



Corporate Tax Reform for a New Century

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THE DISMAL BUDGET OUTLOOK

We know what it takes to compete for the jobs and industries of our time. We need to out-innovate, out-educate, and out-build the rest of the world. We have to make America the best place on Earth to do business. We need to take responsibility for our deficit, and reform our government. That's how our people will prosper. That's how we'll win the future.

—President Barack Obama, January 25, 2011¹

In his State of the Union address, President Barack Obama stressed four ingredients of American prosperity: faster innovation, better education, less deficit, and more jobs. As the president recognized in his address, the US free enterprise system drives the private sector to innovate, invest, and create jobs.² This policy brief concentrates on how reforming the corporate tax system can strengthen the private sector, thereby spurring both innovation and jobs.

Since any change in the tax system potentially affects the federal deficit, we start by summarizing a fact that everyone knows: The US budget outlook is a fiscal disaster. We conclude with a prescription for fiscal sanity that is entirely consistent with corporate tax reform—namely a broad-based consumption tax.

1. President Barack Obama, State of the Union Address, January 25, 2011—as prepared for delivery, www.whitehouse.gov (accessed on April 12, 2011).

2. Obama emphasized, and most economists agree, that the government should take the lead in funding basic research—research that is not immediately profitable but lays the groundwork for future innovation.

The Deficit Outlook

The 2010 sovereign debt crisis in Europe served as a wake-up call for what faces the United States on its current fiscal trajectory. In 2010, total US federal tax revenues were 15 percent of GDP, while total federal outlays were 24 percent, implying a deficit of \$1.3 trillion, almost 10 percent of GDP (table 1).³ The picture in 2010 was clouded by the great recession of 2008–09; yet economic recovery in 2011, 2012, and beyond will not reduce the deficit to manageable size. With a reasonable economic recovery, federal tax revenues will return, under current law, to the historic norm of 18 to 19 percent of GDP. However, even as stimulus measures expire, federal outlays will expand to the mid-20 percent range by 2015 and thereafter continue to climb.

Thanks mainly to a burst of health care promises in the second administration of George W. Bush and the first administration of Barack Obama and a steady rise in interest payments on the growing public debt, total federal outlays are projected to reach 33 percent of GDP by 2030 (table 1). Currently about 13 percent of GDP is devoted to mandatory spending, principally Social Security, Medicare, and Medicaid. Unless curbed by painful legislative changes, these entitlements will expand relentlessly over the next two decades to exceed 15 percent of GDP. Meanwhile, net interest on the ballooning public debt will increase from under 2 percent of GDP in 2010 to 5 percent of GDP in 2020 and over 8 percent of GDP by 2030. Following this trajectory, even if major new foreign wars are avoided, the federal deficit would amount to 6 percent of GDP in 2015, 9 percent in 2020, and approach 15 percent in 2030.

Debt held by the public (including foreign central banks and foreign private holders) is currently 61 percent of US GDP, headed for 84 percent in 2015, and reaching 110 percent in 2020 (the historical peak touched in 1946).⁴ By 2030, along this unsustainable path, debt held by the public would exceed 180 percent of GDP. As Herb Stein famously said, “If something cannot go on forever, it will stop.”⁵ While it’s difficult to specify the breaking point, a generous interpretation of the maximum ratio of debt held by the public to GDP, without triggering a default scare, might be 85 or 90 percent of GDP, a figure that will be reached soon after 2015 under current law. Assuming that real US GDP grows around 2.7 percent annually,⁶ by implication the average annual deficit should not much exceed 2.2 percent of GDP—if the debt ratio is to be stabilized around the 85 to 90 percent range.

Public debt at 90 percent of GDP is an important tipping point. Carmen Reinhart and Kenneth Rogoff (2010) find that countries, whether advanced or emerging economies, that allowed their debt to GDP ratios to exceed 90 percent of GDP experienced a median drop of roughly 1 percentage point in their annual growth rates and a mean drop of 4 percentage points. Lower US growth resulting from a high debt burden would surely dampen the prospects of Americans entering the workforce over the next three decades and almost guarantee a decline in America’s position as the leading world power.

