption taxes are calculated by dividing actual revenues for each tax by its potential tax base. Average tax rates thus reflect different tax bases, different rate structures, and different tax credit regimes across countries.

Average tax rates in the United States are generally lower than in the other G-7 countries; this is consistent with the lower overall tax ratio in the United States. The United States has the third lowest average payroll tax rate, the third lowest combined individual and corporate income tax rate, and the lowest consumption tax rate of the G-7 countries.

The U.S. average tax rates for income, payroll, and consumption are lower than the comparable average rates for the other G-7 countries. The average U.S. combined individual and corporate income tax rate is 13.8 percent compared with 13.9 percent; the average U.S. payroll tax rate is 12.7 percent compared with 22.2 percent; and the average U.S. consumption tax rate is 6.2 percent compared with 17.0 percent in the other G-7 countries.

Top Statutory Tax Rates

Statutory tax rates are often used to compare tax systems and burdens across countries. The top statutory tax rate may be an indicator of a tax environment that is friendly or hostile toward high-income or business taxpayers within a country or state. The top statutory tax rate often applies to only a small number of taxpayers, but a significant portion of total capital income in the country.

Table 8 shows the top statutory tax rates for several different types of taxes: individual income, corporate income, payroll taxes, and value-added taxes (see Figure 5). The United States has the lowest top individual income tax rate of any of the G-7 countries. The 35-percent U.S. corporate income tax rate is in the same range as that of most other countries. The United States is the only G-7 country without a value-added tax, and its payroll tax rate is lower than that of the other G-7 countries, except Canada.

Top statutory tax rates usually apply only to certain taxpayers and only to part of the potential tax base. All of the G-7 countries have progressive individual income tax schedules with lower rates applicable to lower income households. The individual income tax also does not apply to total personal income, because of a variety of exemptions, deductions, and credits.

Average Income Tax Rates

An average tax rate reflects the breadth of the tax base as well as the tax rates applied to that base. An average tax rate is derived by taking actual tax collections and dividing by a consistent measure of the potential tax base. For example, in the case of the individual income tax, the average tax rate is derived by taking total individual income tax revenues and dividing by an estimate of total personal income, including salaries and fringe benefits received from

employers, and capital income.

The United States had an average individual income tax rate of slightly more than 11 percent in 1991. This is in line with Germany, Italy, and the United Kingdom. Canada has a higher average rate, 17.5 percent, while France at 5.7 percent and Japan at 9.0 percent have lower average rates.

All of the G-7 countries, except the United Kingdom, have increased their average individual income tax burden since 1965. The U.S. rate increased from 9.8 percent in 1965 to 12.4 percent in 1980, but declined to 11.3 percent by 1991. The increase before 1980 was partially due to inflation pushing taxpayers into higher marginal tax brackets. Since 1983, the U.S. individual income tax brackets have been indexed for inflation, and tax rates were reduced in both 1981 and 1986. The top statutory individual income tax rate was increased in 1990 and 1993.

Average Income Tax Rates and Capital Income

All of the G-7 countries except the United States provide some form of relief from double taxation of corporate dividends ("corporate tax integration") at the shareholder level in the form of tax credits that reduce individual income tax liability. (See Alvin C. Warren, Jr. s "Alternatives for Corporate Tax Reform" in the first monograph of this series.) For example, in France, individual taxpayers receiving dividends from a French corporation receive a tax credit equal to 50 percent of dividends received. If a French firm earning 100FF of taxable income pays the top corporate tax rate of 33.3 percent and distributes the rest, then the French shareholder includes the dividend payment (67.70FF) plus the corporate tax paid (33.30FF) in taxable income, but receives a tax credit for the amount of corporate tax paid (33.30FF). In effect, the 100FF of corporate income is taxed at only the individual income tax rate, even though corporate tax is collected. In contrast, without corporate integration, a U.S. company earning \$100 pays \$35 of corporate tax, and a U.S. shareholder facing the top rate pays 39.6 percent of the \$65 of dividends, for a total tax of \$60.74 on \$100 of distributed corporate earnings -- a burden substantially greater than the individual income tax rate.

Corporate tax integration reduces the effective tax burden on distributed corporate earnings, but at the shareholder rather than corporate entity level. Thus, comparing corporate tax burdens without taking into account the relief at the individual taxpayer level would be misleading. Meaningful comparisons are made with effective tax rates on new investments (described in the last section) or combined individual and corporate income tax burdens (see Table 9).

Table 9 shows that the U.S. combined average corporate and individual income tax rates are similar to the average rate for the other G-7 countries. The U.S. combined rate declined from 15.2 percent in 1965 and 16.0 percent in 1980 to its lowest level at 13.8 percent in 1991. In contrast, the other G-7 countries average combined rate increased from 10.0 percent in 1965 to 13.9 percent in 1991.

In 1991, the United States had the third lowest combined rate among the G-7 countries, behind France (6.2 percent) and Germany (13.2 percent). Japan, which had a low 9.0-percent average individual income tax rate in 1991, jumped to 15.0 percent when individual and corporate taxes are combined.

Average Payroll Tax Rates

Table 10 shows the average payroll tax rates in the G-7 countries from 1965 to 1991. The United States had the third lowest payroll tax rate among the G-7 countries -- 12.7 percent in 1991. Only Canada at 9.1 percent and the United Kingdom at 11.1 percent had lower rates. France had the highest average payroll tax rate at 38.0 percent.

Average payroll tax rates are lower than the statutory top rates. In the United States, for example, the payroll tax base for the Old-Age, Survivors, and Disability Insurance program has a ceiling, which is also indexed for inflation; in 1994, the ceiling is \$60,600. The hospital insurance portion of the payroll tax, however, has no ceiling and thus applies to all salary and wage income. In addition, the payroll tax does not apply to compensation received in the form of fringe benefits, such as employer-provided health insurance.

Average payroll tax rates have increased significantly over the 1965-91 period -- in some cases doubling or tripling. The U.S. average payroll tax rate increased from 5.9 percent of employee compensation in 1965 to 12.7 percent in 1991, because of increases in the statutory tax rate and expansion of the wage base. Despite these increases, the U.S. average payroll tax rate remains well below the average 22.2-percent rate of the other G-7 countries.

In the United States, the employee and employer shares of the payroll tax are roughly identical. In contrast, the other G-7 countries collect 55 to 70 percent of total payroll taxes from employers.

Average Consumption Tax Rates

Table 11 shows the average consumption tax rates for the G-7 countries. In 1991, the United States had the lowest average consumption tax rate of the G-7 countries at 6.2 percent; this consists primarily of state retail sales taxes. Japan had the next lowest rate at 7.8 percent, but has recently been considering increasing its current 3 percent value-added tax rate to 5 to 10 percent (BNA 1994). The other G-7 countries had average consumption tax rates ranging from 14.6 to 22.1 percent.

Average consumption tax rates have declined since 1965 in four of the G-7 countries, including the United States. The decline is largely attributable to a reduction in specific excise taxes, due to repeal or erosion through inflation of the real value of taxes levied per unit rather than as a percentage of price. The other G-7 countries all have value-added taxes that either replaced specific excise taxes or turnover taxes.

Data Limitations

Average tax rates show the amount of tax collected per dollar of tax base. Average tax rates are based on aggregate data, and do not reveal the distribution of tax burdens among different types of households. Some households pay higher average tax rates; others pay lower tax rates due to graduated rates, tax exclusions or deductions, or tax credits.

Average tax rates do not show the effect of taxes on additional economic activity. Incentives to work, save, and invest depend on marginal tax rates; that is, the tax burden on additional economic activity. Workers deciding whether to work an extra day or go to the beach want to know the additional take-home pay (and tax) arising from any additional earnings.

Marginal or statutory tax rates can be higher or lower than average tax rates, depending on the particular tax. A progressive income tax imposes marginal tax rates higher than average tax rates. A payroll tax with a maximum wage base has a zero marginal tax rate on earnings above the maximum. Specific design features of a tax can affect the marginal tax rate. Phaseouts of specific provisions, such as the earned income tax credit or personal exemptions in the United States, increase the marginal tax rate on income at certain income levels.

Effective Tax Rates on Labor Income

Highlights

The United States has a significantly lower average tax burden on labor income than do the other G-7 countries. When payroll, income, and consumption taxes are considered, the U.S. tax burden on labor income was 29.3 percent in 1991, compared to 41.5 percent in the other G-7 countries.

The average tax burden on labor income tends to increase with income due to progressive individual income taxes. When the tax burden on the average production worker is considered, the U.S. average tax burden on labor income is slightly lower than the average for the other G-7 countries.

Although average tax rates on labor income are relatively low in the United States, certain workers may face very high marginal tax rates due to other tax provisions (such as the phaseout of the earned income tax credit) or other income-tested government programs (such as the Social Security earnings test or loss of Medicaid insurance).

The "Tax Wedge"

The tax system influences employers' decisions to hire workers and workers' decisions to supply their services in the labor market. Taxes affect many employer decisions, such as how many workers to hire, whether to hire part-time or full-time people, and whether to pay employees through wages or fringe benefits. Taxes also affect many employee decisions, such as whether to work outside the home, type of employment, part-time versus full-time jobs, amount of overtime, and type of employment training.

Firms weigh the cost of hiring additional workers relative to the cost of investing in new capital (such as new machinery). If the cost of employing a worker increases, firms are more likely to invest in capital equipment and reduce the amount of labor employed. The cost of hiring an additional worker includes wages and salaries, employer-provided fringe benefits -- including deferred retirement benefits -- plus employer payroll taxes. Higher payroll taxes create a tax wedge between the revenue generated and the total compensation received by employees.

This tax wedge is the revenues generated by the employee that must be paid to the government rather than paid to the employee. Higher employer payroll taxes have been found to reduce employment as well as employee compensation paid.

Taxes on labor income at the employee level produce an additional tax wedge between an employee's compensation received and disposable income. Individual income taxes and employee payroll taxes reduce take-home pay and reduce the reward from an extra hour of work. Empirical studies have found that part-time workers and working spouses are more likely than full-time primary workers to consider the after-tax return on their labor in making their labor participation decision (e.g., Hausman 1981; Killingsworth and Heckman 1986).

The Marginal Tax Rate

The decision to work an extra hour (at the margin) depends on the marginal tax rate (the additional tax from earning an additional dollar), rather than the average tax rate on labor income. The marginal tax rate generally depends on the specific circumstances of the worker. In the United States, the marginal individual income tax rate ranges from zero to over 40 percent, including federal and state taxes, due to the progressive income tax. The employer and employee payroll taxes are each 7.65 percent of the first \$60,600 of taxable wages and salaries in 1994 and 1.45 percent each on additional taxable wages and salaries. If additional compensation takes the form of nontaxed fringe benefits, the marginal income and payroll tax rates are zero. Marginal tax rates are increased significantly if households are subject to phaseout provisions of certain benefit programs, such as the earned income tax credit, social security benefits, or certain welfare programs.

Because marginal tax rates depend on the specific circumstances of individual families, the average tax rate on labor income is reported as an aggregate measure of the overall tax wedge on labor. Table 12 shows the average total tax wedge imposed by income, payroll, and consumption taxes on labor compensation. The average tax wedge on labor compensation was 29.3 percent in the United States in 1991, compared to 41.5 percent in the other G-7 countries. The tax wedge on labor income has increased in all of the G-7 countries as they have increased their reliance on payroll, consumption, and individual income taxation.

Another comparison of the tax burden on labor income that is often made focuses on average production workers. Because average tax burdens can vary by level of income -- especially with low-income public benefits and payroll tax base limits -- the tax burden on an average working family is instructive.

Table 13 shows the average personal income tax and the employee's payroll tax rates for single workers and for two-child families earning an average manufacturing worker's salary in 1992. The U.S. average rates are slightly below the averages for the other G-7 countries. Japan has significantly lower average tax burdens on labor income than the other countries, including the United States; Germany has much higher than average tax burdens on labor income.

