

The Future of the Corporate Tax

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Abstract: This paper discusses three essential challenges of the present economic environment: serious long-term budget imbalances, dramatic increases in income inequality over recent decades, and a discrepancy between national or sub-national government jurisdictions and an increasing global economy. This trio of tough policy challenges necessitates a reevaluation of capital taxation in general, and the corporate tax in particular. Corporate taxation has an important role to play in both protecting the revenue-raising capacity of the income tax system and addressing income disparities. However, the global nature of economic activity requires modernization of corporate taxation; reform of U.S. corporate taxation is long overdue.

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I. Introduction

As the U.S. income tax approaches 100, policy-makers, experts, and the public are clamoring for reform. Over time, many aspects of the tax code have become unwieldy and inefficient, and it is undisputable that one could craft a tax system that collected the requisite revenue in a way that made simultaneous improvements in efficiency, fairness, and simplicity. It is a constant lament of economists that politics too often gets in the way of such reforms: political actors introduce myriad tax law changes that thwart the ivory tower desiderata of experts.¹

The corporate tax in the United States today performs badly by almost any metric, and there is unanimous consensus regarding the need for reform. The U.S. statutory tax rate is relatively high, yet the tax raises less revenue as a share of national income than it does in our peer countries. The rules are mind-numbingly complex, and the treatment of international income raises particularly vexing challenges. The tax generates distortions and inefficiencies on multiple margins: it alters decisions regarding debt versus equity finance, it affects the choice of organizational form, and it alters the nature, location, and reporting of business activity.

Yet achieving a consensus on the ideal corporate tax reform has been difficult for several reasons. The business community wants lower rates and a more generous treatment of international income, yet they are unsurprisingly less interested in measures that would expand the tax base. The public is typically in favor of taxing corporations, yet they are frequently confused about who bears the burden of the tax. And it is hard to

¹ A recent example of the phenomena was the American Jobs Creation Act of 2004. Aside from the repeal of the extra-territorial income exclusion, there was little to recommend the legislation, as discussed in Clausen (2004, 2005).

blame them, since the economics profession shows more confusion on this question than on most. Policy-makers want to be responsive to both the public and the business community, but they face a series of daunting challenges including (i) short-run and long-run budget imbalances, (ii) several decades of economic growth that have occurred amidst dramatic increases in income inequality, such that many households have experienced relatively stagnant wage growth, and (iii) the challenges of policy-making at a national (or subnational) level of jurisdiction while living in an increasingly integrated world economy.

This paper will begin by discussing these key challenges facing U.S. policy-makers. Section III will then discuss the role of capital taxation, considering how theories of capital taxation inform our understanding of policy tradeoffs. Once the desirability of taxing capital is established, Section IV discusses the role of corporate taxation in the context of today's policy challenges. Finally, section V will examine policy alternatives for collecting the corporate taxation in a modern global economy, focusing in particular on the issues surrounding the taxation of international corporate income.

II. U.S. Tax Policy Challenges

The current U.S. policy environment offers a trifecta of daunting challenges: serious long-term budget imbalances, dramatic increases in income inequality over the previous decades, and a mismatch between the jurisdictions of tax policy choices and economic actors that often operate beyond national boundaries. This combination of economic challenges proves particularly vexing with respect to capital taxation, since

capital taxation can be an important source of revenue both directly and indirectly (by protecting other aspects of the income tax base), capital income is distributed far less equally across society than labor income, and capital income is considered more internationally mobile than labor income.²

Consider first U.S. budgetary pressures. In addition to recent short-term budget deficits driven in large part by the recent financial crisis and economic slowdown, there is a far larger long-term mismatch between forecasts of revenues and spending at the federal level. Rising healthcare costs and demographic factors have dramatically increased forecasted spending on Medicare and Medicaid. According to the most recent Congressional Budget Office [CBO] long-term budget outlook, combined federal spending on Medicare, Medicaid and Social Security is predicted to rise by 6 percentage points of GDP over the coming 25 years.³ Unless dramatic changes to existing tax policies are allowed, public debt will increase dramatically. The CBO “alternative fiscal scenario” assumes current policies are allowed to continue; these policies include the Bush tax cuts and short-term patches that prevent the alternative minimum tax from affecting many taxpayers. Under this forecast, public debt rises dramatically, to 90% of GDP by 2022, and approaching 200% of GDP by 2037. Of course, these forecasts raise many questions regarding the ideal baseline scenario as well as assumptions regarding growth in health care costs and other components of government spending. But there is little doubt that long-term budget pressures are quite serious.

Increasing income inequality is another important policy challenge. According to the U.S. Census Bureau, the share of income received by the top 5% of households has

² Although the common view is that capital income is more internationally mobile than labor income, some challenge that perspective. See, e.g., Avi-Yonah and Ohrn (2012).

³ See CBO (2012), p.1.

increased from 16.5% in 1980 to 21.3% in 2010, 30 years later. This nearly mirrors the increase for the top quintile, from 44.1% to 50.2%, implying that most of the increased share of income at the top has gone to the top 5% of households. The mean household in the top 5% saw their incomes increase (in constant 2010 dollars) by 64% over the previous three decades, from about \$175,000 to about \$288,000, while the mean household in the middle quintile saw income gains of only 11% over this period, from about \$45,000 to about \$49,000. When one accounts for the extra hours worked by U.S. households during this time period, and particularly the increased employment by secondary earners, these gains in the middle of the distribution are even more paltry.⁴

The distribution of wealth is far more skewed than the distribution of household income. In 2010, the top 5% of households receive 21% of income, but they receive 85% of capital gains and 65% of dividends.⁵ Indeed, capital income is far more concentrated than regular income, and capital income is also becoming more concentrated over time. For example, the highest income 400 taxpayers received 16% of all long-term capital gains in 2009; this share has been increasing since the IRS began collecting these data in 1992, when the share of the richest 400 taxpayers was about under 6% of all long-term capital gains.⁶

These changes occur amidst a steady decline in labor's share of national income, as documented in Jacobsen and Occhino (2012). While three separate data sources employ different measures of labor's share, they all confirm this decline in recent decades. Data from the U.S. Bureau of Economic Analysis show labor's share declining

⁴ See Congressional Budget Office (2011). *Changes in the Distribution of Workers' Annual Earnings Between 1979 and 2009*.

⁵ Calculations are from data of the Tax Policy Center. See <http://www.taxpolicycenter.org/T09-0490>.

⁶ See data summarized in Burman (2012), Figure 2.

from about 67% to about 64% over the prior decade, data from the Bureau of Labor Statistics show the share declining from about 63% to 58% (from the early 1980s to recently), and data from the Congressional Budget Office show labor's share of income decreasing from 75% in 1979 to about 67% in 2007.