The net interest figures in table 1 do not track the Congressional Budget Office (CBO) “current law” baseline but rather the alternative and more realistic estimates published by the International Strategy and Investment Group (ISI). ISI starts with the CBO “current policy” baseline but points out that the CBO projections contain an implausible macroeconomic combination: By 2015 the unemployment rate will supposedly drop below 6 percent, yet the three-month bill rate will average just 3.9 percent, and the ten-year note rate will average just 4.9 percent.⁷ These interest rate assumptions, in combination with the unemployment projection, are exceptionally low by historical standards. Using Congressman Paul Ryan’s alternative interest rate scenario,⁸ the ISI calculates that net interest on US public debt would be over 3.3 percent of GDP by 2014, rising to 5.6 percent of GDP in 2021. Our figures in table 1 track that path.⁹

3. Our budget outlook is based on projections from the Government Accountability Office (GAO). See notes in table 1 for further detail.

4. The concept of “debt held by the public” excludes Treasury debt held by the Social Security and Medicare systems, debt held by the Federal Reserve, and debt held by other federal agencies.

5. Herbert Stein, “Herb Stein’s Unfamiliar Quotations,” *Slate*, May 16, 1997, www.slate.com (accessed on February 7, 2011).

6. This is the average long-term growth rate assumed by the Government Accountability Office.

7. The CBO current law baseline assumes, among other implausible outcomes, that all the Bush tax cuts expire, that doctors get paid 30 percent less for treating Medicare patients, and that the alternative minimum tax will not be modified for tax years beyond 2009.

8. Congressman Paul Ryan requested that the CBO produce three different estimates on the federal government’s cost of borrowing, given three different interest rate scenarios. The first scenario, used by ISI, estimates that the rate on 10-year Treasury notes issued in calendar year 2011 would average 3.8 percent and that all Treasury interest rates would rise in the future to approximately their average levels over the 1991–2000 period. See CBO (2011) and ISI (2011).

9. The past high record for interest payments on the public debt, 3.3 percent of GDP, was established in 1991. Our own estimates in table 1, taken from the GAO, are consistent with the estimates from ISI. In 2015, per our table 1, net interest costs are at 3 percent of GDP, and by 2020 they reach 5 percent of GDP.

Commission Reports

Table 2 summarizes the recommendations of several commissions that reported late in 2010 and early in 2011. We tabulate the targeted levels of federal revenue, spending, deficits, and debt held by the public, all expressed as a percentage of GDP. We also include other information: Do the proposals reduce the corporate tax rate? Do they call for a broad-based consumption tax? And do they commend a territorial tax system? Through their reform menus, the reports generally prescribe stabilization of total federal spending between 20 and 23 percent of GDP and total revenue between 18 and 21 percent of GDP. These targets translate into annual fiscal deficits generally under 4 percent of GDP annually. The proposals optimistically foresee that debt held by the public will level off between 50 and 70 percent of GDP by 2020.

The Debt Reduction Task Force, headed by Alice Rivlin and former senator Pete Domenici (R-NM), and the Roadmap for the Future, laid out by Congressman Paul Ryan (R-WI), were the only two proposals that called for a broad-based consumption tax. The National Commission on Fiscal Responsibility and Reform, created by President Obama in February 2010, as well as its co-chairs, Erskine Bowles and former senator Alan Simpson (R-WY), called for territorial taxation of corporate income.

Congressman Ryan, chairman of the House Committee on the Budget, unveiled the GOP budget plan on April 5, 2012 with these opening remarks, “Where the President has failed, House Republicans will lead.”¹⁰ The GOP’s plan seeks to cut government spending below 20 percent of GDP by 2012 and stabilize government revenue around 18 percent of GDP through 2021. This will slash the deficit to 2.4 percent of GDP in 2012, and to 1.8 percent of GDP by 2020. Debt held by the public will peak at 74 percent of GDP in 2012 but fall to 69 percent by 2020. Compared to the sustainable scenario we have laid out in table 3, which we discuss in a moment, the GOP’s annual spending target is about 5 percentage points lower while its annual revenue target is about 4 percentage points lower. This allows the GOP plan to reach a deficit number that is half a percentage point lower than our estimates. According to the GOP plan, “Washington has a spending problem, not a revenue problem.”¹¹ The Ryan budget thus caps government revenue at around 18 percent of GDP.

The GOP plan for corporate tax reform cuts the top statutory rate to 25 percent from 35 percent and eliminates deductions, credits, and special carve-outs that leave many companies paying no tax at all.¹² While corporate tax reforms will help make the United States more attractive to businesses, Congressman Ryan’s earlier proposal to replace corporate taxation with an 8.5 percent business consumption tax was not a part of this budget plan.