The average tax burden on labor income differs significantly between Table 13 -- which includes only the employee's payroll tax and personal income tax -- and Table 12 -- which includes both the employee and employer's payroll tax, personal income tax, and consumption tax. Higher employer payroll taxes and consumption taxes in most of the other G-7 countries account for the high average tax burden on labor income when all taxes are included.

Data Limitations

Calculations of the tax burden on labor income depend on a number of assumptions. As described above, both the average and marginal tax burdens depend on the income of the workers. Tables 12 and 13 present average tax burdens for all workers and for average production workers. The two tables also present tax burdens with different combinations of taxes: direct taxes (individual income and employee payroll taxes) and total taxes (including employer payroll and consumption) on labor income. In both cases, the relative tax burdens across countries show a consistent pattern.

Tax rates on labor income are one of many factors influencing international competitiveness. Companies deciding on where to locate their activities consider the average wage and tax rate, the skill and productivity of the local workers, the after-tax cost of capital, and quality of the public infrastructure. Workers deciding on where to live consider wage rates, public services, and other living amenities, as well as tax rates.

International comparisons of tax rates on labor income do not address who bears the burden of labor taxes. For example, if workers bear the burden of employer payroll taxes in the form of reduced wages, then employers do not have to raise prices or reduce profits to accommodate higher employer payroll taxes. If employer payroll taxes cannot

be passed backward to workers in the form of lower wages, due to minimum wage or other institutional or market conditions, then employers in a country with above-average employer payroll taxes could be disadvantaged relative to employers in other countries.

The economic effects of taxation of labor income depend on the marginal, rather than the average, tax rate. The marginal tax rate under a progressive income tax is greater than the average tax rate. The marginal tax rate for a payroll tax subject to a wage base cap is zero for those workers with earnings above the cap. The marginal tax rate on additional employee compensation can depend on the form of the compensation. In the United States, the individual income and payroll taxes do not apply to certain employer-provided fringe benefits. If the additional compensation takes the form of tax-free benefits, then the marginal tax rate is zero.

Marginal tax rates can also be affected by other tax law provisions. For example, in the United States, the phaseout of itemized deductions and personal exemptions can increase the marginal tax rate by over 3 percentage points for a family of four in a particular income range. Families in the phaseout range of the earned income tax credit have their marginal tax rate increased by 16 to 21 percentage points.

Households in the United States can face high marginal tax rates from reductions in government benefit programs as incomes increase. Certain elderly families face an additional marginal tax rate of 33.3 percent on earned income through reduced Social Security benefits. Food stamps and Aid to Families with Dependent Children (AFDC) payments are reduced as income increases. Marginal tax rates can be extremely high for some individuals: A family may lose its entire Medicaid health insurance eligibility due to a small increase in income.

The burden on labor income can be broader than simply taxes. Minimum wage requirements increase the cost of labor to employers in the same manner as employer payroll taxes. Employer mandates, such as family leave requirements, also increase the cost of hiring labor. Government programs for labor may reduce the cost of labor to business (e.g., trade adjustment assistance) or may enhance the skills of workers (e.g., incentives for education). Government unemployment insurance and disability insurance may reduce the cost of workers in certain cyclical or high-risk industries.

Effective Marginal Tax Rates on Capital Income

Highlights

The United States has one of the highest marginal tax rates on corporate capital income among the G-7 countries. Only Canada had a higher effective tax rate on domestic corporate investment in 1991.

The United States taxes its domestic corporate capital more heavily than the average for the other G-7 countries investment in the United States. Similarly, the United States taxes its outbound investment in other countries more heavily than the other countries tax their domestic investment.

The higher tax burden on U.S. corporate capital is partially attributable to the fact that the United States is the only G-7 country that does not have some form of relief from double taxation of distributed corporate earnings.

The United States, like most of the other G-7 countries, taxes income from corporate machinery less heavily than income from structures and inventory. The United States taxes corporate equity investment more heavily than either debt finance or noncorporate equity. Differential tax treatment can result in an inefficient allocation of investment capital.

Impacts of High Effective Tax Rates

The average tax burden on capital income reflects the tax treatment of both new and old investments, since long-lived assets such as machinery and structures are depreciated over multiple years. Tax policy generally can influence firms decisions on new, but not existing, investments. Economic studies, therefore, calculate effective marginal tax rates on new investments to show the reduction in the expected rate of return due to both corporate and individual income taxation. The effective marginal tax rate is the equivalent of the average tax rate for a single investment during its entire economic useful life. These studies generally hold nontax factors, such as inflation rates, constant for international comparisons of tax systems.

Effective marginal tax rate calculations take into account the most important features of capital taxation in each country. In addition to statutory marginal tax rates, depreciation allowances, and corporate tax integration provisions,

the calculations incorporate the mix of assets and type of financing.

High effective tax rates on corporate source income can result in a number of adverse effects. First, a high effective rate increases the pre-tax rate of return that corporate capital must earn to provide an attractive after-tax rate of return to investors. A high effective rate reduces the incentive for capital investment relative to investments in financial assets or relative to using more labor. Investment in capital assets is important because it can increase the productivity of workers and increase real incomes.

Second, a high effective tax rate on corporate source income penalizes investment in corporate capital relative to noncorporate business capital. If corporate income is taxed more heavily than noncorporate income, investors will be less willing to invest in the higher taxed sector, even when that sector before taxes is more efficient than the lower taxed sector.

Third, a high effective tax rate on corporate source income penalizes corporate equity finance relative to debt finance. Tax-induced incentives for debt finance may encourage firms to become more highly leveraged than they would in the absence of taxes. Greater reliance on debt finance makes companies more susceptible to bankruptcy during business fluctuations.

Comparisons of Marginal Tax Rates

Table 14 shows the effective marginal tax rates on corporate source income for the G-7 countries in 1991. The U.S. effective marginal tax rate on domestic corporate income was 37.5 percent, compared to an average of 31.1 percent for the other G-7 countries. Only Canada had a higher marginal tax rate on its domestic investment than the United States. Germany had a particularly low rate of 15.3 percent on its domestic corporate investment.

The U.S. effective marginal tax rate on outbound investment (e.g., investment by U.S. domestic companies in other countries) is higher than the average of the other G-7 countries. The average rate on U.S. outbound investment was 5.7 percentage points higher in 1991 than on domestic investment, due to both foreign and U.S. tax rules. The higher tax rate on outbound investment from the United States increases the pre-tax rate of return ("hurdle rate") that U.S. companies must earn to make it worthwhile to invest abroad; this rate puts U.S. multinationals at a competitive tax disadvantage relative to other countries multinational corporations.

The average rate on inbound investment -- domestic investment by foreign companies -- into the United States was 36.7 percent, which is below the average tax rate on inbound investment for the other G-7 countries and below the tax rate on U.S. domestic investment. This lower inbound domestic rate again places U.S. companies at a competitive disadvantage. The United States is the only G-7 country that has a higher tax rate on its domestic companies than foreign companies operating in its boundaries. The lower rate on inbound investment is caused by the way in which foreign countries tax their domestic companies.

Other studies of effective tax rates have found that the U.S. effective rate fell from 1980 to 1985 due to the reduction in tax rates, accelerated depreciation, and investment tax credits in the 1981 tax act (Jorgenson and Landau 1993). The U.S. tax rate on corporate income increased after the 1986 Tax Reform Act due to the repeal of the investment tax credit and slower depreciation rates.

Marginal Tax Rates on Domestic Corporate Investment

Effective marginal tax rates on capital income can vary by type of capital assets, source of finance, and ownership of corporate capital (see Table 15). OECD calculations show that machinery is taxed less heavily than buildings and inventories in all of the G-7 countries. Debt-financed corporate capital is taxed at a low rate, while new share issues and retained earnings are taxed at quite high rates. The favorable treatment of debt is largely due to the deductibility of the inflationary component of interest expense by corporations, while much of interest income is not taxed at the owner level because it is held by tax-exempt institutions.

The distinctions between corporate and noncorporate investments, between debt and equity finance, and between retained earnings and dividend payments in the United States result from the lack of integration of the individual and corporate income taxes. All of the other G-7 countries have some form of corporate tax integration, which reduces the double taxation of corporate equity income. Corporate integration would reduce the differential taxation of corporate and noncorporate investments, the distinction between debt and equity, and the differential treatment of dividends and retained earnings that currently exist for U.S. capital.

Data Limitations

Calculating effective marginal tax rates in order to determine the after-tax rate of return on new corporate investment requires a number of assumptions. Cross-country comparisons generally hold constant as many factors as possible to isolate the tax policy differences (King and Fullerton 1984).

While isolating tax policy differences, cross-country comparisons can assume away important nontax differences. For example, the United States enacted accelerated depreciation allowances in 1981 partially because of the high inflation rate at that time. When inflation rates fell sharply in the early 1980s, the implicit inflation adjustment included in the accelerated depreciation rules became quite favorable for investment. Differences in depreciation rules across countries may reflect differences in inflation rates, which a comparative analysis usually ignores.

The effective tax rates presented here are for corporate equity capital only. Lower effective tax rates apply to noncorporate business capital and capital in housing and consumer durables, since noncorporate capital income is only taxed at the individual level. The corporate tax rates shown are calculated assuming the top statutory individual income tax rate for the investor. Since much of corporate equity is held by tax-exempt pension funds, foreign investors, and financial institutions, the overall effective rate will depend on the various sources of finance in each country.

The OECD marginal tax rate calculations assume that dividend taxation reduces the after-tax rate of return on equity capital. Some studies assume that corporate income taxes are capitalized in lower share values and thus only reduce the after-tax rate of return on new shares. Whether dividend taxation affects existing capital can make a significant difference in the relative taxation of corporate equity capital across countries.

Because corporate tax integration in other countries generally takes the form of reduced dividend taxation at the individual income tax level, this study has not presented separate calculations for corporate income tax only. Additionally, these calculations cannot take into account all of the tax code provisions affecting the cost of capital. For example, in the United States, the corporate alternative minimum tax rate can increase the cost of capital for certain companies. Other provisions specific to particular industries can reduce or increase that industry's effective marginal tax rate.

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Table 1--Total Government Tax Revenues as a Percentage of GDP in the G-7 Countries, 1965-91

| Country | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 |
|-----------------------|------|------|------|------|------|------|------|
| Canada | 25.9 | 31.3 | 32.4 | 31.6 | 33.1 | 37.0 | 37.3 |
| France | 34.5 | 35.1 | 36.9 | 41.7 | 44.5 | 43.8 | 44.2 |
| Germany | 31.6 | 32.9 | 36.0 | 38.2 | 38.1 | 36.8 | 39.2 |
| Italy | 25.5 | 26.1 | 26.2 | 30.2 | 34.5 | 39.1 | 39.7 |
| Japan | 18.3 | 19.7 | 20.9 | 25.4 | 27.6 | 31.4 | 30.9 |
| United Kingdom | 30.4 | 36.9 | 35.5 | 35.3 | 37.8 | 36.7 | 36.0 |
| Average, other G-7 | 27.7 | 30.3 | 31.3 | 33.7 | 35.9 | 37.5 | 37.9 |
| United States | 25.8 | 29.2 | 29.0 | 29.3 | 28.7 | 29.5 | 29.8 |

Source: OECD, Revenue Statistics.

Figure 2 -- Tax Ratios in the U.S. and Other G-7 Countries, 1965-90

Source: OECD, Revenue Statistics.