The recent evolution of the distribution of income in the United States raises concerns for several reasons. First, to the extent that gains from economic growth do not benefit the society at large, that is clearly a big concern. But even if the middle class is making small real gains in income, the dramatic increase in income inequality is still a concern. Income confers status, power, and access to a better starting point (schooling, health, etc.) for one's progeny. Such large increases in income inequality raise concerns about the quality of our democracy and the availability of opportunity.

A final tax policy challenge is the mismatch between the jurisdiction of policy-makers and more globally integrated economic actors. Figures 1 and 2 show two measures of global integration, ratios of international trade to GDP and ratios of foreign direct investment flows [FDI] to GDP. In both Figures, it is clear that the United States has become substantially more integrated with the world economy in recent decades; trade to GDP ratios have tripled over the previous 40 years, and FDI to GDP ratios have tripled in the previous 20 years. Further, measures of cross-border portfolio investment and international capital mobility have also shown even more substantial increases. Figure 3 shows the total stock of foreign assets and liabilities (i.e., the sum all U.S. assets held by foreigners and all foreign assets held U.S. persons) relative to (two times) GDP. In 2011, U.S. entities owned \$21 trillion in foreign assets and foreign entities owned \$25 trillion in U.S. assets, relative to a U.S. GDP of \$15 trillion. Thus, both assets and

liabilities are well in excess of the size of the U.S. economy. This ratio has increased more than seven-fold since 1976, and growth has been particularly rapid over the previous decade.

Yet despite the fact that goods, services, and investments often flow relatively freely across national boundaries, policy-makers' authority is typically confined to national or sub-national jurisdictions. Perhaps the European Union is the exception that proves the rule. This set of nations has undertaken substantial economic integration, even in some cases adopting the same currency, yet most tax and spending decisions are still taken at a national or sub-national level. The EU budget presently stands at only about 1.1% of EU GDP.⁷

III. Capital Taxation

As noted, this combination of economic challenges proves particularly vexing with respect to capital taxation. While capital taxation can be an important source of revenue and progressivity, there is some concern that capital taxation may not be efficient. Indeed, there is a tradition of models in the public finance literature that suggest that the optimal capital tax rate is zero. The logic behind these models is that capital taxation will reduce the future stock of capital, investment in new production, and the growth rate of the economy. The zero tax rate result is due to the highly distortionary nature of capital taxes over time, as discussed in Auerbach and Hines (2002).

The seminal papers in this area are Judd (1985), Chamley (1986), and Atkinson and Stiglitz (1976); subsequent analysis by Jones, Manuelli, and Rossi (1997), Atkeson, Chari, and Kehoe (1999) and Chari and Kehoe (1999) have shown that the main result is

⁷ See http://ec.europa.eu/budget/explained/faq/faq_en.cfm#2011, accessed August 20, 2012.

robust to a number of model extensions. Yet aspects of these canonical models are highly unrealistic, including infinitely lived households, perfect foresight, perfect capital markets, and so on. Further, recent theoretical work has suggested channels whereby there is important role for positive capital taxes, often at rates similar to what we observe in practice.

For example, Conesa, Kitao, and Krueger (2009) take into account incomplete capital markets and an explicit life-cycle structure to savings decisions. Their model generates an implied optimal capital tax rate of 36%, and the nature of their result is robust to changes in key economic parameters. Piketty and Saez (2012) employ a model with an explicit role for inheritance, noting that bequest taxation is optimal when labor income is no longer the unique determinant of lifetime incomes; the optimal inheritance tax is about 50-60% in their model. Together with imperfect capital markets and uninsurable idiosyncratic shocks to rates of return, the model also implies an optimal capital tax due to uninsurable uncertainty about future returns, at a rate that may exceed the optimal labor income tax.

Farhi, Sleet, Werning, and Yeltekin (2012) also suggest a political economy rationale for positive capital taxation. In this model, large degrees of unchecked wealth inequality generate political demands for extreme expropriation capital taxes. However, in a dynamic game, these extreme outcomes can be avoided through more moderate levels of capital taxation over time, and the optimal capital tax schedule is progressive.

These newer models have many attractive features. First, they match the reality on the ground far more than the prior literature that emphasized the optimality of zero tax rates on capital. As Piketty and Saez note, the models of that prior literature imply that

economists should support the elimination of all inheritance taxes, property taxes, corporate profit taxes, and taxes on dividends and capital gains. However, most economists would not recommend such a dramatic agenda, and most countries have in practice levied substantial taxes on capital, of 8-9% of GDP in the United States and the European Union.⁸

Second, in contrast to the implications of the zero capital tax literature, capital taxes do not appear to have the predicated large effects on the capital stock or on growth. Despite a wide variety of capital tax policy experiments, there remains little cross-country empirical evidence of large growth effects from lower taxes on capital. A recent study by Djankov et al (2010) does consider the impact of corporate taxation on investment using cross-country data, but their analysis is subject to a number of key caveats.⁹ Indeed, as noted in Piketty and Saez (2012), capital to output ratios have been remarkably stable over time despite changes in tax policy.¹⁰

Third, there is little evidence that savings rates are sufficiently sensitive to tax policy parameters to generate the zero optimal capital tax result. Evidence from the behavioral literature suggests that household savings decisions are heavily influenced by psychological elements and minor transaction costs, indicating little support for the perfect foresight models. Also, bequests are left for many reasons, such as accidental and

⁸ See data provided in the introduction of Piketty and Saez (2012).

⁹ As they note, other studies do not typically use cross-country analysis. In their analysis, they employ a cross-section of 85 countries in 2004. They find that effective tax rates, but not statutory rates, have a statistically significant effect on overall investment. Yet the influence of effective tax rates on investment is still subject to caveats: (i) the absence of time series variation makes it impossible to control for country-specific fixed effects, (ii) the effect loses statistical significance when a complete set of control variables are added, and (iii) the effect loses statistical significance if Bolivia is excluded from the analysis, as noted by Gravelle and Hungerford (2011).

¹⁰ See Piketty and Saez (2012), page 6.

altruistic motivations, and these sorts of motivations also interfere with the zero capital tax optimality result.

Beyond the unrealistic features and predictions of the zero optimal capital tax literature, there are also several pragmatic reasons for taxing capital. First, in practice, it can be hard to distinguish capital and labor income, particularly for high-income and/or self-employed individuals that have discretion regarding the form in which they receive their income. Indeed, there is evidence that shifting between capital and labor tax bases takes place in response to tax rate differentials, as shown by Pirttila and Selin (2011), Gordon and Slemrod (2000), and Gordon and MacKie-Mason (1995). Thus, a zero capital tax rate, or merely a significantly lower capital tax rate than the labor tax rate, runs the risk of eviscerating the labor income tax base through income shifting.