Ultimately, of course, it’s a political choice—and a choice that will be hotly debated—what mix of spending cuts and tax increases will be implemented to achieve a sustainable fiscal position and what tax reforms will become part of the new fiscal landscape. Indeed, by April 10, 2011, President Obama began laying out his own plan for deficit reduction, describing his approach as a “scalpel” compared with Ryan’s “machete.”¹³ President Obama’s proposals include keeping annual domestic spending low by building on savings that both the Democrats and Republicans agreed to on April 8; finding additional savings in the US defense budget; reducing health care spending through the reforms passed earlier; reducing tax expenditures; and reforming the US corporate tax code.¹⁴ While the president did not go into the specifics of his plan, he estimated his “more balanced approach” will achieve \$4 trillion in deficit reduction over 12 years.

Our projections, summarized in table 3, foresee that spending will be capped around 24 percent of GDP—a level that was already reached in 2010—while federal tax revenues will be increased to 22 percent of GDP, a jump of around 3 to 4 percentage points from the historic norm. Our scenario requires each political party to compromise on a core value—the Republicans on revenue increases and the Democrats on entitlement spending, especially Medicare. This compromise would achieve an average deficit around 2.2 percent of GDP and would stabilize federal debt below 90 percent of GDP in the long term.¹⁵ More discipline on federal spending would certainly be desirable, but we question

10. House Committee on the Budget (2011, 5).

11. House Committee on the Budget (2011, 17).

12. House Committee on the Budget (2011, 53).

13. Zachary A. Goldfarb, “Obama’s new approach to deficit reduction to include spending on entitlements,” *Washington Post*, April 10, 2011, www.washingtonpost.com (accessed on April 11, 2011).

14. Remarks by the President on Fiscal Policy, April 13, 2011, www.whitehouse.gov (accessed on April 13, 2011).

15. In calculating our sustainable fiscal outlook scenario, we assume that GDP will grow at an annual rate of 2.7 percent, consistent with the Government Accountability Office’s average long-term growth rate.

whether the American public or the Congress is prepared to cut deep into entitlement promises.¹⁶ Flattening the trajectory of future entitlement growth may be all the US political system can deliver.

OECD Comparisons

To round out our story, we examine how the United States compares with its major trading partners and economic competitors. The unweighted average for total public revenue—federal, state, and local combined—among OECD countries (excluding the United States) was 36 percent of GDP in the most recent good economic year prior to the great recession, namely 2007 (table 4). US federal, state, and local tax revenues in that year were 28 percent of GDP, one of the lowest among OECD countries and 8 percentage points below the average.¹⁷ By contrast, in 2007, Canadian federal and provincial taxes equaled 33 percent of GDP; German federal and *länder* taxes, 36 percent; Japanese federal and prefecture taxes, 28 percent; and UK taxes 36 percent.

The unweighted average for total public outlays among OECD countries—again, federal, state, and local excluding the United States—was 42 percent in 2007 (table 4), whereas US total spending was 37 percent. To single out individual countries for comparison, Canada spent a total of 39 percent of GDP in 2007, Germany 44 percent, Japan 36 percent, and the United Kingdom 44 percent.

These comparisons indicate that, in a recent good year, US spending was running around 5 percentage points lower than the average OECD nation, and US tax revenue was running 8 percentage points below the average. The US numbers inescapably spell a large deficit.

The year 2007 was a good year in the world economy. Yet, even in a good year, the United States incurred a federal fiscal deficit of almost 3 percent of GDP, compared with the OECD unweighted average (excluding the United States) of a 1 percent surplus (table 4). Again to single out a few countries, Canada had a surplus of 1.4 percent of GDP in 2007, Germany a surplus of 0.3 percent, Japan a deficit of 2.4 percent, and the United Kingdom a deficit of 2.8 percent. Of course, in 2009 and 2010, all OECD countries had large deficits, but none of the major countries booked as much red ink as the United States.