Table 2
Total Government Outlays and Deficits/Surpluses as a Percentage of GDP in the G-7 Countries, 1965-91

| Country | Spending Ratio | | | | | | |
|-----------------------|----------------|------|------|------|------|------|------|
| | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 |
| Canada | 29.1 | 34.8 | 38.5 | 38.7 | 45.3 | 45.9 | 48.8 |
| France | 38.4 | 38.5 | 43.4 | 46.1 | 52.1 | 49.8 | 50.6 |
| Germany | 36.6 | 38.6 | 48.4 | 47.9 | 47.0 | 45.2 | 48.7 |
| Italy | 34.3 | 34.2 | 41.6 | 41.9 | 50.9 | 53.2 | 53.6 |
| Japan | NA | 19.4 | 26.8 | 32.0 | 31.6 | 31.7 | 31.4 |
| United Kingdom | 36.1 | 38.8 | 44.4 | 42.9 | 44.0 | 39.9 | 40.8 |
| Average, other G-7 | 34.9 | 34.1 | 40.5 | 41.6 | 45.2 | 44.3 | 45.6 |
| United States | 27.9 | 31.7 | 33.5 | 31.8 | 33.2 | 33.3 | 34.2 |

| Country | Deficit Ratio | | | | | | |
|-----------------------|---------------|-------|--------|-------|--------|--------|--------|
| | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 |
| Canada | NA | 0.8 | (2.5) | (2.8) | (6.8) | (4.1) | (6.1) |
| France | NA | 1.1 | (2.4) | 0.0 | (2.9) | (1.5) | (2.1) |
| Germany | NA | 0.2 | (5.6) | (2.9) | (1.2) | (2.0) | (3.2) |
| Italy | NA | (3.7) | (12.9) | (8.6) | (12.6) | (10.9) | (10.2) |
| Japan | NA | 1.7 | (2.8) | (4.4) | (0.8) | 2.9 | 3.0 |
| United Kingdom | NA | 2.9 | (4.5) | (3.4) | (2.9) | (1.3) | (2.9) |
| Average, other G-7 | NA | 0.5 | (5.1) | (3.7) | (4.5) | (2.8) | (3.6) |
| United States | NA | (1.0) | (4.1) | (1.3) | (3.1) | (2.5) | (3.4) |

NA = not available

Note: Data from 1965 and 1970 may use a different concept.

Source: OECD, Economic Outlook, Vol. 53.

Table 3
Public Health and Pension Expenditures as a Percentage of GDP in the G-7 Countries, 1965-91

| Country | Public Expenditures on Health and Pensions | | | | | |
|---------|--|------|------|------|------|------|
| | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 |
| Canada | 5.9 | 8.2 | 9.2 | 9.9 | 11.8 | NA |
| France | 11.4 | 12.8 | 15.5 | 17.5 | 19.2 | NA |
| Germany | 13.3 | 14.5 | 18.9 | 18.4 | 18.2 | NA |

| | | | | | | |
|---------------------------------|------|------|------|------|------|-----|
| Italy | 11.5 | 12.7 | 15.6 | 17.6 | 21.0 | NA |
| Japan | 3.9 | 4.4 | 6.7 | 9.0 | 10.0 | NA |
| United Kingdom | 8.3 | 8.8 | 10.9 | 11.5 | 11.9 | NA |
| Average, other G-7 | 9.1 | 10.2 | 12.8 | 14.0 | 15.3 | NA |
| United States | 6.0 | 7.9 | 10.2 | 10.8 | 11.6 | NA |
| Public Expenditures on Health | | | | | | |
| Canada | 3.1 | 5.0 | 5.5 | 5.5 | 6.4 | 6.8 |
| France | 3.6 | 4.3 | 5.4 | 6.0 | 6.5 | 6.6 |
| Germany | 3.6 | 4.1 | 6.3 | 6.3 | 6.4 | 6.0 |
| Italy | 3.8 | 4.5 | 5.2 | 5.6 | 5.4 | 6.3 |
| Japan | 2.7 | 3.2 | 4.1 | 4.6 | 4.7 | 4.7 |
| United Kingdom | 3.5 | 3.9 | 5.0 | 5.2 | 5.2 | 5.2 |
| Average, other G-7 | 3.4 | 4.2 | 5.2 | 5.5 | 5.8 | 5.9 |
| United States | 1.5 | 2.7 | 3.5 | 3.9 | 4.4 | 5.2 |
| Public Expenditures on Pensions | | | | | | |
| Canada | 2.8 | 3.2 | 3.7 | 4.4 | 5.4 | NA |
| France | 7.8 | 8.5 | 10.1 | 11.5 | 12.7 | NA |
| Germany | 9.7 | 10.4 | 12.6 | 12.1 | 11.8 | NA |
| Italy | 7.7 | 8.2 | 10.4 | 12.0 | 15.6 | NA |
| Japan | 1.2 | 1.2 | 2.6 | 4.4 | 5.3 | NA |
| United Kingdom | 4.8 | 4.9 | 5.9 | 6.3 | 6.7 | NA |
| Average, other G-7 | 5.7 | 6.1 | 7.6 | 8.5 | 9.6 | NA |
| United States | 4.5 | 5.2 | 6.7 | 6.9 | 7.2 | NA |

NA = not available

Sources: OECD, Health Systems, Vol. I; and OECD, Reforming Public Pensions.

Table 4
Total Government Outlays Excluding Public Health
Expenditures as a Percentage of GDP in the G-7 Countries,
1965-91

| Country | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 |
|--------------------|------|------|------|------|------|------|------|
| Canada | 26.0 | 29.8 | 33.0 | 33.2 | 38.9 | 39.1 | 41.6 |
| France | 34.8 | 34.2 | 38.0 | 40.1 | 45.6 | 43.2 | 43.9 |
| Germany | 33.0 | 34.5 | 42.1 | 41.6 | 40.6 | 39.2 | 42.6 |
| Italy | 30.5 | 29.7 | 36.4 | 36.3 | 45.5 | 46.9 | 47.1 |
| Japan | NA | 16.2 | 22.7 | 27.4 | 26.9 | 27.0 | 26.7 |
| United Kingdom | 32.6 | 34.9 | 39.4 | 37.7 | 38.8 | 34.7 | 35.3 |
| Average, other G-7 | 31.4 | 29.9 | 35.3 | 36.1 | 39.4 | 38.4 | 39.5 |
| United States | 26.4 | 29.0 | 30.0 | 27.9 | 28.8 | 28.1 | 28.3 |

Sources: OECD, Economic Outlook; and OECD, Health Systems, Vol. I.

Figure 3 -- Composition of Tax Revenues in the U.S. and
Other G-7 Countries, 1991
Source: OECD, Revenue Statistics.

Table 5
Composition of Tax Revenues in the G-7 Countries, 1991
(percentage of total tax revenues)
Type of Tax

| Other | Canada | France | Germany | Italy | Japan | U.K. |
|-------------------|--------|--------|---------|-------|-------|------|
| G-7 Avg. | | | | | | |
| Individual income | 40.7 | 13.5 | 27.1 | 26.4 | 26.9 | 28.5 |
| 27.2 | | | | | | |
| U.S. | | | | | | |
| 34.9 | | | | | | |

| | | | | | | |
|-------------------------------------|-------|-------|-------|-------|-------|-------|
| Corporate income | 5.5 | 4.5 | 4.3 | 9.6 | 20.0 | 8.9 |
| 8.8 | 7.3 | | | | | |
| Subtotal-income taxes | 46.2 | 18.0 | 31.4 | 36.0 | 46.9 | 37.4 |
| 36.0 | 42.2 | | | | | |
| Employee payroll | 4.8 | 13.0 | 17.1 | 6.6 | 11.4 | 6.7 |
| 9.9 | 11.8 | | | | | |
| Employer payroll | 10.2 | 27.1 | 20.1 | 23.2 | 15.6 | 10.4 |
| 17.8 | 16.5 | | | | | |
| Subtotal-payroll taxes | 15.0 | 40.1 | 37.2 | 29.8 | 27.0 | 17.1 |
| 27.7 | 28.3 | | | | | |
| General consumption | 14.1 | 17.8 | 16.4 | 14.3 | 4.4 | 18.5 |
| 14.3 | 7.6 | | | | | |
| Excise and other taxes | 13.2 | 9.3 | 10.3 | 13.8 | 9.1 | 14.2 |
| 11.7 | 9.2 | | | | | |
| Subtotal, taxes on goods & services | 27.3 | 27.1 | 26.7 | 28.1 | 13.5 | 32.7 |
| 25.9 | 16.8 | | | | | |
| Property | 9.5 | 5.8 | 2.8 | 2.5 | 9.3 | 8.2 |
| 6.4 | 11.2 | | | | | |
| Other* | 2.0 | 9.0 | 1.9 | 3.6 | 3.3 | 4.6 |
| 4.1 | 1.5 | | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 100.0 | 100.0 | | | | | |

*Other taxes includes receipts from taxes that governments are unable to identify or isolate such as fines and penalties not identifiable to a particular category of taxes. Also included are miscellaneous local and federal government taxes and poll taxes, if appropriate.

Source: OECD, Revenue Statistics.

Figure 4--Changes in Composition of Taxes for the U.S. and Other G-7 Countries, 1970-91
Source: OECD, Revenue Statistics.

Table 6
Change in the Composition of Taxes in the U.S. and the Other G-7 Countries, 1970-91
Percentage of GDP

| Type of Tax | United States | | | Other G-7 Countries | | |
|----------------------------------|---------------|-------|--------|---------------------|-------|--------|
| | 1970 | 1991 | Change | 1970 | 1991 | Change |
| Individual income | 10.3 | 10.4 | 0.1 | 7.0 | 10.2 | 3.2 |
| Corporate income | 3.7 | 2.2 | (1.5) | 3.0 | 3.2 | 0.2 |
| Payroll | 5.6 | 8.9 | 3.3 | 7.5 | 11.5 | 4.0 |
| Excise | 3.3 | 2.1 | (1.2) | 5.0 | 3.7 | (1.3) |
| Other Consumption | 1.6 | 2.3 | 0.7 | 4.2 | 5.6 | 1.4 |
| Other | 4.7 | 3.9 | (0.8) | 3.6 | 3.7 | 0.1 |
| Total | 29.2 | 29.8 | 0.6 | 30.3 | 37.9 | 7.6 |
| Percentage of Total Tax Revenues | | | | | | |
| Type of Tax | United States | | | Other G-7 Countries | | |
| | 1970 | 1991 | Change | 1970 | 1991 | Change |
| Individual income | 35.2 | 34.9 | (0.3) | 22.5 | 27.2 | 4.7 |
| Corporate income | 12.7 | 7.3 | (5.4) | 10.9 | 8.8 | (2.1) |
| Payroll | 19.3 | 29.8 | 10.5 | 25.1 | 29.9 | 4.8 |
| Excise | 11.3 | 7.1 | (4.2) | 17.0 | 9.8 | (7.2) |
| Other Consumption | 5.6 | 7.6 | 2.0 | 12.8 | 14.3 | 1.5 |
| Other | 15.9 | 13.3 | (2.6) | 11.7 | 10.0 | (1.7) |
| Total | 100.0 | 100.0 | | 100.0 | 100.0 | |

Source: OECD, Revenue Statistics.

Table 7
Change in the Composition of U.S. Federal and State/Local
Tax Revenues, 1970-91
(Percentage of total tax revenues)

| Type of Tax | Federal | | | State | | | Local | | |
|---------------------------------|---------|---------|--------|-------|-------|--------|-------|-------|--------|
| | 1970 | 1991 | Change | 1970 | 1991 | Change | 1970 | 1991 | Change |
| Individual income | 48.1 | 45.4 | (2.7) | 19.1 | 32.0 | 12.8 | 3.6 | 4.7 | 1.1 |
| Corporate income | 17.5 | 9.5 | (7.9) | 7.8 | 6.6 | (1.2) | 0.6 | 0.9 | 0.2 |
| Payroll | 22.3 | 37.7 | 15.4 | NA | NA | NA | NA | NA | NA |
| Taxes on goods and services | 9.7 | 5.7 | (4.1) | 62.5 | 53.0 | (9.5) | 7.9 | 14.9 | 7.0 |
| Property | 1.9 | 1.1 | (0.9) | 2.1 | 1.4 | (0.7) | 84.9 | 75.3 | (9.6) |
| Other* | 0.5 | 0.6 | 0.1 | 8.5 | 7.1 | | 3.0 | 4.2 | |
| Total | 100.0 | 100.0 | | 100.0 | 100.0 | | 100.0 | 100.0 | |
| Total revenues (in billions) | 188.0 | 1,030.3 | -- | 48.0 | 310.6 | -- | 38.8 | 214.7 | -- |
| Percentage of total revenues | 68.4 | 66.2 | (2.2) | 17.4 | 20.0 | 2.5 | 14.1 | 13.8 | (0.3) |

NA = not available

*Other taxes do not include federal government grants or transfers.