Second, there are likely to be positive correlations between earning opportunities and savings propensities, and these correlations can render capital taxation efficient. Third, there are also other prominent features of the world that can generate a useful role for capital taxation, such as borrowing constraints and the uncertainty of future earnings; these considerations are discussed in more detail in Diamond and Saez (2011). Fourth, capital income is in part a reward for postponing consumption, or savings, but a substantial portion of capital income is also likely to be rents, as argued by Stiglitz (2012).¹¹ The efficiency considerations of taxing rents are far from dire; indeed, it may be optimal to tax away rents as much as possible since taxes on rents are nondistortionary, as explained in Dasgupta and Stiglitz (1971).

Finally, even though capital taxation may be efficient for the reasons described above, it is also important to note that capital taxation has an essential role to play in

¹¹ See especially arguments within chapter 4.

terms of progressivity, given the fact that capital income is so highly concentrated, as shown in Section II above.

Still, one pragmatic consideration argues against capital taxation. In particular, if capital is highly mobile internationally, capital may avoid taxation by moving in response to tax rate differences among jurisdictions, thus shifting the burden of taxation onto immobile factors like labor and land. This consideration has important policy implications that are discussed in sections IV and V below.

IV. Corporate Taxation in the Context of Today's Policy Challenges

The corporate tax has an important role to play in addressing today's tax policy challenges, as it can be an important source of government revenue and tax progressivity. However, to understand the role of the corporate tax in a progressive tax system, one must first establish the incidence of the corporate tax. In a global economy, this question is particularly important. While early models of corporate tax incidence such as Harberger (1962) show that capital bears the tax in a general equilibrium framework, allowing free capital mobility in an open-economy, as in Harberger (1995,2008), Gravelle and Smetters (2006), or Randolph (2006), puts some or all of the tax burden onto labor.

The open-economy general equilibrium tax incidence mechanism works in a straightforward fashion. Corporate tax rate discrepancies between countries cause a movement of capital from high-tax to low-tax jurisdictions. In high-tax jurisdictions, the reduction in the capital stock lowers the marginal product of labor and the wage, with the opposite effects in low-tax jurisdictions. The magnitude of wage effects depends on a

number of key economic parameters, as discussed in Gravelle (2010): the degree of capital mobility, the size of the country, product substitution elasticities, the relative capital intensity of the corporate sector, and the degree of factor substitution. Beyond uncertainty regarding these parameters, additional theoretical ambiguity comes from important real-world considerations that are left out of these complicated general equilibrium models. Such considerations include residence-based aspects of the corporate tax, subsidies for debt-financed investment (due to accelerated depreciation and the deductibility of interest payments), dynamic considerations, imperfect competition, the role of bargaining, and policy interactions among countries.

The combination of uncertain economic parameters within open-economy general-equilibrium tax incidence models and several important factors that are left out of the models entirely, or modeled elsewhere, make it quite difficult to establish the true nature of corporate tax incidence using theory alone. Yet empirical work in this area suffers from essential limitations. Many papers do not engage the theoretical mechanisms of the open-economy general equilibrium tax incidence models. Some papers rely instead of partial correlations between corporate tax rates and wages, raising concerns regarding spurious correlations and omitted variables, or other papers consider other mechanisms, such as rent-sharing. Further, much of this body of empirical work has been demonstrated to be insufficiently robust to relatively minor changes in specification. For a more detailed discussion of this body of work, see Gravelle and Hungerford (2008, 2011) and the survey within Clausing (2012).

New evidence is provided in Clausing (2012, 2013). Using the most comprehensive data sets to date, multiple methods, and many robustness and

specification alternatives, this work shows no clear robust relationship between corporate tax policy parameters and wages. These analyses are based on data from OECD countries over the prior three decades. While it remains possible that labor bears some of the corporate tax burden, and the relationship is just not discernible using aggregate data, there are also several reasons why capital may continue to bear the corporate tax burden, described in detail in Clausing (2013).

Indeed, globalization itself provides two mechanisms through which workers in high corporate tax countries may not be disadvantaged due to capital outflows. First, since corporations are mere intermediaries in global capital markets in which a wide assortment of investors with different tax treatments invest, tax policy changes could affect the ownership and financing patterns of assets more than they affect the aggregate level of investment in different countries.¹² Since wages depend on the capital stock more than they depend on the ownership and financing structure of the capital stock, this consideration is likely to diminish the wage effects of corporate tax rate differences among countries. Second, global tax avoidance by multinational firms has become more sophisticated and pervasive, generating an increased divergence between the location of economic activity (such as investment, employment, and sales) and the location of income for tax purposes.¹³ This divergence could reduce the wage effects of relative

¹² As noted above, somewhat surprisingly, there is little cross-country evidence on the relationship between corporate tax variables and *overall* investment or capital stocks outcomes, despite a large literature on the relationship between corporate taxation and foreign direct investment, reviewed in the meta-analyses of de Mooij (2005) and de Mooij and Ederveen (2003 and 2008). Djankov et al (2010) note that prior studies of corporate taxation and investment do not typically use cross-country analysis. In their analysis, they employ a cross-section of 85 countries in 2004. Djankov et al (2010) is discussed above, in section III and footnote 9.

¹³ I have discussed these trends at great length in prior work, including Clausing (2009, 2011), Avi-Yonah and Clausing (2008), and Avi-Yonah, Clausing, and Durst (2009).

corporate tax rates, since internationally agile firms can move income without commensurate movements of investment and jobs. Indeed, many of the most global companies have become increasingly adept at the creation of stateless income, as discussed in Kleinbard (2011). If firms can respond to tax differences among countries through *financial* or *organizational* decisions, this will lower the tax sensitivity of *real* activity, thus reducing adverse effects on labor associated from tax-induced reductions in the capital stock.

Finally, it is important to note that the corporate tax may also fall on profits, rather than on normal returns to capital. As Auerbach (2006) notes, if the corporate tax is actually a tax on rents, then it would not impose distortions on capital investment and would be borne by shareholders. The firms that pay corporate tax are very large, possibly suggesting a role for economies of scale and considerations of imperfect competition that may generate rents. For example, the IRS reports that in 2008, one fiftieth of one percent of corporations remit 64% of the corporate tax in the United States.¹⁴

The above considerations imply that taxing corporations in a global economy may be particularly challenging, due to the mobility of capital and taxable income. This raises important policy conundrums that will be tackled in the following section. Yet the preponderance of evidence suggests that corporate taxes are still likely to fall on either capital or shareholders, thus implying that corporate taxation has an important role in affecting the progressivity of the tax system.

Currently, for distribution tables, the corporate tax is allocated by the U.S. Treasury such that 82% of the burden is assigned to capital and 18% to labor. As

¹⁴ See <http://www.irs.gov/taxstats/article/0,,id=170743,00.html>, Table 22, last accessed 24 July 2012.

described in Cronin et al (2012), the U.S. Treasury model identifies the share of the corporate tax that falls on normal versus super-normal returns (37% and 63%, respectively), and it then allocates the normal portion of the corporate tax 50/50 to capital/labor, and the super-normal portion entirely to capital. The Congressional Budget Office allocates the corporate tax entirely to capital income; corporate income taxes are borne by owners of capital in proportion to their income from capital. These assumptions are described in Congressional Budget Office (2011). The Joint Committee on Taxation has not distributed the corporate income tax due to the uncertainty regarding corporate tax incidence; in prior work, it was distributed to capital. Finally, the nonpartisan Tax Policy Center has done independent tax policy distribution tables since 2003. They assigned the corporate tax to capital income until September 2012; presently, they assign 80% of the corporate tax to capital income.