Tax Reform Elsewhere

The *Paying Taxes 2011* study released by the World Bank, International Finance Corporation, and PricewaterhouseCoopers showed that several US trading partners reformed their tax structures between 2009 and 2010: Canada, China, and the Netherlands, for example, simplified their tax compliance procedures.¹⁸ The Netherlands made value added tax (VAT) filings a quarterly event and simplified profit tax calculations. Canada reduced its labor taxes and mandatory contributions, extended the two-year write-off for investments, and followed through on commitments to reduce the federal corporate income tax rate to 15 percent and average combined federal and provincial tax rates to 25 percent by 2012. The tax reforms undertaken in Canada between 2006 and 2009 have led to a 14 percent increase in manufacturing investment.¹⁹ Many smaller countries also cut their corporate tax rates in 2009 and 2010, examples being Indonesia from 28 to 25 percent, Taiwan from 25 to 17 percent, Panama from 30 to 25 percent, and Brunei from 23.5 to 22 percent.²⁰ All the initial corporate rates in these countries were lower than rates in the United States. Evidently, the United States lags well behind the rest of the world in reforming its tax code and cutting corporate taxes.

16. A recent Wall Street Journal/NBC News poll indicates that at least 75 percent of Americans oppose cuts in Social Security or Medicare. Neil King Jr. and Scott Greenberg. "Poll shows budget-cuts dilemma", *Wall Street Journal*, March 3, 2011, A5.

17. In 2007, some 16 percent of US GDP was collected in federal taxes and 13 percent in state and local taxes. See Bureau of Economic Analysis, 2011, National income and Product Accounts Table.

18. *Paying Taxes 2011: The Global Picture*, figure 1.12, page 15.

19. Canadian Manufacturers and Exporters (2010).

20. *Paying Taxes 2011: The Global Picture*, figure 1.11, page 15.

Public Attitudes

Remarks by Richard Trumka, the president of the AFL-CIO (American Federation of Labor and Congress of Industrial Organizations), on March 17, 2011, reflect the anti-multinational corporation (MNC) sentiments of organized labor and many leaders in the Obama administration and Congress. Trumka claimed that:²¹

For a generation, we've made the mistake of orienting our international economic policies around the profitability of U.S. corporations abroad rather than the quality and quantity of jobs at home, or sustainable and democratic development around the world, and the results are in. Large U.S.-based multinational corporations have thrived as global enterprises, but the United States is suffering from massive job loss, unsustainable trade deficits masked by one ruinous bubble after another. The sad truth is that for decades our trade and economic policies have not served the interest of the United States as a world power by delivering good jobs or the competitive edge that we must have.

Trumka acknowledged that a lower corporate tax rate could be part of the solution to offshoring, and he specifically pointed to Germany as a country that benefits from a VAT adjusted at the border (imposed on imports, exempted on exports). However, if the American public, speaking through Congress, prescribes more revenue as part of the answer to sustainable debt and deficit levels, *higher* corporate taxes are sure to be debated. We argue that the economic case for *lower* corporate taxes is straightforward, but in an era of budget stress the political case is far from clear. To deliver on Obama's call for innovation and jobs, the United States desperately needs corporate tax reform—meaning much lower statutory, marginal effective, and average effective corporate tax rates. All three must be cut. The United States also needs dramatic tax simplification, leading to a broader base and fewer loopholes.²² It might seem hard to square the circle between lower corporate tax rates and higher overall tax revenue as a percent of GDP. No doubt many Americans will see a flat contradiction between the two goals. In this policy brief, however, we contend that the circle can be squared and that corporate tax reform can be reconciled with a modest increase in federal revenues delivered through a broad-based consumption tax.

A HIGH-TAX COUNTRY

As we have seen, compared with other OECD nations, the United States collects a fairly modest amount of revenue through its overall tax system. Federal and state taxes combined raised 28 percent of GDP in 2007, compared with 36 percent of GDP in the OECD unweighted average (excluding the United States; see table 4).²³ Moreover, even in the good year 2007, US corporate taxes claimed only 3 percent of GDP compared with the OECD unweighted average of 4 percent (excluding the United States; see table 5). In what sense, then, is the United States a high-tax country?

High Rate, Small Base

The US problem is that the nation has sought to make up through a high rate what has been lost through a small tax base. This is true both of individual and corporate income taxes, but here we focus on corporate taxation. Using estimates of the average effective corporate tax rate and corporate tax revenue as a percent of GDP, it is possible to make rough calculations of the size of the corporate tax base as a percent of GDP (table 5). It appears that in 2007, the US corporate tax base—in other words, taxable corporate profit—was just 13 percent of GDP, compared with the OECD unweighted average (excluding the United States) of 22 percent.

21. Conversation with Richard Trumka, Council on Foreign Relations, March 17, 2011, transcript available at www.cfr.org (accessed on March 28, 2011).

22. The Internal Revenue Code contains at least 2,000 dense pages of corporate tax statutes, and the interpretative Treasury Regulations cover many thousand pages.