Source: ACIR, Significant Features of Fiscal Federalism, Vol. II, 1993.

Figure 5--Average Tax Rates on Income, Payroll, and Consumption in the U.S. and the Other G-7 Countries, 1991
Source: OECD, National Accounts, Vol. II.

Table 8--Top Statutory Tax Rates on Income, Payroll, and Value-Added Taxes in the G-7 Countries, 1994

| Country | Income Tax-1 | | Corporate Dividend | | Social Security-2 | | Value-Added Tax |
|----------------|--------------|------------|--------------------|----------|-------------------|------|-----------------|
| | Individual | Corporate | Relief | Employee | Employer | | |
| Canada | 53.2 | 28.8 | Partial | 2.6 | 2.6 | 7.0 | |
| France | 56.8 | 33.3 | Full | 20.0 | 45.0 | 18.6 | |
| Germany | 53.0 | 45.0/30.03 | Full | | 24.7 | 24.7 | 15.0 |
| Italy | | 51.0 | 36.0 | Full | 9.5 | 45.0 | 19.0 |
| Japan | | 65.0 | 37.5 | Partial | 14.5 | 14.5 | 3.0 |
| United Kingdom | 40.0 | 33.0 | Partial | 10.0 | 10.2 | 17.5 | |
| United States | 39.6 | 35.0 | None | 7.7 | 7.7 | 0.0 | |

1-Central government rate only.

2-Maximum rate. May apply only to certain earnings.

3-Undistributed earnings/distributed earnings.

Sources: Ernst & Young, Worldwide Personal Tax Guide; and Ernst & Young, Worldwide Corporate Tax Guide and Directory.

Table 9
Average Combined Corporate and Individual Income Tax Rates
in the G-7 Countries, 1965-91
(Percentages)

| Country | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 |
|--------------------|------|------|------|------|------|------|------|
| Canada | 13.5 | 17.9 | 19.1 | 18.4 | 18.2 | 20.7 | 19.8 |
| France | 5.9 | 4.5 | 4.2 | 5.1 | 5.7 | 5.5 | 6.4 |
| Germany | 11.9 | 12.4 | 12.6 | 13.5 | 13.6 | 12.3 | 13.2 |
| Italy | NA | 6.0 | 6.7 | 9.9 | 13.1 | 14.5 | 14.4 |
| Japan | 8.9 | 10.5 | 10.1 | 11.5 | 13.0 | 15.1 | 15.0 |
| United Kingdom | NA | 18.0 | 18.7 | 16.2 | 17.3 | 16.0 | 14.7 |
| Average, other G-7 | 10.0 | 11.6 | 11.9 | 12.4 | 13.5 | 14.0 | 13.9 |
| United States | 15.2 | 15.6 | 14.2 | 16.0 | 14.3 | 14.6 | 13.8 |

NA = not available

Source: OECD, National Accounts, Vol. II, Table 8.

Table 10
Average Payroll Tax Rates in the G-7 Countries, 1965-91
(Percentages)

| Total Payroll Tax Rate | | | | | | | |
|------------------------|------|------|------|------|------|------|------|
| Country | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 |
| Canada | 2.9 | 5.0 | 6.2 | 6.2 | 8.1 | 8.7 | 9.1 |
| France | NA | 26.4 | 28.1 | 32.5 | 35.9 | 38.4 | 38.0 |
| Germany | 19.1 | 21.6 | 25.9 | 26.6 | 28.9 | 28.9 | 29.2 |
| Italy | NA | NA | NA | 24.1 | 25.9 | 28.7 | 29.2 |
| Japan | 8.7 | 9.9 | 11.6 | 13.4 | 15.1 | 16.7 | 16.4 |
| United Kingdom | 7.9 | 8.7 | 10.0 | 10.1 | 12.3 | 11.1 | 11.1 |
| Average, other G-7 | 9.7 | 14.3 | 16.4 | 18.8 | 21.0 | 22.1 | 22.2 |
| United States | 5.9 | 7.6 | 9.4 | 10.1 | 11.8 | 12.5 | 12.7 |

| Employers Share of Payroll Tax Rate | | | | | | | |
|-------------------------------------|------|------|------|------|------|------|------|
| Country | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 |
| Canada | 1.9 | 3.0 | 3.7 | 3.7 | 4.9 | 5.1 | 5.2 |
| France | NA | 18.9 | 19.8 | 21.1 | 22.6 | 22.8 | 22.6 |
| Germany | 9.3 | 10.3 | 12.1 | 12.7 | 13.6 | 13.7 | 13.9 |
| Italy | NA | NA | NA | 17.9 | 18.4 | 19.3 | 19.3 |
| Japan | 4.5 | 5.1 | 5.9 | 6.8 | 7.7 | 8.6 | 8.5 |
| United Kingdom | 3.9 | 4.4 | 5.9 | 6.0 | 6.2 | 6.4 | 6.5 |
| Average, other G-7 | 4.9 | 8.3 | 9.5 | 11.4 | 12.2 | 12.6 | 12.7 |
| United States | 3.3 | 3.9 | 4.9 | 5.4 | 6.2 | 6.2 | 6.3 |

| Employees Share of Payroll Tax Rate | | | | | | | |
|-------------------------------------|------|------|------|------|------|------|------|
| Country | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 |
| Canada | 1.0 | 2.0 | 2.5 | 2.5 | 3.2 | 3.6 | 3.9 |
| France | NA | 7.6 | 8.3 | 11.4 | 13.4 | 15.6 | 15.4 |
| Germany | 9.8 | 11.4 | 13.8 | 13.9 | 15.2 | 15.2 | 15.2 |
| Italy | NA | NA | NA | 6.2 | 7.5 | 9.3 | 9.8 |
| Japan | 4.1 | 4.8 | 5.7 | 6.6 | 7.3 | 8.1 | 7.9 |
| United Kingdom | 4.0 | 4.3 | 4.1 | 4.2 | 6.1 | 4.7 | 4.6 |
| Average, other G-7 | 4.7 | 6.0 | 6.9 | 7.4 | 8.8 | 9.4 | 9.5 |
| United States | 2.6 | 3.7 | 4.5 | 4.7 | 5.6 | 6.2 | 6.4 |

NA = not available

Source: OECD, National Accounts, Vol. II, Table 8.

Table 11--Average Consumption Tax Rates in the G-7
Countries, 1965-91 (Percentages)

| Country | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 |
|--------------------|------|------|------|------|------|------|------|
| Canada | 20.2 | 19.3 | 21.8 | 21.7 | 20.8 | 14.8 | 14.6 |
| France | 22.0 | 22.6 | 19.5 | 26.2 | 26.2 | 18.9 | 17.9 |
| Germany | 19.8 | 20.7 | 17.4 | 18.8 | 17.5 | 18.7 | 22.1 |
| Italy | 15.9 | 19.2 | 13.2 | 14.1 | 15.3 | 19.8 | 20.1 |
| Japan | 9.0 | 9.3 | 6.8 | 7.6 | 7.0 | 7.7 | 7.8 |
| United Kingdom | 16.4 | 18.4 | 15.0 | 17.9 | 20.6 | 18.4 | 19.4 |
| Average, other G-7 | 17.2 | 18.3 | 15.6 | 17.7 | 17.9 | 16.4 | 17.0 |
| United States | 8.6 | 8.7 | 8.1 | 7.5 | 7.6 | 6.1 | 6.2 |

Sources: OECD, National Accounts, Vol. II; and OECD, Revenue Statistics.

Table 12
Effective Average Tax Rates on Labor Income in the G-7
Countries, 1965-91
(Percentages)

| Country | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 |
|---------|------|------|------|------|------|------|------|
| Canada | 30.2 | 34.9 | 37.9 | 37.3 | 37.9 | 37.3 | 36.8 |

| | | | | | | | |
|--------------------|------|------|------|------|------|------|------|
| France | NA | 39.9 | 38.9 | 45.4 | 47.7 | 45.9 | 45.9 |
| Germany | 40.2 | 42.7 | 44.1 | 45.8 | 46.7 | 46.2 | 48.6 |
| Italy | NA | NA | NA | 37.6 | 41.8 | 46.8 | 47.1 |
| Japan | 23.7 | 26.2 | 25.6 | 28.7 | 30.8 | 34.3 | 34.1 |
| United Kingdom | NA | 37.2 | 36.6 | 36.2 | 40.2 | 37.0 | 36.5 |
| Average, other G-7 | 31.4 | 36.2 | 36.6 | 38.5 | 40.9 | 41.3 | 41.5 |
| United States | 26.8 | 28.5 | 28.4 | 30.0 | 29.9 | 29.7 | 29.3 |

NA = not available.

Note: Includes individual income tax, employee and employers' payroll taxes, and consumption taxes. Assumes all labor income is eventually consumed.

Sources: OECD, National Accounts, Vol. II; and OECD, Revenue Statistics.

Table 13
Average Income and Employee Payroll Tax Rates at
the Income Level of the Average Production Worker
in the G-7 Countries, 1992
(As a percentage of gross earnings)

| Country | Single Person | | Two-Child Family | | |
|--------------------|-------------------|------------------|---------------------|------------------|------|
| | Individual Income | Employee Payroll | Individual Combined | Employee Payroll | |
| Combined | | | | | |
| Canada | 20.4 | 5.1 | 25.5 | 12.3 | 5.1 |
| 17.4 | | | | | |
| France | 8.0 | 18.0 | 26.0 | 1.0 | 18.0 |
| 19.0 | | | | | |
| Germany | 18.9 | 18.3 | 37.2 | 8.3 | 18.3 |
| 26.6 | | | | | |
| Italy | 18.7 | 9.4 | 28.1 | 14.9 | 9.4 |
| 24.3 | | | | | |
| Japan | 8.4 | 7.0 | 15.4 | 2.7 | 7.0 |
| 9.7 | | | | | |
| United Kingdom | 18.0 | 7.6 | 25.6 | 14.8 | 7.6 |
| 22.4 | | | | | |
| Average, other G-7 | 15.4 | 10.9 | 26.3 | 9.0 | 10.9 |
| 19.9 | | | | | |
| United States | 18.3 | 7.7 | 26.0 | 11.1 | 7.7 |
| 18.8 | | | | | |

Source: OECD, The Tax/Benefit Position of Production Workers.

Table 14--Effective Tax Rates on Domestic
Corporate Investment, Outbound Investment, and Inbound
Investment in the G-7 Countries, 1991
(Percentages)

| Source Country | Domestic Investment | Outbound Investment | Inbound Investment |
|----------------|---------------------|---------------------|--------------------|
| Canada | 41.2 | 42.5 | 42.5 |
| France | 31.5 | 38.3 | 39.0 |
| Germany | 15.3 | 25.4 | 30.6 |
| Italy | 34.2 | 42.5 | 35.1 |
| Japan | 35.9 | 43.8 | 39.8 |
| United Kingdom | 28.6 | 27.5 | 26.7 |
| Avg. other G-7 | 31.1 | 36.7 | 37.3 |
| United States | 37.5 | 43.2 | 36.7 |

Note: Ernst & Young conversion of tax wedges into effective tax rates.

Source: OECD, Taxing Profits in a Global Economy.