Table 5 of Cronin et al (2012) is reproduced below. This table indicates how different assumptions about the incidence of the corporate tax affect the distributional effects of the tax. If capital bears all of the corporate tax, the top 1% pay 50% of the tax and the top quintile pays 81% of the tax; if capital bears 18% of the corporate tax (the “new methodology” column), then the top 1% pays 43% of the corporate tax and the top quintile pays 76% of the corporate tax. Even if one assumes that the tax falls 50% on labor, which seems unlikely given the arguments above, the corporate tax remains highly progressive, with the top 1% paying 31% of the tax and the top quintile paying 69% of the tax.

Table 5
 Percent Distribution of the Corporate Income Tax Under Alternate Assumptions
 (2012 Income Levels)

Family Cash Income Quintile	New Methodology	100 % Positive Capital	50 % Positive Capital & 50% Labor
Lowest	1.1	0.8	1.4
Second	3.2	2.3	4.6
Third	6.6	5.2	8.8
Fourth	12.0	9.7	15.8
Highest	76.0	80.9	68.9
Total	100.0	100.0	100.0
Top 10	66.1	72.8	56.0
Top 5	58.0	65.6	46.2
Top 1	43.0	49.8	30.6

As noted above, dividends and capital gains income is also very concentrated at the top tiers of the income distribution. Given the current favorable treatment of dividends and capital gains income, a well-functioning corporate tax has a particularly important role to play in a progressive tax system.

The corporate tax is also an important source of U.S. government revenue, at both the state and federal levels. Figure 4 shows that federal corporate tax revenues have fluctuated in recent years; they average about 10% of federal revenues. Figure 5 shows both federal corporate tax revenues and corporate tax revenues for all levels of government (including state and local) as a share of GDP over recent decades. Lately, corporate revenues have averaged about 2% of GDP. Thus, while the corporate tax was an even more important source of revenue historically, it is still a significant source of

revenue. Notably, it is a larger source of revenue in other high-income OECD countries, as shown in Figure 6.

Not only is the corporate tax an important source of revenue on its own, but it is perhaps even more important in protecting revenues from the personal income tax, particularly considering today's reduced tax rates on dividends and capital gains. Without a corporate tax, corporate form could provide a huge tax-sheltering opportunity, particularly for high-income individuals. This point is explained nicely in Gravelle and Hungerford (2011).¹⁵ As discussed in Section III, there is evidence of shifting between capital and labor tax bases in response to such tax rate differentials, so policy makers should be cautious regarding the broader revenue consequences associated with lower corporate tax rates, which extend beyond the corporate tax base.

V. Collecting the Corporate Tax in Today's Economy¹⁶

In the United States, there is wide dissatisfaction with the current corporate tax system, and many reforms have been suggested. Most proposals suggest a lower corporate tax rate, in the context of steadily lower corporate tax rates among other OECD countries. Figure 7 shows the path of statutory corporate tax rates for OECD countries over the previous 30 years. Still, despite declining rates, corporate tax revenues have not declined in typical OECD countries, as shown in Figure 6. Indeed, many corporate tax rate cuts have been accompanied by measures to broaden the corporate tax base.

¹⁵ As they calculate, sheltering opportunities exist when corporate rates fall below personal income tax rates and corporations retain a large share of their earnings. For example, a reduced corporate tax rate of 27% would provide sheltering opportunities for corporations that distribute less than 73% of their earnings.

¹⁶ Portions of this section are excerpted from Clausing (2013), forthcoming.

This section considers several categories of reform options. First, incremental improvements can address the many distortions introduced by the peculiar form of the corporate tax. Second, issues surrounding organizational form are addressed. Third, options for reforming the international taxation of multinational firms are considered.

Incremental Improvements

There are many inefficiencies introduced by particular features of the corporate tax. For example, in the United States, accelerated depreciation rules, production income deductions, and other special rules, credits, and deductions create an uneven treatment among different corporate sectors. The different treatment of debt and equity is also a critical distortion. Debt-financed investments receive a small subsidy through the corporate tax system, since interest payments are deductible for the firm (although interest receipts are taxable at the individual level), whereas equity investments may be taxed at a rate above the corporate rate, since dividends and capital gains are taxed at the personal level, albeit at lower rates.

Some of these distortions can be addressed through simple base-broadening, rate-lowering reforms. Lower rates reduce the debt/equity distortion, alongside other distortions of the tax, and lower rates could be accompanied by reforms that reduced or eliminated the relative preferences caused by accelerated depreciation rules, the production income deduction, and other special tax deductions and credits. Also, some suggest disallowing the inflationary component of interest deductions. This would both raise tax revenue and lower the debt/equity distortion.

Organizational Form

Another major issue surrounding the corporate tax is the inefficiency associated with distorting the organizational form of firm activity. Depending on the relative tax rates of the top personal income tax rate, the corporate tax rate, and the tax rates on dividends and capital gains, entrepreneurial activity may be relatively tax advantaged in some types of organizational form. At present, non-corporate form is typically tax-preferred relative to corporate form. These distortions would also be reduced by rate-lowering, base-broadening reforms.¹⁷

A related concern is the double taxation of corporate income, first at the corporate level, and then at the personal level. Of course, aspects of double-taxation debates are silly, since the overall level of tax burden surely matters more than the number of taxes. For example, most would prefer two 5% taxes on their capital income to one 20% tax. However, resolving the double-taxation issue is more tricky than it appears at first glance. If all taxation is moved to the personal level, some capital income that is held tax-free in pensions, endowments, and non-profits would go untaxed. Gravelle and Hungerford (2011) note that over 50% of individual passive income is held in tax-exempt form through pensions, retirement accounts, life insurance annuities, and non-profits.

Still, raising the tax rate on personal dividends and capital gains while lowering the corporate tax rate may make sense. It would both lessen the distortions associated with the corporate tax and increase the ease of enforcement, since it is likely more

¹⁷ Still, if the corporate rate fell much below the top individual rate, the corporate form would provide tax-sheltering opportunities.

difficult for individuals to avoid capital taxes than it is for corporations.¹⁸ A similar plan has been discussed in Altshuler, Harris, and Toder (2010).

Another option for reducing possible double taxation of corporate equity income would be to tax capital gains and dividend income fully, but allow a credit for taxes already paid at the corporate level, as proposed by Burman (2003). This is conceptually satisfying, although there may be concerns regarding the complexity of this approach. Recently, the Mirrlees Review on tax reform in the United Kingdom, discussed in Mirrlees et al (2012), suggests a similar approach to integration, since there would be reduced tax rates for dividends and capital gains on shares where corporate tax had already been paid.