23. In 2010, federal tax revenues were largely derived from individual income taxes (43 percent of the total) and payroll taxes (Social Security and Medicare, 40 percent of the total) (table 1). As the economy recovers, individual income taxes will rise and again account for about half of total revenues.

Pass-Through Entities

Why the difference? The US tradeoff between a small base and a high rate is the direct result of exempting a huge portion of US business activity from corporate taxation—the consequences of systematically enlarging the terrain of so-called pass-through entities. These firms are not taxed at the business level but instead only at the individual level, when their earnings are actually or constructively distributed to the ultimate owners.²⁴ Pass-through entities include general and limited partnerships, limited liability corporations (LLCs), limited liability partnerships (LLPs), and Subchapter S corporations.

In the early 2000s, only 18 percent of US business firms were incorporated enterprises; the other 82 percent were unincorporated—in other words, pass-through entities (table 6). By comparison, in a sampling of other advanced countries, around 33 percent of business firms are incorporated. Even among incorporated US firms, the fraction of activity subject to corporate taxation has progressively declined. In 1980, Subchapter S corporations (pass-through firms) accounted for just 3 percent of business receipts; in 2007 they accounted for 20 percent (table 7). By Peter Merrill's (2007) reckoning, in 1987, business entities that were subject only to pass-through taxation accounted for 29 percent of total business income; however, by 2004, they had grown to around 52 percent of total business income.

Debt versus Equity Taxation

US corporations are severely tax disadvantaged, relative to their competitors, in respect of equity capital. But in respect of debt capital, US corporations enjoy tax parity with their foreign competitors. Like nearly all countries, the United States allows a deduction for interest payments on debt capital.²⁵ Of course the deductions reduce the size of the corporate tax base, but on this account the US corporate tax base is no smaller than the tax bases in most other OECD countries. However, no US deduction is allowed for dividends paid on equity capital nor is any recognition given to shareholders for the prior payment of corporate tax on their dividends.²⁶ Not only are US corporate profits taxed at a higher rate than in nearly all other countries but also dividends are again taxed when paid to individual shareholders.²⁷

Accordingly, US-based MNCs—firms that account for the bulk of US exports and almost all outward direct investment—pay high taxes directly and indirectly on their equity earnings.²⁸ The “commanding heights” of the US economy—MNCs with far-flung business ties—pay the corporate rates depicted in table 8, and their American shareholders pay additional tax. The US statutory corporate rate (federal and state combined) in 2010 was the second highest among OECD countries, at 39 percent—11 percentage points higher than the unweighted average of competing countries (table 8).²⁹ In addition, American shareholders paid another 15 percent tax on dividends received in their personal tax returns.

“Loopholes”

MNCs, like other firms, are able to reduce their tax obligations below the statutory rate through the use of “loopholes,” as they are colloquially called, or “tax expenditures,” as they are termed in US budget documents. Table 9 lists the top 10 “tax expenditures,” in terms of tax dollars not collected, as compiled by the Treasury Department and listed in the Budget of the United States for FY2012. In 2012, these top 10 will amount to \$93 billion and account for around 86 percent of

24. This important feature of the US tax structure was first emphasized by Peter Merrill in 2007.

25. Moreover, many interest payments are very lightly taxed in the hands of recipients. See Hufbauer and Assa (2007, chapter 4).

26. Some countries do recognize prior payment of corporate taxes through so-called “integrated” tax systems.

27. The current top tax rate on dividend income paid to American shareholders is now 15 percent. Ryan J. Donmoyer and Mike Dorning, “Obama Confronts Resistance From Democrats Over Deal to Adopt Bush Tax Cuts,” Bloomberg, December 7, 2010, www.bloomberg.com (accessed on February 17, 2011). Consequently, the statutory rate on corporate earnings, when all after-tax earnings are paid out as dividends, is almost 50 percent.

28. Pass-through legal structures are simply not designed for firms with thousands of employees, millions of shareholders, and dozens of subsidiary firms.