Table 15--Effective Tax Rates on Domestic Corporate Investment by
 Type of Finance and Asset in the G-7 Countries, 1991
 (Percentages)

| Country | Avg. for Each Finance Source | | | Avg. for Each Asset Type | | | Overall |
|-----------------------|------------------------------|------------|--------|--------------------------|-----------|-------------|---------|
| | Retained Earnings | New Equity | Debt | Buildings | Machinery | Inventories | |
| Average | | | | | | | |
| Canada | 41.9 | 50.0 | 37.5 | 41.2 | 36.7 | 50.5 | 41.2 |
| France | 37.5 | 59.7 | (2.0) | 31.5 | 21.9 | 47.9 | 31.5 |
| Germany | 16.7 | 23.1 | 9.1 | 19.4 | 19.4 | (2.0) | 15.3 |
| Italy | 46.2 | 35.9 | (6.4) | 39.0 | 31.5 | 31.5 | 34.2 |
| Japan | 47.4 | 65.0 | (47.1) | 40.5 | 32.4 | 38.5 | 35.9 |
| U.K. | 29.6 | 21.9 | 30.6 | 25.4 | 23.1 | 41.9 | 28.6 |
| Average, other G-7 | 36.5 | 42.6 | 33.6 | 32.8 | 27.5 | 34.7 | 31.1 |
| U.S. | 43.2 | 54.1 | 15.3 | 42.5 | 33.3 | 38.3 | 37.5 |

Source: OECD, Taxing Profits in a Global Economy.

ALTERNATIVES FOR CORPORATE TAX REFORM

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This paper provides an introduction to alternative proposals for fundamental reform of the U.S. corporate income tax. The first section, "Integration of Corporate and Individual Income Taxes," examines integration of the corporate and individual income taxes, which is the reform that has been most widely adopted by our trading partners. The section titled "Other Proposals for Reform" discusses other major reform proposals. Conclusions and recommendations are found in the last section.

INTEGRATION OF CORPORATE AND INDIVIDUAL INCOME TAXES

Our discussion of integration is divided into three sections: (a) current U.S. taxation of corporate income and the resulting economic distortions; (b) tax policy issues involved in integration; and (c) economic effects of integration.

U.S. TAXATION OF CORPORATE INCOME

The United States has long had what is usually called a classical income tax system, under which income is taxed to shareholders and to corporations as distinct taxpayers. Taxable income earned by a corporation and then distributed to individual shareholders as a dividend is thus taxed twice, once to the corporation, and once to the shareholder on receipt of the dividend. As a result, the current regime is often characterized as a "double tax" system. The actual U.S. situation is considerably more complex. For example, some income earned through corporate enterprise is taxed only once, at the corporate level, as in the case of corporate taxable income distributed as dividends to exempt shareholders. Other income earned through corporate enterprise is taxed only once, but at the investor level, as in the case of corporate earnings distributed as deductible interest payments to taxable debtholders. Finally, some income earned through corporate enterprise is not taxed in the United States at either the corporate or investor level, as in the case of interest paid to certain foreign and tax-exempt holders of U.S. corporate debt.¹ As a result, corporate income is sometimes taxed twice in the United States, sometimes once, and sometimes not at all.

This system involves several undesirable economic distortions, of which the following four are usually considered the most important:

Disincentive for Investment in New Corporate Capital: U.S. investors are discouraged from investing in new corporate equity because of the additional burden of the corporate tax.

Incentive for Corporate Financing by Debt or Retained Earnings: U.S. corporations are encouraged to finance new projects by issuing debt or using retained earnings, rather than by issuing new stock, in order to avoid an additional level of tax.

Incentive to Distribute or Retain Corporate Earnings: There can be a tax incentive to retain or distribute corporate earnings, depending on the relationships among corporate, shareholder, and capital gains tax rates.² Additional discussion will appear later in this report. If the corporate and effective capital gains rates are sufficiently low relative to shareholder rates on ordinary income, the tax system encourages retention of earnings by U.S. corporations to take advantage of the lower rates.

Incentive to Distribute Corporate Earnings in Tax-Preferred Forms: U.S. corporations are encouraged to distribute earnings in tax-preferred transactions, such as redemptions giving rise to capital gains, rather than by paying dividends.

Integration of the corporate and individual income taxes refers to various means of eliminating the separate, additional burden of the corporate income tax where it exists, and substituting a system in which investor and corporate taxes are interrelated. This would produce a uniform levy on capital income, whether earned through corporate enterprise or not. Integration would accordingly reduce or eliminate the distortions of the current system.

Thirty years ago, the corporate tax systems of most other major developed countries were similar to ours. In the last three decades, however, most of our major trading partners have fully or partially integrated their individual and corporate income taxes, thereby eliminating or reducing the disparities that still exist in the United States.³ While integration has been discussed periodically in the United States, this discussion has not been identified with any political party or movement. The Treasury Department has, for example, developed proposals in both Democratic and Republican Administrations, and the House of Representatives included a modest step toward integration in the

initial version of the Tax Reform Act of 1986.

TAX POLICY ISSUES

Integration of the corporate and individual income taxes involves a number of tax policy decisions, the sum of which determines the structure and effects of the integration system. The most important of these issues are considered in this paper in the context of two recent U.S. integration studies, which are the most comprehensive to date: Early in 1992, the Treasury Department released the results of a multi-year study of integration (U.S. Treasury 1992a); and the American Law Institute Federal Income Tax Project subsequently published the results of its own multi-year study (Warren 1993).⁴ The range of tax policy choices involved in any program of integration can be elucidated by comparing the recommendations of these two studies in eight areas: (1) basic integration structure; (2) untaxed corporate income; (3) treatment of debt; (4) retained earnings; (5) exempt shareholders and creditors; (6) international income; (7) nondividend distributions; and (8) transition to the new system.

1. Basic Integration Structure: In theory, there are a variety of ways in which the individual and corporate income taxes could be integrated to reduce the distortions of current law. The corporate tax could, for example, be repealed and shareholders taxed currently on corporate earnings, but that approach would require annual allocation of undistributed corporate income to a myriad of complex capital interests. Alternatively, the corporate tax could be repealed and shareholders taxed annually on changes in stock values, but that approach would require abandoning the realization criterion of income taxation. For these reasons, the shareholder allocation and annual valuation approaches to integration have not generally been pursued here or abroad. Instead, integration, as proposed in the United States and adopted abroad, has usually involved one of the following distribution-related approaches:

Shareholder Credit for Corporate Taxes Paid: When a shareholder receives a taxable dividend, the shareholder would also receive a tax credit for corporate taxes previously paid with respect to the dividend amount, just as a wage earner now receives a credit for income taxes withheld by the employer. If fully implemented, this approach would convert the corporate tax into a withholding levy for income ultimately to be taxed at graduated shareholder rates. This is the approach generally adopted abroad, although the shareholder credit does not always equal the full amount of the corporate tax previously paid with respect to the dividend.

Corporate Deduction for Dividends Paid: Dividends, like interest, would be deductible when paid by the corporation. Under this approach, any previously paid corporate tax would in effect be refunded to the corporation when dividends are paid to shareholders. Essentially similar results would be obtained by imposing a lower corporate tax rate on distributed earnings than on retained earnings. If withholding on dividends were considered important to ensure compliance, a corporate deduction for dividends would be the equivalent of shareholder credit integration, because the withholding credit would fulfill the same function as the shareholder credit.

Shareholder Exclusion for Dividends Received: Dividends would be exempt from taxation at the shareholder level, so that the corporate tax would be the only tax on income earned through corporate enterprise.

Each of these approaches has advantages and disadvantages. The ALI study develops shareholder credit integration for the United States, on the grounds that it offers the fullest solution to the defects of current law. The American Institute of Certified Public Accountants Tax Division (1993) also recently endorsed this approach, in part because it has become the international norm. If fully implemented, the shareholder credit approach would tax all income earned through corporate enterprise once, but only once, at the progressive rate applicable to the individual investor. The dividend deduction approach has the same result, but without the compliance advantage of corporate withholding. The Treasury's 1992 integration study favored the dividend exclusion approach because of its simplicity and minimal departure from current law. If fully implemented, this approach would tax all income from corporate enterprise once, but only once, at the flat rate applicable to corporations.

2. Untaxed Corporate Income: Any integration system must take into account the fact that some corporate income is distributed to shareholders without bearing a full corporate tax. The ALI study follows the European practice of imposing an auxiliary withholding tax on corporate distributions to ensure that shareholders do not receive credits for taxes that have not been paid at the corporate level. This approach permits a uniform tax credit for all dividends to all shareholders, making the system very simple for individual taxpayers. No double tax would result, because payments of regular corporate tax would be considered prepayments of this auxiliary withholding tax. On the other hand, certain dividends may be free of corporate tax as a result of deliberately enacted corporate tax preferences that should be passed through to shareholders. Accordingly, the ALI study would permit the flow-through to shareholders of congressionally-designated tax preferences.

Under the Treasury's dividend exclusion, shareholders would be taxed on dividends that had not been taxed at the

corporate level. Like the ALI approach, this system would require a corporate-level account to keep track of what income had borne corporate taxes. Individual taxpayers would treat dividends as taxable or nontaxable, based on a report from each corporation. The Treasury study originally rejected the possibility of passing through corporate tax preferences to shareholders, but a subsequent version of its dividend exclusion would permit some such pass-through (Treasury 1992b).

3. Treatment of Debt: One important goal of integration is to reduce the differential income tax treatment of corporate equity and debt. Equivalent treatment is achieved under the ALI study by imposing a withholding tax on corporate interest payments. The withholding credit for interest functions in the same manner as the shareholder credit for dividends.

Under the Treasury's dividend exclusion, equivalence would not be achieved because corporate earnings distributed as dividends would be taxed at the corporate level at a flat rate, whereas corporate earnings distributed as interest would be taxed at the investor level at graduated rates. Equivalence would, however, be achieved under the fullest implementation of the Treasury's preferred integration approach, which is called a comprehensive business income tax. Under this proposal, neither interest nor dividends would be deductible by corporations, nor would they be taxable to recipients. The same regime would apply to noncorporate business entities. In effect, all business income would be taxed at a flat rate applied to business entities. The Treasury indicated that this approach would take a decade to phase in.

Accordingly, corporate interest, like dividends, would be taxable at the investor's graduated rate under the ALI study, but at the flat rate applicable to business units under the fullest implementation of the preferred approach of the Treasury study.

4. Retained Earnings: Under shareholder credit integration, retained corporate earnings would present two problems. First, shareholders whose marginal tax rates were below the corporate rate would be disadvantaged by such retentions, creating a tax incentive for distributions of corporate earnings. Second, taxation of shareholder capital gains due to retained corporate earnings would, as under current law, constitute multiple taxation of the same gain. The second problem could be eliminated by preferential taxation of gains on corporate stock, but such a preference would be overbroad because not all gains on corporate stock are due to retained corporate earnings.

Both problems are addressed in the ALI study by a constructive dividend option, under which corporations could make tax credits available to shareholders without the requirement of a cash distribution. If the corporate tax rate was equal to the highest individual rate, constructive dividends could not disadvantage shareholders, who would either pay no taxes or receive a refund as a result of the constructive distribution. In addition, the increase in shareholder basis due to the constructive reinvestment would eliminate the possibility of double taxation on sale of the stock.

Current taxation of retained earnings at the corporate rate is consistent with the goal of dividend exclusion integration to tax all corporate income at that rate. Accordingly, the Treasury report addresses only the second problem identified above: multiple taxation of corporate income as a result of shareholder capital gains. The Treasury's recommended approach is also a constructive dividend option.

5. Exempt Shareholders and Creditors: Nominally exempt suppliers of corporate capital, such as charitable organizations and pension funds, do not always receive their share of corporate income free of tax under current law. The portion of corporate income distributed to such investors is sometimes taxed (due to the corporate tax on income distributed as dividends) and sometimes not (due to the corporate deduction for interest payments and to corporate preferences for some income distributed as dividends). Since one of the goals of integration is elimination of such discontinuities, any comprehensive system of integration will necessarily affect currently exempt shareholders.

The approach of the ALI study is to maintain a single level of tax on corporate income received by such investors, and to rationalize that tax in order to eliminate tax-induced distortions in investment decisions. Accordingly, entities that are nominally exempt under current law would be subject to an explicit tax on corporate investment income, against which the shareholder and creditor withholding credits could be used, with any excess refundable. The basic idea of this proposal is that the rate of tax on income from corporate investment received by exempt entities should be uniform and explicitly determined as a matter of tax policy. That rate could be set to maintain the same amount of revenue as is currently collected on corporate income distributed to exempt shareholders, to increase that amount, or to decrease it.