However, the Mirrlees review also suggests that the normal return to capital be entirely exempt from taxation. It achieves this through a combination of policy changes that include an allowance for corporate equity (ACE) within the corporate tax. This feature would address the debt/equity distortion by providing a similar tax preference for equity financed investments. The intention is to exempt the normal return to capital from taxation and only tax excess returns. Auerbach (2012) and Devereux (2012) discuss the Mirrlees review. As Auerbach notes, it is not clear that such a generous treatment of the normal return to capital is justified, given recent developments in the theory of capital taxation, discussed in Section III above. In addition, Devereux regrets that the Mirrlees review does not address the difficult problems associated with the taxation of internationally mobile corporate income.

¹⁸ Most assume that corporations have more opportunities for tax avoidance than individuals do, although estimates of the world's wealth in tax havens are large. See, e.g., Zucman (2012), who estimates that 8% of world financial wealth of households is held in tax havens, most of it unrecorded.

International Tax Reforms

There is a substantial consensus that the U.S. system of taxing international income is particularly flawed. Rules are mind-numbingly complex, enforcement, administration and compliance are very costly, the statutory corporate tax rate is high, and U.S. corporate tax revenues are a relatively low share of GDP in comparison with other OECD countries.

Further, the system itself encourages the shifting of both profits and the underlying sources of economic activity to low-tax countries. The United States uses a worldwide system of taxation, nominally taxing international income, yet deferral of U.S. taxation on foreign income until repatriation, cross-crediting, and other rules lighten the taxation of international income substantially.

However, there is more consensus on the need for international reform than there is on the underlying characteristics of possible reforms. Possible reforms discussed here include (1) moving to a territorial system, (2) ending or limiting the advantages of deferral, and (3) a formulary apportionment system for taxing international income.

1. Territorial Systems

Many countries use territorial systems of international taxation that exempt foreign income from taxation, and two prominent countries – the United Kingdom and Japan – have recently adopted territorial systems of taxation. Many in the United States have argued that adoption of a territorial system is required in order for U.S. based multinational firms to compete with those in other countries. While territorial systems

have some merits, such arguments ignore a crucial fact: foreign territorial systems often tax foreign income far more heavily than the present U.S. system.

For example, under typical territorial systems in other countries, some foreign income is taxed *currently*, even if it is not repatriated. Japan taxes foreign income currently when the foreign tax rate is less than 20%; in other countries, foreign income is taxed currently if the host country tax rate is less than $\frac{1}{2}$ or $\frac{3}{4}$ of the home country rate.¹⁹ In comparison, the U.S. system facilitates the creation of “stateless income” through check the box regulations and other rules that allow firms to generate income that is not taxed anywhere. Kleinbard (2011) discusses such features of the U.S. tax system in detail. He “rejects as inconsistent with the data any suggestion that current U.S. law renders U.S. multinational firms less competitive when compared with their territorial-based competitors.”

Indeed, it is possible to create a territorial tax system that has a higher tax burden on foreign income than the present U.S. system, making one question whether moving toward a territorial system would enhance the competitiveness of U.S. multinational firms. However, many multinational firms favor a territorial system that will, on net, lighten the U.S. tax treatment of foreign income, and the political process may be far more likely to generate a “cartoon” territorial system than a “tough” one. While such a system would reduce concerns that repatriation is discouraged by the U.S. worldwide

¹⁹ See Joint Committee on Taxation. “Background and Selected Issues Related to the U.S. International Tax System and Systems That Exempt Foreign Business Income.” May 20, 2011. JCX-33-11.

system, it would also dramatically relax the remaining constraint on shifting income abroad, likely generating large revenue losses.²⁰

2. Ending or Limiting Deferral

Proposals to end or limit deferral of U.S. taxation on foreign income also come in many flavors, but most would lower the corporate tax rate alongside measures that limit the advantages of deferral. Examples include the proposed legislation of Wyden (D-OR) and Coats (R-IN) that would repeal deferral and lower the corporate rate to 24% as well as the reforms suggested by the Obama Administration that would put in place a minimum tax on foreign income earned in low-tax countries alongside a lower corporate tax rate. Grubert and Altshuler (2008) have also suggested a burden-neutral worldwide taxation plan that would combine the current taxation of foreign income (ending deferral) and a 28% corporate tax rate.

Kleinbard (2011), after discussing the scope and magnitude of the stateless income problem, ultimately recommends a worldwide approach that would tax foreign earnings currently, under a residence-based system where firms are required to consolidate the earnings of foreign subsidiaries. He also wrestles with the possibility of a territorial tax system, but he concludes that it would be fundamentally impossible in a modern economy to determine the true source of income when so much of multinational firms' profits are generated by intangible assets and internal synergies. This approach,

²⁰ Still, one should remember that international corporate tax avoidance comes with a silver lining. If multinational firms can move income without moving underlying investments, corporate tax rate differences among countries need not depress wages in high-corporate tax countries. Mobile firms simply avoid the tax, while immobile firms are not able to respond to taxation in a way that lowers worker wages. Still, a territorial system would generally make multinational firms more tax-sensitive in their real investments abroad, and if this is not undone by tax avoidance or clientele effects, the enhanced tax sensitivity of real investments can have negative effects on workers.

however, does place importance on adequate legal definitions of residency as well as determining the ideal threshold for consolidation; Kleinbard also recommends that such a proposal be combined with a lower corporate tax rate.

These proposals would have many benefits relative to the status quo. In particular, they reduce the inefficiencies and distortions of the corporate tax by lowering the rate, yet they simultaneously reduce the incentive to shift income and economic activities to low-tax countries. In terms of the corporate tax incidence question, the lower tax rate and the curtailing of deferral would both lower the incentive to move real investments abroad.

3. Formulary Apportionment

In prior work, I have extensively discussed the advantages of a formulary apportionment system as well as possible drawbacks and how they might be addressed. Under a formulary system, worldwide income is allocated to individual countries by a formula that reflects their real economic activities. This stands in contrast to separate accounting systems that require firms to separately account for their income and expenses in each country.

If the United States adopted a formulary system, multinational firms would pay U.S. taxes on the share of its worldwide income that is allocated to the United States by the formula. One common formula would equally weight asset, sales, and payroll shares in the United States. An essential advantage of the formulary approach is that it provides a concrete way for determining the source of international income and it is not sensitive to arbitrary features of corporate behavior such as a firm's declared state of residence or their organizational structure.

Further, the factors in the formula are real economic activities rather than financial determinations. As summarized by Slemrod and Bakija (2008) and Auerbach and Slemrod (1997), there is a vast amount of empirical research on taxation that suggests a hierarchy of behavioral responses. Taxpayers are most responsive when the timing of transactions affects taxation; taxpayers are also responsive in undertaking financial or accounting responses to taxation; real economic decisions concerning employment or investment are far less responsive to taxation. As demonstrated in Figure 8, there is a similar pattern of tax response for U.S. multinational firms and their affiliates. This figure clearly shows that disproportionate amounts of income are booked in low-tax country destinations, whereas countries with high shares of foreign employment are not necessarily low-tax countries.