29. Prime Minister Kan of Japan is seeking a five percentage point reduction in Japan's corporate tax rate; if he succeeds the United States will be left with the most burdensome corporate tax regime amongst the OECD countries.

business “tax expenditures.”³⁰ Even taking into account the relief provided through “tax expenditures,” the United States still imposes very high marginal effective and average effective rates on corporate profits, as shown in table 8. Table 10 shows that high statutory tax rates are closely rank-correlated with high marginal and effective tax rates.³¹

Moreover, it must be recognized that labeling a tax law provision as a “tax expenditure” presupposes an agreed norm of corporate taxation. There is no agreement, either within the United States or among other nations, that worldwide taxation of undistributed earnings of foreign subsidiaries represents the appropriate norm for corporate tax systems. Accordingly, it is highly questionable whether the item ranked one in table 9, namely deferred taxation of foreign earnings, should be labeled a “tax expenditure” and thereby characterized as a “loophole.”

By the same token, the omission of pass-through entities from the Treasury’s list of tax expenditures scorecard is breath-taking. By implication, the Treasury believes that the norm for federal taxation of business should be a zero tax rate on half of business activity and a 35 percent tax rate on the other half. This is hardly a level playing field. If pass-through entities were instead taxed at current corporate rates, corporate tax revenues would almost double. Evidently, as these examples show, the label “tax expenditure” reflects the political orientation of the Treasury Department more than the objective features of the tax system.

In any event, with or without “loopholes,” the United States is a high-tax country, so far as corporations are concerned. Marginal and average effective US corporate rates, as well as statutory rates, remain among the highest in OECD countries and are far higher than rates in China (table 8).³² Box 1 outlines the negative impact of current US corporate tax structure. But the fact of high rates will not prevent the United States from becoming a still higher tax country when the economic consequences of prolonged fiscal deficits take their toll.³³ Populist arguments for raising corporate taxes—both raising the statutory rate and closing “loopholes”—will surely be rolled out when Congress seriously tackles the huge fiscal deficit.

The High Cost of High Tax Rates

President Obama’s latest budget proposal, for FY2012, explicitly called for corporate tax reforms. The president invited “Congress to work with the Administration on corporate tax reform that would simplify the system, eliminate these special interest loopholes, level the playing field, and use the savings to lower the corporate tax rate for the first time in 25 years—and do so without adding a dime to our deficit.”³⁴

As already stressed, the United States has one of the highest statutory corporate tax rates among its trading partners, making the president’s call for corporate tax reforms welcome news. Unfortunately, the president’s statement implies that US *average* corporate tax rates would not be cut, since he proposes to make up, through “loophole” closing, any tax revenue lost by reducing the statutory rate.

If instead reform legislation succeeds in sharply cutting all three corporate tax rates—the statutory rate, the average effective rate, and the marginal effective rate—the payoff will be substantial. Table 11 shows gross fixed capital formation, fixed investment by business firms, and machinery and equipment investment by business firms for 2007. Whatever the measure, US investment rates are below the OECD norm. Fixed investment by business firms was particularly low at 9.6 percent of GDP in 2007, compared with the unweighted average of 12.8 percent of GDP (excluding the United States).³⁵ The United States does better in research and development (R&D) outlays—in other words, investment in

30. The estimated total for the top ten tax expenditures from 2012 to 2016 is \$581 billion, according to President Obama’s FY2012 budget (Budget of the US Government, Fiscal Year 2012, www.whitehouse.gov [accessed on March 9, 2011]).

31. Table 10 shows a Spearman rank correlation of 0.64 between statutory rates with average effective rates from the World Bank as well as of 0.90 between statutory rates with average effective rates from Hassett and Mathur (2011). The marginal effective rates from Chen and Mintz (2011) are 0.50 rank correlated with statutory rates while rates from Hassett and Mathur (2011) are 0.84 correlated with statutory rates.

32. Effective tax rates are defined as taxes paid (at the margin, or in total) divided by corporate income consistently defined (again, at the margin or in total).

33. Adverse consequences are likely to include impairment of the nation’s AAA credit rating, higher interest rates, and a shrinking role of the dollar as the world’s reserve currency.

34. Budget of the United States Government, Fiscal Year 2012, page 26, www.whitehouse.gov (accessed on March 9, 2011).

35. A substantial (and excessive) part of US gross fixed investment between 2000 and 2007 was in housing—unfortunately the most tax-favored part of fixed investment in America.

Box 1 The impact of burdensome corporate taxes: Case examples

Confronted with burdensome US corporate taxes, firms often vote with their feet and leave the United States for more favorable tax climates abroad—not a happy outcome for the US economy. Here we provide some illustrations.