A similar uniform tax on investment income is discussed in the Treasury study, but is not proposed. In the absence of such a proposal, the distortions of current law due to differential treatment of debt and equity would remain in effect with respect to tax-exempt investors under the dividend exclusion approach.

6. International Issues: Two important international questions must be addressed in designing an integration system. First, what should be the extent of U.S. taxation of U.S. corporate income paid to foreign parent companies or investors under integration? Second, how should foreign taxes paid by U.S. companies on foreign income affect the U.S. taxation of U.S. shareholders on distribution of those earnings? Resolution of these issues is complicated by the existence under current law of nonrefundable withholding taxes on U.S. dividends and interest paid to certain foreign recipients. Where applicable, these taxes substitute for the income tax applied to domestic recipients of such income.⁵

With respect to foreign parent companies and investors, the approach of the ALI study is similar to that applicable to exempt organizations. Foreign parents and investors would be subject to a new U.S. tax on investment income and would receive fully-refundable integration credits. This tax would replace the current nonrefundable withholding tax, which applies to some, but not all, U.S. corporate income distributed outside the United States. The rationale for this proposal is again that the rate of tax on U.S. income should be uniform and explicitly determined as a matter of tax policy, first by legislation and then by treaty negotiation. The uniform tax developed in the ALI study would be an innovation in international taxation and would therefore require discussion with our treaty partners. The Treasury study discusses the possibility of a uniform tax on foreign parent companies and investors along these lines, but limits its conclusion to the proposition that changes should not be made unilaterally by the United States in order to preserve our bargaining power for treaty negotiation with our trading partners.

A fundamental feature of U.S. tax law is a credit (up to the amount of the U.S. tax) for foreign taxes paid on income earned abroad by U.S. companies or individuals.⁶ The purpose of this credit is to avoid double taxation of foreign income. Converting the U.S. corporate income tax into a withholding tax suggests that credits for foreign tax paid by U.S. corporations should be passed through to U.S. shareholders on distribution of foreign income. The ALI study approximates that result with considerably less complexity by treating an appropriate amount of corporate foreign income as tax-exempt when distributed as dividends. Like the proposal regarding foreign investors, this proposal could be limited to income from countries with reciprocal provisions. Such a limitation would initially seem advisable because foreign integration systems have not generally included comparable provisions. The Treasury study discusses pass-through of foreign tax credits, but again limits its conclusions to stating that the United States should not make any changes unilaterally. A subsequent Treasury proposal would pass through some foreign tax credits to shareholders (Treasury 1992b).

7. Nondividend Distributions: There are a variety of transactions other than dividends by which corporate income can be distributed to shareholders, including repurchases by a corporation of its stock, purchases by one corporation of the stock of another corporation from noncorporate shareholders, and payments in liquidation. Under current law, the tax treatment of such nondividend distributions to individuals can be less onerous than that of dividends because basis recovery and a capital gains preference may be available with respect to the former, but not the latter.⁷ In recent years, there has been a significant increase in the use of tax-preferred nondividend distributions by public companies (Bagwell and Shoven 1989).

The principal issue presented by nondividend distributions in the design of an integration system is the extent to which the benefits of integration will be available for such distributions, in order to achieve neutrality with dividends. Under the ALI study, nondividend distributions would generally carry out shareholder credits to achieve parity with dividends. The Treasury study concludes that no change in current law would be necessary because the incentive to engage in nondividend distributions would be reduced under integration.

8. Transition: As with any major change in tax law, integration could be made immediately effective, phased-in over time, or accompanied by exceptions for pre-existing transactions. With respect to the last possibility, it is sometimes argued that integration should be available only for corporate equity acquired after the date of enactment because the capital markets have already discounted the price of pre-enactment corporate equity to take into account any double taxation under current law. Under this argument, integration for pre-enactment equity would result in unjustified windfalls to current shareholders. The ALI and Treasury studies both prefer phasing-in of integration to permanently limiting the new system to post-enactment equity. Concern about integration unduly benefiting current shareholders could be addressed in the method chosen to finance integration, which is discussed below. Windfall gains from integration could also be captured by a special tax on such windfalls, although such levies have not been popular in recent years (Auerbach 1990).

9. Summary: As indicated by the foregoing discussion, any integration proposal involves a number of fundamental tax policy decisions regarding domestic and foreign companies and their investors. The ALI study would convert the separate U.S. corporate income tax into a withholding tax in order to eliminate or reduce the economic distortions and intractable legal distinctions that arise under current law. The Treasury study would pursue the same goals by

exempting corporate dividends from shareholder taxation. The principal tax policy question posed by the difference between the two approaches is whether income earned through corporate enterprise should ultimately be taxed at the investor's graduated rate or at a flat rate applicable to business organizations.

ECONOMIC EFFECTS

Analysis of integration proposals requires consideration of the effects of the proposals on economic efficiency, tax revenues, and distribution of the tax burden across income classes.

1. Economic Efficiency: In principle, the effects of the tax-induced distortions of current law are straightforward. The tax biases of the current system produce a misallocation of resources, resulting in a diminution in economic welfare. It is much more difficult to quantify the improvement in economic welfare that would follow from elimination of these biases by enactment of integration.

The 1992 Treasury study includes a comprehensive economic analysis of the benefits of integration. Four different versions of integration (shareholder allocation, shareholder credit, dividend exclusion, and a comprehensive business income tax) are examined, using four different models of the economy and two different financing assumptions, in order to generate a range of estimates of the change in economic welfare. As would be expected, integration generally increases the flow of assets into corporations, reduces corporate reliance on debt finance, and results in a lower and more uniform cost of capital for U.S. companies. The estimated increases in economic welfare range from an amount equivalent to 0.07 percent of annual consumption to an amount equivalent to 0.73 percent of consumption, or from approximately \$2.5 billion to \$25 billion per year. Much of the variation in results is due to differences in the economic models and to differences in financing assumptions, rather than differences among the integration alternatives. Indeed, the report states that "one striking feature of the calculations is that within each model, and for a given financing assumption, structurally different [integration] prototypes often have similar overall effects on economic well-being" (Treasury 1992a, at 111).

These calculations were made using computable general equilibrium models, which are computer representations of the U.S. economy. To avoid confusing the results of integration with the results of simply reducing taxes, these calculations include replacement of lost revenue by either lump-sum taxes or increases in the rate of taxes applicable to capital income. Lump-sum taxes are levies that are unavoidable, so their introduction permits an estimate that does not involve further distortions of economic behavior. On the other hand, lump-sum taxes, such as a poll tax requiring payment of an equal amount by all adults, are politically unlikely. The alternative financing assumption -- that integration would be accompanied by offsetting adjustments in the tax rate applicable to capital income -- follows from the view of many economists that the burden of the current corporate tax is largely shifted to the holders of all capital. Additional discussion will appear later in this report.

Like all such calculations, the Treasury estimates are not without limitations. For example, as the Treasury study indicates, the models do not take into account many of the details of the integration proposals, such as whether corporate tax preferences are passed through to shareholders. Moreover, the results ignore transition effects and focus on long-term equilibria. Finally, the Treasury report adopts a particular view of the effects of current law that is not universally accepted by financial economists. Essentially, the Treasury adopts the "traditional" view of corporate finance that a dollar invested in a corporate equity will, all other things being equal, increase share value by a dollar. Under this view, corporations are encouraged by the capital markets to pay dividends, in spite of any tax disadvantages. The alternative, or "new" view is that the separate taxation of corporations under current law will be taken into account when share prices are determined by the capital markets, reducing share values.⁸ Under this second view, much of the additional tax burden of the current corporate tax system will have been capitalized into share prices, reducing the economic benefits to be expected from integration (Auerbach 1990).

As in the 1992 Treasury study, previous estimates of the economic benefits of integration have been significant, although they have varied in amount. For example, in the 1970s, the Congressional Joint Committee on Taxation estimated the welfare gains to be about \$6 billion a year for shareholder allocation and about \$3 billion a year for distribution-related integration (U.S. Congress 1977). Fullerton, King, Shoven, and Whalley (1981) reported an annual welfare gain of up to 0.8 percent of expanded national income. Henderson (1987) found that the annual cost of an unintegrated tax on corporations was about 3.5 percent of expanded national income, or about \$150 billion in 1986 dollars. More recently, a Congressional Research Service report estimated that current law reduced economic welfare by 1.34 percent of annual consumption (Gravelle 1991).

Given the state of the art, these estimates should not be regarded as precise.⁹ Rather, the most important conclusion to be drawn from these studies is that the 1992 Treasury report confirmed the conclusion of previous analyses that there are significant gains in economic welfare to be had from integration in the United States. A more concrete

estimate of benefits would depend on the details of the integration proposal, the model of the economy used to estimate the gains, and the method of financing integration.

2. Revenue Effects: The revenue effects of integration depend on not only the details of the integration proposal, but also on assumptions regarding the behavior response to integration. Using the behavioral consequences described above with regard to economic efficiency, the Treasury study estimated the annual revenue loss to be \$13.1 billion for dividend exclusion integration and \$14.6 billion for shareholder credit integration. The annual revenue loss from shareholder allocation was estimated to be \$36.8 billion. On the other hand, the study concluded that its comprehensive business income tax would increase revenues by \$3.2 billion annually (or \$41.5 billion with capital gains taxation of assets also subject to the business-level tax). It will be recalled that this proposal would tax all capital income at the entity level, so that, for example, corporate interest payments that now flow tax-free to foreign portfolio lenders and U.S. exempt institutions would be fully taxed because such payments would no longer be deductible.

Previous estimates also concluded that the revenue costs of integration would be significant. The Joint Committee on Taxation estimated the revenue cost of shareholder credit integration in the 1970s at \$5 billion if corporate tax preferences were not passed through to shareholders, and exempt taxpayers were not eligible for credits (U.S. Congress 1977). The Treasury Department estimated the revenue cost of the President's 1985 proposal for a deduction of 10 percent of dividends to be about \$6 billion after phasing-in (U.S. President 1985). And a 1991 Congressional Research Service study estimated the revenue costs of full shareholder credit integration to be about \$30 billion annually (Gravelle 1991).

It seems likely that any integration alternative, other than the comprehensive business income tax, would by itself involve a revenue loss, although the amount of that loss will depend on the exact program proposed. Simply eliminating the double taxation of dividends would obviously lose more revenue than also assuring that all corporate income is taxed once, but only once. A shareholder credit for the full amount of corporate taxes paid with respect to dividends would involve a greater revenue loss than a partial credit, which has often been the initial approach to integration abroad. In the current budgetary climate, any integration program would have to be constructed with its revenue consequences taken into account, as well as plans for financing the program.

3. Distributional Effects: Estimating the distributional effects of integration involves still further complexities. Once the behavioral responses to integration are identified and the resulting revenue costs are estimated, the distribution of those costs across income classes must be compared with the distribution of the current corporate tax. The current distribution has, however, long been controversial (McLure 1979, at 29-42). Although corporations pay corporate taxes, the burden of those taxes must ultimately be borne by some human beings. In theory, there are a variety of possibilities. Most obviously, shareholders might bear the burden as a result of lower dividends. On the other hand, corporate taxes might be shifted to consumers through higher prices or to workers through lower wages. Still another possibility is that investors respond to the separate corporate tax by investing less in corporate enterprise, and more in noncorporate enterprise, until the after-tax rates of return from the two kinds of investment are equal. The result of this equilibrating process would be that all owners of capital (corporate and noncorporate, business and residential) would bear the burden of the corporate income tax, because the after-tax return to all capital would be lower as a result of the tax. A final possibility is that the burden of the corporate tax system with respect to existing corporate capital has already been capitalized into share prices that are lower than they would be in the absence of the current system. On this hypothesis, current buyers of stock from other shareholders do not incur any significant detriment from present law.