A detailed discussion of the advantages and disadvantages of a formulary approach is included in my prior work, and space does not allow more discussion here.²¹ However, the advantages of a formulary approach come with an important drawback. Since formulary apportionment would base tax liabilities on the factors in the formula, it would increase the *real* responsiveness to tax differences among countries, thus exacerbating the possible adverse effects associated with a reallocation of capital stock due to tax rate differences among countries. Thus, while formulary approaches would dramatically reduce international tax avoidance due to accounting manipulations of the source of income, the silver lining of tax avoidance would also be reduced, since mobile multinational firms could become more tax sensitive in their real decisions. For this reason, Avi-Yonah and Clausing (2008) suggest a formula that is based solely on the

²¹ This work includes Clausing (2009, 2011), Avi-Yonah and Clausing (2008), and Avi-Yonah, Clausing, and Durst (2009).

destination of sales factor, and Avi-Yonah, Clausing and Durst (2009) suggest a formulary profit-split method that also relies on a sales-based formula. With carefully crafted legislative implementation, these types of approaches lessen concerns regarding increased real responses to tax rate differences under a formulary approach.

V. Conclusion

This paper has argued that there is still a vitally important role for the corporate tax in the contemporary U.S. economy. Despite the fact that the economy is far more globally integrated than it was in decades past, there is no evidence that the corporate tax is now falling on labor. And despite the fact that old models of capital taxation argue against positive capital taxation, new models with far more realistic features suggest that capital taxation is not particularly inefficient in comparison to other taxes.

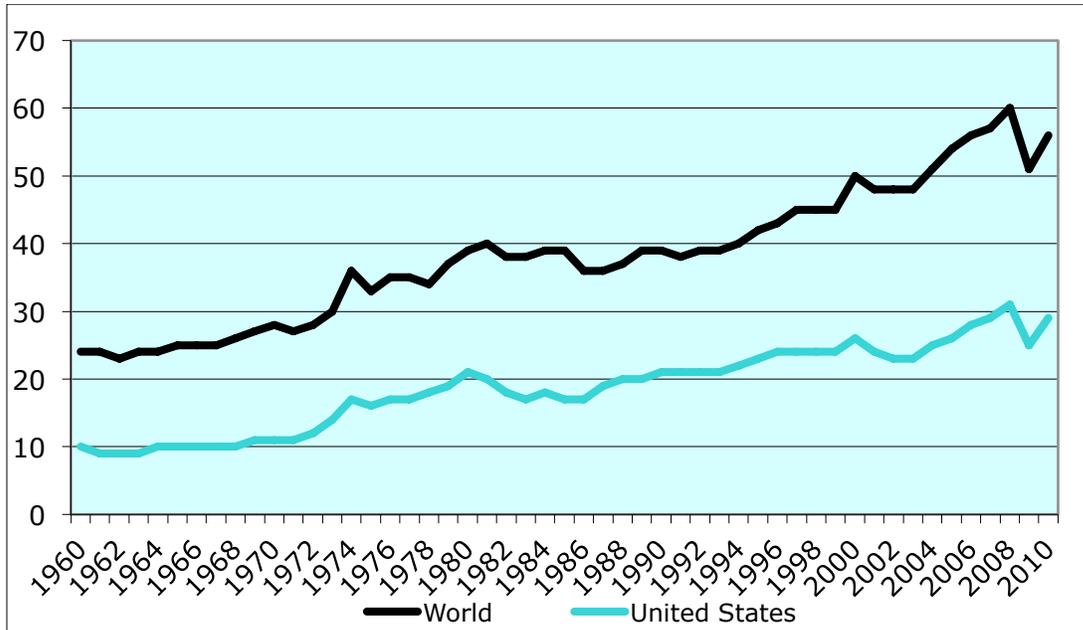
Thus, a healthy corporate tax can fulfill an important role in both generating tax revenue on its own and protecting the individual income tax base from abuse. In addition, given the dramatically skewed distribution of capital income, alongside decades of recent U.S. economic growth that has predominantly benefited those in the top tiers of the income distribution, corporate taxation has an essential role to play in a progressive tax system.

Finally, while the modern U.S. corporate tax is in desperate need of reform, there are many reform options that would improve the status quo. Even a simple rate-lowering, base-broadening reform would be welcome, but there are also ways to reduce distortions to organizational form as well as reforms that would address the seemingly intractable problem of taxing international business income. Together, these reforms can help create

a corporate tax that is both less distortionary and far more suited to an internationally integrated economy. With luck, the next century of the income tax will witness just such progress.

Figure 1: Trade to GDP Ratios

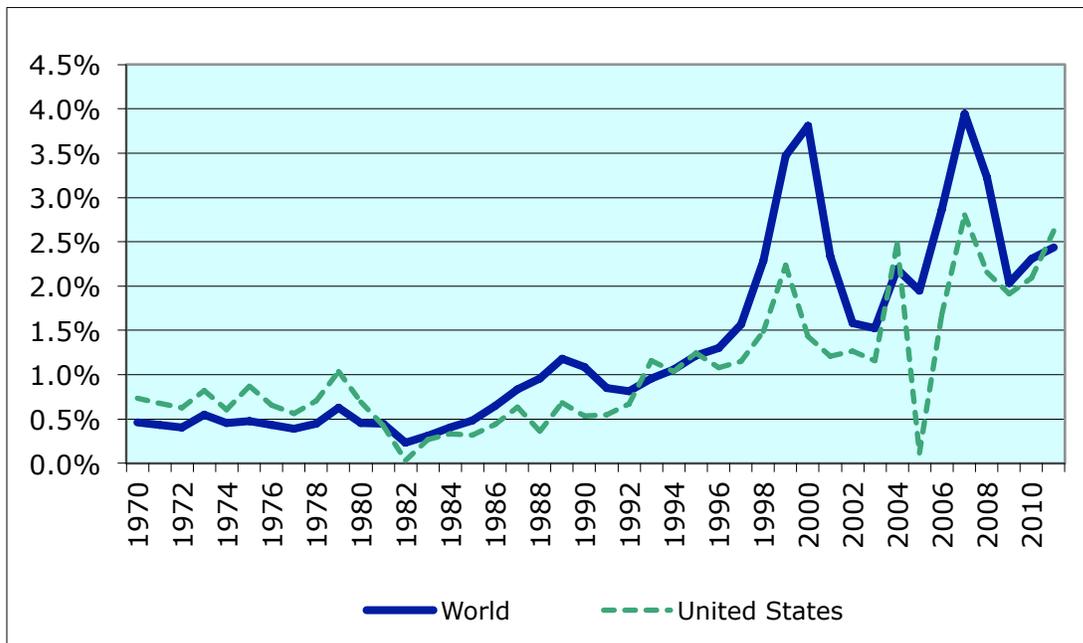
(Exports and Imports relative to GDP)



Data are from the World Bank's *World Development Indicators*.