Deferral and the Shipping Industry

Ken Kies (2007) has written a concise history of US changes in deferral rules and their effect on the US shipping industry. Until 1986, foreign shipping income earned by US-controlled foreign corporations was eligible for deferral—the time-honored tax concept that US-based MNCs will not be taxed on their overseas profits until they repatriate the earnings to the United States. In the Tax Reform Act of 1986, Congress eliminated deferral for foreign shipping income.¹ In other words, foreign shipping profits would be taxed currently by the United States, whether or not repatriated.

The 1986 Act made the United States the only country to tax shipping income. The results were dramatic. In 1986, there were 429 US-owned, foreign-flag ships serving international bulk shipping markets.² By 2000 that fleet had shrunk by more than a third to 273 ships. From 1988 to 2000, the number of US-owned, foreign-flag tankers fell by nearly 50 percent, from 246 ships to only 126 ships. Overall, between 1988 and 1999, the number of US-owned, foreign-flag ships, expressed as a percentage of the world merchant fleet, dropped from 5.6 to 2.9 percent. Much of the decline was attributable to the acquisition of US-based shipping companies by foreign competitors not subject to tax on their shipping income.³ The decrease in US-based shipping companies also decreased the number of potential investors in the US-flag “Jones Act” domestic trade.⁴ Over the period between 1985 and 2004, the US-flag fleet declined from 737 to 412 vessels, causing US-flag shipping capacity, measured in deadweight tonnage, to drop by more than 50 percent.⁵

The losses had adverse implication for US security interests. In times of emergency, the Pentagon can compel US-owned tankers, bulk carriers, and other vessels to carry oil, gasoline, and other materials in defense of US interests overseas. The military first turns to US-flag ships and then to US-owned foreign-flag ships—together these ships comprise the Effective United States Control (EUSC) fleet. Henry Marcus, Steven Torok, Timothy Glinatsis, and Parker Larson (2002) from the Massachusetts Institute of Technology pointed to the loss of deferral as the reason the EUSC fleet was not large enough to satisfy US strategic needs. Marcus et al. stated that “The combination of U.S. tax laws passed in 1975 and 1986 resulted in a business environment where EUSC shipowners could no longer avoid paying tax on current income. This change put them at a major disadvantage to their foreign competitors who often paid little or no income tax. Consequently, EUSC shipowners greatly reduced their investment in EUSC ships since the Tax Reform Act of 1986.”⁶

In January 2002, Congress started to debate the reform of US tax rules to make US-based companies more competitive in world markets.⁷ The 1986 Act shipping rules became a poster child for reform, and in October 22, 2004, President George W. Bush signed into law the American Jobs Creation Act of 2004, which among many other provisions restored deferral for shipping income.

Positive results were seen almost immediately. By January 2005, Overseas Shipholding Group Inc. (OSG) acquired Stelmar Shipping, an Athens-based international shipper of crude and petroleum products. This increased the size of OSG’s foreign-flag fleet by 80 percent, from 50 to 90 vessels. OSG also began a major expansion of its US-flag fleet.

Corporate Inversions and Earnings Stripping

In 2002, the issue of “corporate inversion” took center stage after several US companies incorporated in low-tax countries like Bermuda. These companies include Cooper Industries, Tyco International, Ingersoll-Rand, Noble Corp., and Nabors Industries, all giant manufacturers or oil firms.⁸ A corporate inversion occurs when a US parent corporation with foreign subsidiaries (controlled foreign corporations or CFCs) reorganizes itself in the following manner.⁹ First it creates a new foreign parent corporation, based in a low-tax country such as Bermuda. The US operations then become a subsidiary corporation to the foreign parent. The former foreign subsidiaries (CFCs) of the erstwhile US parent corporation also become subsidiaries of the foreign parent. As a result of these changes, only the US operations of the foreign parent remain subject to US tax laws—essentially a “do-it-yourself” territorial tax system.¹⁰

Inversions are motivated both to reduce the burden of US taxation on the income of foreign subsidiaries (as mentioned) and to facilitate “earnings stripping.” “Earnings stripping” occurs when a US corporation claims a deduction for an excessive amount of interest paid to a related foreign corporation.

(continued on next page)

Box 1 The impact of burdensome corporate taxes: Case examples *(continued)*

Tyco International, a diversified manufacturer with headquarters in Exeter, New Hampshire, claims that incorporation in Bermuda saved it more than \$400 million in 2002 alone.¹¹ Ingersoll-Rand reportedly avoided \$40 million annually in US corporate income taxes by incorporating in Bermuda.