The distributional consequences of any major corporate tax reform will depend on who is assumed to bear the burden of the current system. Consider the alternative hypotheses that the tax is borne entirely by shareholders or entirely by consumers. Because shareholding is more concentrated in upper-income brackets than is consumption, simple elimination of the additional burden of the corporate tax would have different distributional consequences under the two assumptions. Although the distributional burden of current law remains controversial, most economists probably accept the view that the corporate tax is borne by shareholders in the short run, but holders of all corporate capital, and perhaps workers, in the long run (Treasury 1992a).

The Treasury report accordingly analyzes the distributional consequences of integration under the alternative hypotheses that the long run incidence of the current corporate tax is entirely on holders of capital and that it is divided evenly between holders of capital and workers. As indicated above, the Treasury also assumed that revenue losses due to integration would be offset by increasing tax rates applicable to capital income generally. Under these assumptions, the Treasury concluded that shareholder credit integration, dividend exclusion integration, and a comprehensive business income tax would have only a slight effect on the distribution of the tax burden across income groups.

As in the case of its estimates of welfare gains and revenue losses from integration, the Treasury's estimates of distributional consequences should not be accorded more precision than is warranted by the current state of the art. Rather, the most important conclusion to be drawn from the Treasury's discussion of the distributional consequences is simply that integration need not have a major effect on the distributional burden of corporate and individual income taxes. As emphasized in the Treasury report and previous studies (Feldstein and Frisch 1977; Gravelle 1991), the method of financing integration will have an important effect on these consequences.

RECAPITULATION

The basic case for integration is economic. The additional burden of the corporate income tax increases the cost of capital for U.S. companies, discourages new investment in corporate enterprise, and encourages the issuance of corporate debt. Thirty years ago, these were also the attributes of the corporate tax systems of our major trading partners. Since then, most other developed countries have adopted some version of integration, generally the shareholder credit approach. Integration of the U.S. corporate and individual income taxes would increase economic welfare by taxing all corporate income once, but only once.

There are a variety of tax policy choices to be made in designing an integration system, the most fundamental of which is whether the single tax to be applied uniformly to corporate-source income should be the individual investor's graduated rate (as in the ALI study) or a flat rate for business income (as in the Treasury study). The gains in economic welfare, as well as the revenue and distributional consequences of integration, would depend on the details of the program and how it was financed. On the assumption that the long run burden of the current tax falls most heavily on the holders of all capital, the Treasury study concludes that negative revenue and distributional consequences could be avoided by financing integration with an increase in tax rates applicable to capital income generally. Alternative means of financing integration, such as the adoption of a value-added tax, would have different consequences (Fullerton and Rogers 1993).

Given the case for integration, are there countervailing reasons for keeping a separate, additional corporate income tax? It is sometimes argued that an additional corporate tax is justified to offset the benefits of incorporation (Goode 1951), to capture windfall gains (Rudnick 1989), or to increase the progressivity of the federal income tax (Pechman 1985). None of these views provides a convincing reason for retention of the current U.S. system for taxing corporate income. First, it is widely agreed today that the burden of the corporate tax is ultimately borne by human beings, although there is less agreement about the identity of those human beings. Second, the current tax is not limited to windfall gains. (Proposals for a corporate tax limited to "extraordinary" gains are discussed below in Part II.) Third, the corporate income tax is a very inefficient and distortionary means of accomplishing income tax progressivity. Moreover, as discussed above, adoption of integration need not affect the current distribution of the tax burden.

Given the advantages of integration and its widespread adoption in other developed economies, why has it not already been enacted in the United States? When the matter was raised by the Carter and Reagan Administrations in the late 1970s and early 1980s, the U.S. corporate community was not uniformly enthusiastic, especially when the alternative was a reduction of corporate tax rates. This lack of enthusiasm is sometimes attributed to the myriad of tax preferences that selectively reduced corporate taxes for many industries prior to the Tax Reform Act of 1986. For some industries, adoption of corporate tax integration would have meant loss of their preferred tax position, considerably diluting their enthusiasm. The Tax Reform Act of 1986 eliminated many of these preferential provisions and reduced corporate tax rates generally, so this reaction should be less widespread today, particularly in light of increased concern about the international competitiveness of American companies.

OTHER PROPOSALS FOR REFORM

This part discusses four proposals for major corporate tax reform other than integration: (a) cash flow taxation of corporations; (b) a corporate deduction for the return on equity capital; (c) reform of the U.S. taxation of corporate mergers and acquisitions; and (d) tax incentives for certain corporate investments. The first and second proposals are often considered alternatives to integration, while the third and fourth address other issues.

CASH FLOW CORPORATE TAXATION

A longstanding alternative to personal income taxation is personal consumption (or expenditure) taxation, under which individuals would be taxed on what they spent on consumption, rather than on what they earned, during the taxable period.¹⁰ Since income is usually defined as the sum of consumption plus savings during the taxable period, personal consumption could be measured by subtracting savings from income. As shown in the following example, this form of cash flow taxation is similar to taxing income from labor, but not capital.¹¹

Consider a taxpayer who receives \$100 in labor income in year 1, which he invests at a 10 percent rate of return for disinvestment and consumption in year 2. Under an income tax levied on both labor and capital income at the rate of 50 percent, the taxpayer would have \$50 to invest in year 1, earn \$5 in capital income in year 2, and have \$52.50 to consume after paying year 2 taxes. Under an equivalent-rate expenditure tax that permitted a deduction for savings, the taxpayer could invest the entire \$100 in year 1, earn \$10 in capital income in year 2, and have \$55 to consume after paying \$55 in year 2 taxes. Under an income tax that reached labor income, but not capital income, the taxpayer would have \$50 to invest in year 1, earn \$5 in capital income in year 2, and again have \$55 to consume because no taxes would be due in year 2. This equivalence often leads to the conclusion that capital income is implicitly exempt under an expenditure tax because the results are essentially similar to those under an income tax that explicitly exempts capital income.¹² The government's revenue is distributed differently under the two taxes, but is equal in present value.

Although the Internal Revenue Code purports to levy an income tax, it is actually something of a hybrid. Some capital income, such as interest on bank deposits, is fully taxable under income tax principles. Other income, such as that deposited in qualified retirement accounts, is taxed under expenditure tax principles because it is not taxed until drawn down for consumption after retirement. Still other income, such as that on state and local bonds, is explicitly exempt. Proponents of moving the Internal Revenue Code further in the direction of pure consumption taxation usually argue that economic welfare would be increased by reducing the distortion between present and future consumption under an income tax, and that the tax system would be simpler as a result of effectively exempting capital income. Proponents of moving the Internal Revenue Code further in the direction of a pure income tax usually emphasize the goal of taxing the return from capital to the same extent as the return from labor.

This longstanding debate about whether personal income taxation should be replaced by a personal tax on cash flow has produced the correlative proposal that corporate income taxation be replaced by a corporate tax on cash flow (Institute for Fiscal Studies 1978; King 1987). There are several ways in which a corporate cash flow tax could be structured. First, all positive and negative cash flows from real, as opposed to financial, transactions could be taken into account in determining the corporation's annual tax base. The major changes from current law required by this approach would be: (a) the immediate deduction (or "expensing") of capital expenditures, such as the purchase of equipment; (b) the exclusion of interest receipts; and (c) the disallowance of interest deductions. A second approach to corporate cash flow taxation would be to take all business cash flows, real and financial, into account. Under this approach, all business receipts would be included in the tax base, while all business expenditures (including capital expenditures) would be deducted. This implementation would include gains from financial, as well as real, investments in the tax base. Finally, since the result of subtracting all business expenditures from all business receipts is net cash distributed to shareholders, a third way to implement a tax on corporate cash flow would be simply to tax distributions to shareholders. Net inflows from shareholders should produce refundable tax credits under this last approach.

As illustrated by the example above of a personal cash flow tax, the general effect of a corporate cash flow tax would be to reduce the effective rate of the tax to zero. What then are the advantages of such a levy over simple repeal of the corporate tax? First, the cash flow tax, in any of the three versions described above, would continue to collect revenue on income produced by pre-enactment corporate equity, which did not benefit from a deduction at the moment of investment. This approach would therefore avoid the possibility under integration of a windfall to current shareholders if the detriment of the current system has been capitalized in share prices. Second, the tax would allow the government to participate in the private sector return on new corporate equity. The Treasury would, in effect, contribute resources to corporations as a result of either the tax benefit from expensing capital outlays or the negative taxes on net cash inflows from shareholders. The Treasury would collect its proportionate share of the income produced by investment of those resources when it taxed business receipts that were not reinvested.

To recapitulate, a corporate cash flow tax would continue the current tax burden on income from old equity, while the return on new equity would be effectively exempt. Income earned through corporate enterprise would actually be tax-preferred under this proposal because, unlike other capital income, there would be no current tax burden at either the corporate or investor level on reinvested income. The proponents of a cash flow corporate tax usually also advocate replacing the personal income tax with a personal consumption tax, so that income from capital would be effectively exempt from taxation whether earned through corporate enterprise or not.

DEDUCTION FOR THE RETURN ON CORPORATE EQUITY

As indicated above, one of the principal distortions of current law is that returns on corporate debt capital are deductible by the corporation if distributed as payments of interest, while returns on corporate equity capital distributed as payments of dividends are generally subject to double taxation. Two major proposals for a deduction

for the return on equity have been recently developed. 1. Deduction for Payments on New Equity: The American Law Institute (1982, 1989) has published studies proposing a deduction for dividend payments with respect to new equity. These proposals are intended to address the distortions of current law described above, but without creating windfall gains for current shareholders. There are four principal proposals:

Corporate Debt: Interest payments would be deductible only to the extent of a specified interest rate typical of corporate debt.

Corporate Equity: Dividends on qualified equity capital would be deductible up to the amount of the specified rate applicable to interest deductions.

Nondividend Distributions: Major distributions to shareholders that are not taxed as dividends would first reduce qualified contributed equity capital and then convert outstanding debt into nonqualified equity. Further nondividend distributions would be subject to a minimum tax on distributions at the corporate level, which would be creditable against shareholder taxes on the distribution.

Intercorporate Equity Investments: Dividends received by one corporation from a portfolio investment in another corporation would be taxable.

The first proposal would limit the deductibility of interest payments to a return typical of corporate debt. The second proposal would eliminate the differential treatment of debt and equity under current law by extending the limited deduction for interest to dividends paid with respect to qualified contributed capital, which is essentially equity capital contributed after the date of the reform's enactment. Restriction of qualified capital to post-enactment contributions is intended to avoid the possibility of windfall gains to current shareholders, who are assumed to have benefited from reduced share prices because the additional burden of the unintegrated tax system has been capitalized into current share prices. The third and fourth proposals would achieve similar results for nondividend distributions.

Taken together, these four proposals would eliminate the additional burden of the corporate tax on income earned on corporate assets up to a specified return, by means of a deduction for interest and dividends paid with respect to debt and new equity. There would continue to be a double tax on the return on debt and new equity capital in excess of the specified rate and on the entire return to old equity. The minimum tax on nondividend distributions and related provisions would remove the preference for such distributions. These proposals thus differ from integration in two important respects. First, they attempt to avoid windfall gains by limiting the new system to new equity capital. Second, they continue a separate, additional corporate-level tax for corporate income in excess of the cost of debt capital, presumably on the theory that the excess is due primarily to economic rents.

2. Allowance for Corporate Equity: The Institute for Fiscal Studies recently published a proposal for reforming corporate taxation by introducing an annual deduction for the product of a specified rate of interest and the amount of a corporation's equity capital. According to the proposal, the "effect of such an allowance is to put equity finance in a company on a similar basis to that of debt finance, but without the inevitable cash outflow associated with the payment of interest" (Institute for Fiscal Studies 1991, at 2). Like the ALI studies discussed immediately above, this proposal would limit deductibility of an equity return to the cost of debt capital, but unlike the ALI study, the deduction would not depend on actual payment of dividends. As a result, income from investment in corporate stock would be tax-preferred relative to other forms of investment income subject to current taxation, including corporate debt, because the interest component of the return on equity would not be taxed until distributed to the shareholder. The position of the British study is that the corporate tax should be considered separately from the individual income tax, and that defects in the latter, such as the failure to tax changes in share values, should be corrected at the shareholder level. This position should be contrasted with the premise of both integration and the limited deduction for payments on equity. These latter two reforms are based on the premise that corporate and individual income taxation should be designed together to implement a coherent system.