Figure 2: Foreign Direct Investment

(Outward Foreign Direct Investment Flows, as a share of GDP)



Data are from UNCTAD and are available at <http://unctad.org/en/Pages/Statistics.aspx/FDI/>.

Figure 3: Gross Foreign Assets and Liabilities Relative to GDP
(Gross Foreign Assets Held by U.S. + Gross U.S. Assets Held by Foreigners / (2*GDP))

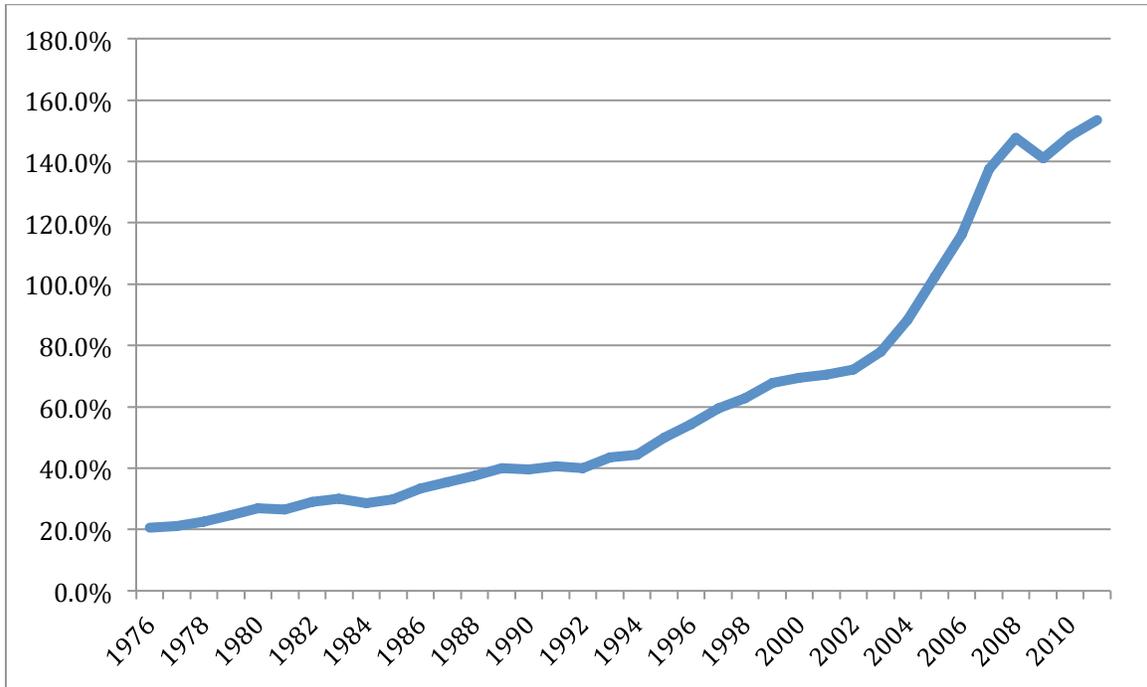
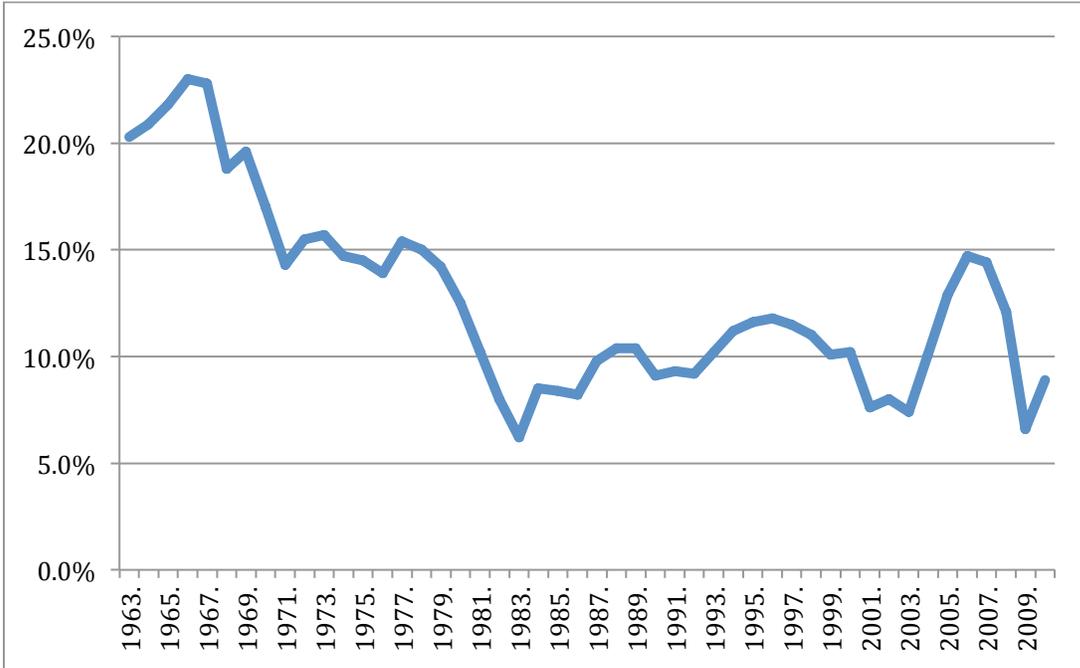
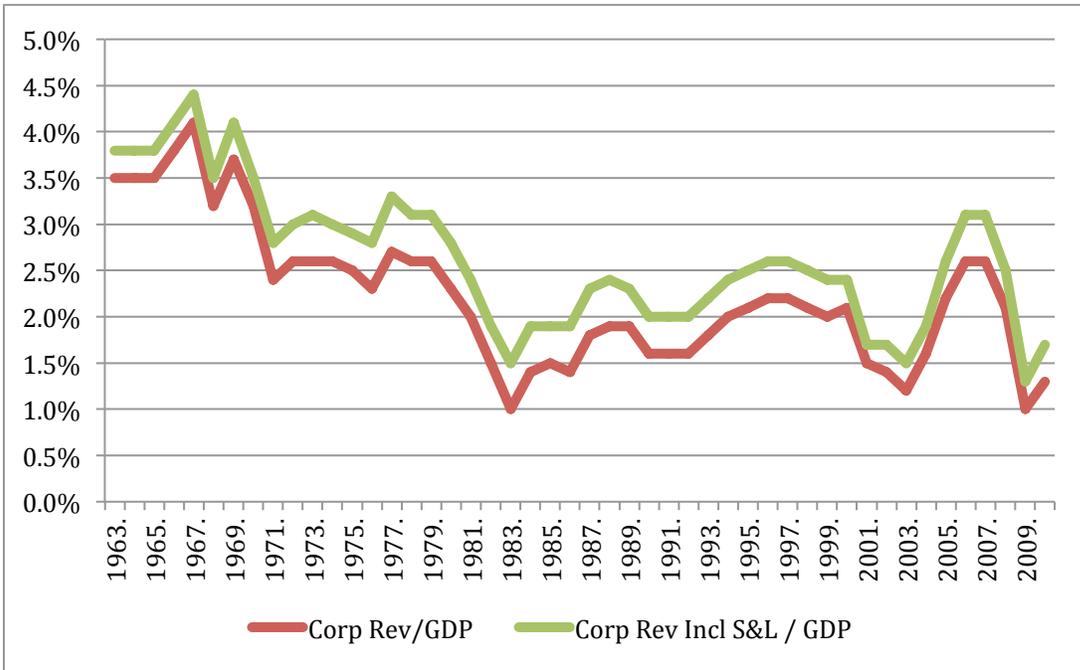