In summary, corporate profits under the allowance for corporate equity would be taxed at the corporate level only to the extent they exceeded a "normal" return and at the shareholder level only on distribution.¹³ This result would be more consistent with cash flow taxation at the investor level than with income taxation of investors as in the United States.

Like a corporate cash flow tax, a deduction for the return on corporate equity can be considered an alternative response to the defects of current law addressed by integration. Our discussion of these two alternatives has not been at the level of detail of our discussion of integration because these alternative approaches have not yet resulted in proposals as fully developed as those for integration. Nonetheless, many of the issues discussed above with respect to integration, such as the treatment of exempt and foreign shareholders, would also have to be addressed in

the design of a legislative program based on these alternatives.

We now turn to two proposals for reform that address other issues, the taxation of corporate acquisitions and the possibility of preferring certain corporate investments.

Mergers and Acquisitions

U.S. tax law has long distinguished between nontaxable and taxable corporate acquisitions.¹⁴ Transactions in the first category, such as a merger of two companies pursuant to a state corporate law statute, benefit from nontaxability at both the corporate and the shareholder levels. The basic rationale is that these transactions only involve changes in the form of business organization. The web of statutory and judicial rules that categorize asset sales, stock purchases, mergers, and other transactions as either taxable acquisitions or nontaxable reorganizations is extraordinarily complex. As a result of this complexity, corporate acquisition transactions in the United States are often structured to satisfy the tax law, creating additional transactions costs. Quite apart from these problems, there has been ongoing congressional concern in recent years that the tax system not create incentives for corporate mergers (U.S. Congress 1989a and 1989b).

The American Law Institute (1982, 1989) has proposed that the longstanding and extremely complex provisions of current law be replaced for corporate tax purposes by a simple dichotomy between carryover-basis transactions and cost-basis transactions.¹⁵ In carryover-basis transactions, the transferring company does not recognize gain on the transfer, and the acquiring company carries over the transferor's cost basis in its assets, so any currently untaxed gain will be taxed on a future disposition of the assets. In cost-basis transactions, the transferring company recognizes gain, and the acquiring company increases asset basis to reflect its cost. This dichotomy has long been implicit in existing law in that purchases of shares by one corporation in another receive carryover-basis treatment, as do nontaxable reorganizations, while sales of corporate assets receive cost-basis treatment.

Whether or not a particular transaction would be subject to cost-basis or carryover-basis taxation at the corporate level would be elective.¹⁶ As long as the parties were consistent in terms of corporate taxation, they could choose to classify a transaction as either carryover-basis or cost-basis regardless of (1) whether the consideration paid by the acquiring corporation was stock, debt, or cash; and (2) whether the acquiring corporation obtained the target's assets or stock. The major constraint on electivity would be that nonrecognition of gain to the target corporation in a carryover-basis acquisition of assets would require the target to liquidate and distribute to its shareholders the consideration received in the transfer.

The recommendation that the choice between carryover-basis and cost-basis taxation be made explicitly elective is justified in the proposals primarily on the ground that the choice is often effectively elective under current law because taxpayers are free to cast their transactions in the corporate form (asset sale, stock sale, or reorganization) that produces the desired tax results. On the other hand, where nontax reasons control the form of the transaction, tax consequences under current law can differ for substantially similar transactions. Explicit electivity would accordingly further the goals of simplification and transactional neutrality.

This explicit electivity has been controversial because it would appear to be inconsistent with the very idea of levying a tax on realized corporate gain. What could be more clearly realized corporate gain than the sale of corporate business assets for cash? Why then should a sale of a corporate business for cash be eligible for carryover-basis taxation, even if internal corporate tax consistency is maintained? The usual answer to these questions is found in the limitation of carryover-basis treatment of such sales to cases in which the target corporation liquidates and distributes to its shareholders the consideration received from the acquiring company. Accordingly, the ALI approach would mandate either corporate or shareholder realization on the sale of a corporate business for cash.

This reform would be consistent with the view that the corporate tax should be designed to protect the individual income tax base. From this perspective, a corporate income tax on operating income is needed in order to prevent the corporation from becoming a tax shelter, in which income could be accumulated without current taxation at the shareholder level. On this protective rationale, a corporate level tax is not necessary upon the sale of an entire corporate business for cash, as long as shareholder gain is then realized because gain on business assets would not be taxable until sale, whether held in corporate form or not.

The ALI approach would not, on the other hand, be consistent with a view of the corporate tax as fundamentally separate from, rather than protective of, individual taxation, so all corporate gain should be taxed as soon as realized even if there is simultaneous shareholder taxation. From this perspective, the approach of current law to mergers and acquisitions should be substantially simplified and refined, but not radically restructured. The American Bar Association Tax Section (1981) has formulated reform proposals based on this more limited premise.

INCENTIVES FOR CERTAIN CORPORATE INVESTMENTS

Because of its pervasive reach, the corporate income tax has often been used as a policy instrument to encourage or discourage corporate investment choices. As in many countries, the effective tax rate on different categories of corporate income in the United States has varied greatly as a result of depreciation schedules and an investment tax credit that applied differently to different corporate investments (King and Fullerton 1984). The fundamental policy decision embodied in the historic Tax Reform Act of 1986 was to reduce this differential treatment in exchange for a general reduction in corporate tax rates. There was both an economic and an administrative reason for this decision. The economic reason was that the market, rather than the political process, was thought to be better at allocating corporate investment among competing alternatives. From this perspective, the tax system should strive for neutrality among investments in order to avoid distorting economic decisions. The administrative reason was that a system of generally high tax rates with preferential treatment of particular categories of income creates expensive disputes about whether certain transactions fall within the preferred category. One of the prime examples of this tendency was the development of the tax shelter industry in the United States prior to 1986. An income tax system that is neutral with respect to economic decisions avoids the waste of transaction costs incurred to take advantage of tax nonneutralities.

The basic philosophy behind the Tax Reform Act of 1986 is not universally shared. Groups promoting their own views of good economic policy continue to urge use of the tax system to accomplish their goals. For example, the Bush Administration attempted to convince Congress to substantially lower capital gains rates to stimulate investment. The Council on Competitiveness (1993) has urged adoption of an investment tax credit to improve the competitiveness of certain U.S. industries. And the Clinton Administration's initial tax program included a proposal for a tax credit for incremental investment. In some cases, proposals to favor certain categories of corporate investment are made without a solid grounding in economic theory and empirical analysis (Gravelle 1993).

It has, however, recently been argued that investment in equipment is empirically associated with economic growth, so that an investment tax credit limited to equipment would be justified by the beneficial externalities associated with this type of asset (De Long and Summers 1991 and 1992). If it could indeed be demonstrated that there were significant economic benefits to society that would not be fully valued by private purchasers of equipment, a corporate tax subsidy for this category of investment could be justified as correcting a market failure. To date, however, the empirical basis of the assertion that investment in equipment has a causal relationship with economic growth has not been generally accepted by economists (Auerbach, Hassett, and Oliner 1993). Accordingly, the case for abandoning the principle of tax neutrality remains undemonstrated.

CONCLUSIONS AND RECOMMENDATIONS

There is very little dispute about the defects of the current U.S. corporate income tax system. Its principal distortions include: a disincentive for individuals to invest in new corporate equity; an incentive for corporations to finance new projects by issuing debt or using retained earnings, rather than issuing equity; an incentive to retain, rather than distribute, corporate earnings under certain rate relationships; and an incentive to make distributions in tax-preferred forms. The result of these distortions is an increase in the cost of capital for U.S. companies, as well as legal distinctions that are difficult, if not impossible, to apply in practice. In addition, certain areas of corporate tax law, such as that applicable to mergers and acquisitions, impose considerable transaction costs due to their extraordinary complexity.

Given the defects of current law, which reform alternatives should be pursued? The answer depends largely on the goals considered appropriate for income tax policy at the end of the 20th century because different proposals would accomplish different goals. For example, a corporate cash flow tax would implement the policy goals of taxing income on new corporate investment at an effective corporate rate of zero, thereby creating a tax preference for such income, which would not be taxed to shareholders until distributed. The dividend exclusion preferred by the Treasury in 1992 would, on the other hand, reduce the distortions of current law on the premise that all corporate income should be taxed only once, at a flat rate as it is earned. The limited deduction for dividends on new equity is a response to those distortions that is premised on the primacy of avoiding windfalls to current shareholders.

What then should be the goals of U.S. tax policy with respect to corporate income in the 1990s? Economic theory and practical experience suggest that economic welfare is maximized when the tax system is as neutral as possible among different categories of investment. American political history suggests that Americans want a progressive income tax to be a principal source of federal revenue. If economic neutrality and progressive taxation are accepted as premises for U.S. corporate tax policy at the end of the 20th century, the preferable response to the defects of current law is shareholder credit integration, which is also the approach that has been most widely adopted by other

countries with large developed economies. Under this approach, all corporate income is ultimately taxed once, but only once, at the shareholder's graduated rate. Concerns about the distributional effects of integration, including the possibility of windfalls to current shareholders, could be taken into account in considering financing alternatives.

Shareholder credit integration would be fully consistent with reform of the taxation of corporate mergers and acquisitions, whether along the lines proposed by the ALI or otherwise. It would also be consistent with preferential treatment of certain categories of corporate investments, although the current budgetary situation suggests that any such preference should be supported by a convincing showing of the economic benefits to be realized.

Notes

1. Internal Revenue Code of 1986 (hereinafter I.R.C.) Section 871(h) exempts interest paid to foreign holders of portfolio debt.
2. The reaction of the capital markets to taxation may also affect the incentive to retain or distribute corporate earnings.
3. Countries with fully or partially integrated tax systems include Australia, Canada, France, Germany, Italy, and the United Kingdom. These systems are described in U.S. Treasury (1992a).
4. The author of this paper was also the author of the ALI study.
5. I.R.C. Sections 871, 881. The level of these taxes is a subject for negotiation in bilateral tax treaties.
6. I.R.C. Section 901.
7. Corporate shareholders, on the other hand, would generally prefer to characterize distributions as dividends in order to take advantage of the dividend-received deduction, which reduces multiple taxation of income at the corporate level. I.R.C. Section 243.
8. For an explication and comparison of the two views, see Zodrow (1991) and Halperin (1992).
9. Nor should they be regarded as indicating that the unintegrated corporate tax is the most important source of tax distortions in the economy. For example, Fullerton and Henderson (1989) conclude that distortions among assets were greater than distortions between the corporate and noncorporate sectors under pre-1986 law.
10. The literature on the advantages and disadvantages of personal consumption taxation, as compared with personal income taxation, is extensive. For discussions of the principal issues in the United States, see Andrews (1974), Graetz (1979), Warren (1980), and Bradford (1984).
11. This equivalence was first noted in Brown (1948). In terms of simple algebra, a tax at a rate of t on labor income of I would leave $(1-t)I$ after taxes, which would compound to produce $(1-t)I(1+r)^y$ for consumption if invested at a pre-tax rate of return r for y years. A consumption tax would permit the entire amount of labor income to be invested in the year it was earned, yielding $I(1+r)^y$ after y years and $(1-t)I(1+r)^y$ in after-tax consumption.
12. The exact equivalence in this simple example assumes that interest and tax rates would be the same under the two taxes. For a discussion of these and other assumptions underlying the equivalence, see Graetz (1979).
13. As proposed, the allowance for corporate equity would replace the integration system currently in effect in the United Kingdom.
14. I.R.C. Sections 354-368.
15. The staff of the U.S. Senate Finance Committee subsequently developed legislative recommendations that followed the basic approach of the ALI proposals. (U.S. Congress, 1983 and 1985).
16. Whether shareholders would be taxed would depend on the nature of the consideration received. In general, stock for stock exchanges would not be taxed, on the theory that the underlying investment had not significantly changed.

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