Figure 4: Federal Corporate Tax Revenue / Total Federal Receipts



Source: Economic Report of the President, Table B-80

Figure 5: Corporate Tax Revenues as a Share of GDP



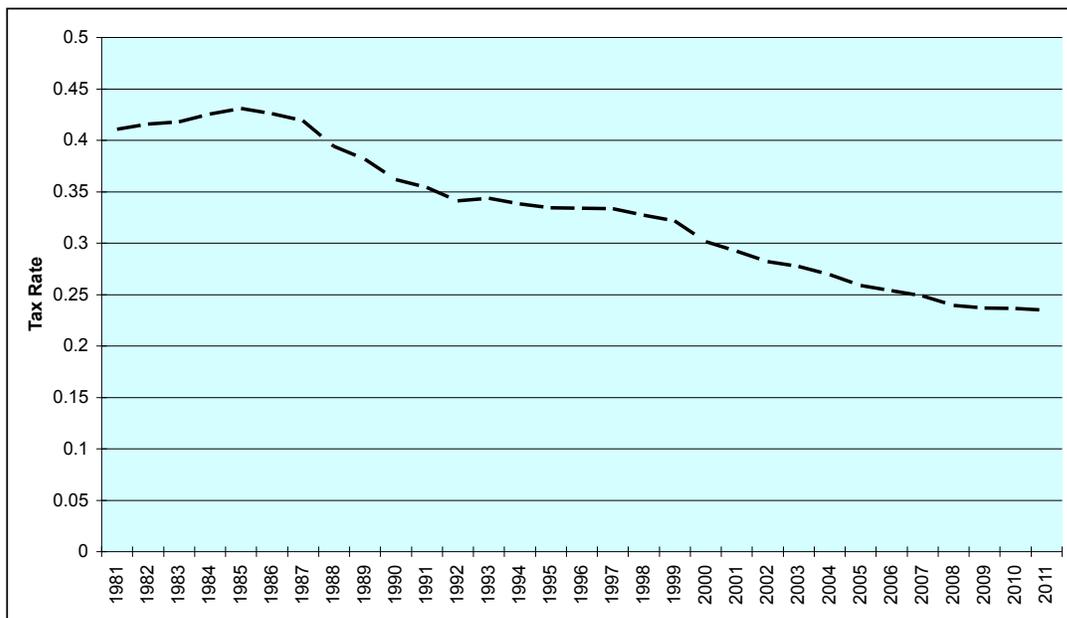
Source: Economic Report of the President, Tables B-1, B-80, and B-85

Figure 6: Corporate Tax Revenues/GDP, OECD Countries
(average for all OECD countries)



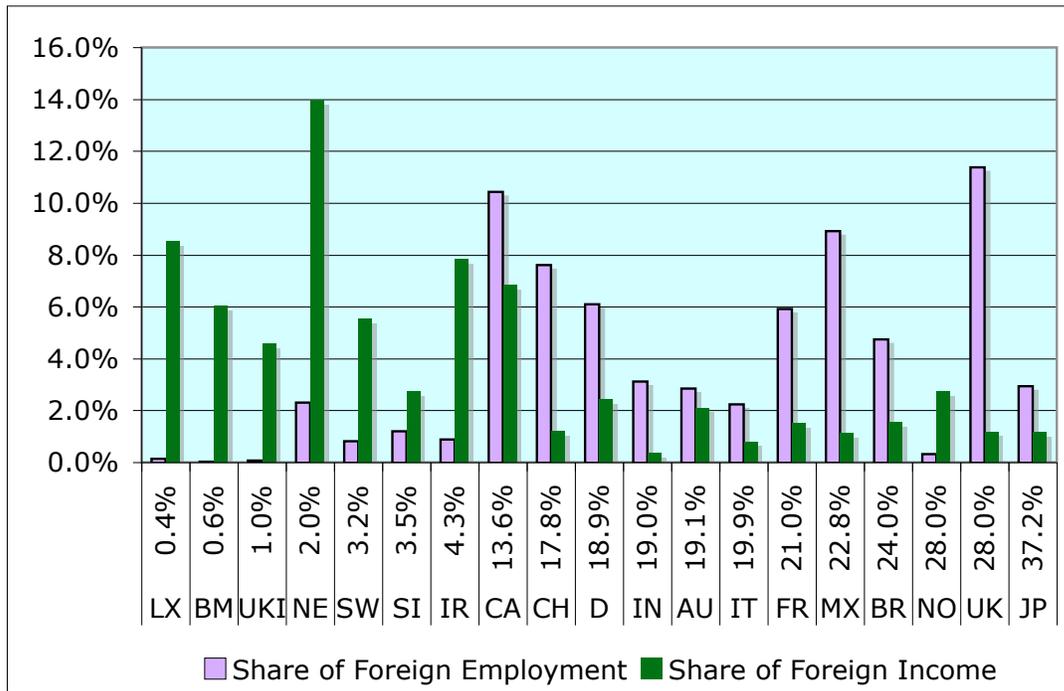
Source: OECD

Figure 7: Statutory Tax Rates of Central Government, OECD Countries
(average for all OECD countries)



Source: OECD

Figure 8: Share of Total Foreign Income and Employment by Location, 2008
 (Data are sorted by the effective tax rate of all U.S. affiliates in each location.)



Note: These data are from the U.S. Bureau of Economic Analysis. The data show only foreign affiliates of U.S. multinational firms. Locations are included in the figure if they have either 2% or more employment *or* income shares. The effective tax rate is calculated as actual taxes paid relative to pre-tax net income. Effective tax rates for Norway and the UK are capped at the statutory tax rate. Destinations included are Luxembourg, Bermuda, the UK Caribbean Islands, the Netherlands, Switzerland, Singapore, Ireland, Canada, China, Germany, India, Australia, Italy, France, Mexico, Brazil, Norway, the U.K., and Japan.

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