Nabors Industries is one of the largest land-based oil and gas drilling companies in the world with more than 600 rigs.¹² In June 2002, Nabors reincorporated in Bermuda and moved its “headquarters” from Texas to Barbados. The new headquarters consists of a small office located on the island, where the directors meet. Nabors reported that its effective overall tax rate fell from 36 percent in 2001—the last full year before it moved to Bermuda/Barbados—to 10 percent in 2003, the first full year after the move. In dollars, the overall tax bill fell from \$83.7 million in 2001 to \$8.5 million in 2003.¹³ Nabors Director of Corporate Development Denny Smith says the company made the move simply to remain competitive. “We lost a ton of jobs and found ourselves in a position where we could not be competitive anymore,” Smith says. “Most of our competitors don’t face the same tax burden as we do.”¹⁴

Noble Corp, which operates one of the world’s largest fleets of offshore drilling rigs, incorporated in the Cayman Islands in May 2002 but retained its physical headquarters in Sugarland, Texas.¹⁵ The company’s overall tax bill fell from \$29.5 million in 2001 to just \$16.2 million in 2003.¹⁶ The drop in US taxes was dramatic: Noble had paid \$15.3 million in US taxes in 2001 but received a refund of \$2.6 million in 2003—its first full year in Cayman. Noble claimed it was forced to move in order to compete in the offshore drilling rig business. Noble’s two other main competitors—Transocean Inc. and GlobalSantaFe Corp.—are also incorporated in Cayman.

Inversions created a storm of criticism and, in June 2002, Congressman Bill Thomas (R-CA), chairman of the House Ways and Means Committee, with the support of the Treasury, introduced a bill that is specially designed to thwart corporate inversions: H.R. 5095, The American Competitiveness and Corporate Accountability Act of 2002 (Hufbauer and Assa 2003). The measures in this bill included tightened earnings stripping rules by limiting the deduction when interest is paid by a US subsidiary to a related foreign corporation, additional tax burdens on corporate inversions, unwinding inversion transactions involving at least 80 percent identity of stock ownership, and imposing a corporate “toll tax” on inversion transactions involving 60 percent but less than 80 percent identity of stock ownership.¹⁷

While H.R. 5095 was never reported out of Committee, it formed the basis for anti-inversion provisions in the American Jobs Creation Act of 2004, signed by President Bush. Internal Revenue Code section 7874, resulting from the 2004 Act, does not prevent firms from inverting; however, it eliminates the tax benefits associated with inverting and increases the tax cost of a corporate inversion.¹⁸

One result of this legislative action is that Stanley Works, based in Connecticut, was successfully prevented from relocating to Bermuda. But the slowdown of inversions does not mean that the adverse impact of burdensome US taxation has disappeared. First, and most importantly, when firms consider where in the world to locate a new plant or distribution center or research facility, and they check the box of location considerations, the United States is sure to come almost last in terms of its combined federal and state corporate tax burden. Moreover, some firms are quietly exploring the relocation of traditional headquarters activity. For example, Halliburton Co. decided to relocate its chief executive and corporate headquarters to Dubai in 2007.¹⁹ While the Halliburton spokeswoman explicitly stated that the company anticipated absolutely no tax benefits from this decision, the fact that Dubai has no corporate income tax is intriguing. The oil drilling firm EnscO is another example. EnscO moved its corporate headquarters from the United States to the United Kingdom in 2010, expressing its actions as “redomicile” while carefully avoiding the words “corporate inversion” (Webber 2010, 35). A redomiciliation includes moving corporate offices and personnel to a new site (not necessarily a tax haven), which might improve operations and incidentally lower a firm’s tax rate (a benefit that EnscO anticipates).

The CBS 60 Minutes show host Lesley Stahl characterized Zug, Switzerland, and Ireland as tax havens attractive to hi-tech and pharmaceutical companies.²⁰ With a corporate rate of 12 percent, only a third of the US federal rate, Ireland has attracted 600 American companies, accounting for around 100,000 jobs. Zug, Switzerland, has a corporate tax rate of about 16 percent, a population of only 26,000, but serves as home to 30,000 companies, growing at an average of 800 companies a year.

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Box 1 The impact of burdensome corporate taxes: Case examples *(continued)*

Transocean moved to Zug two years ago. It has around 1,300 employees in the Houston area and around 12 or 13 in Switzerland. As a Swiss company for tax purposes, Transocean saves about \$2 billion worth of taxes (according to Congressman Lloyd Doggett during the 60 Minutes show). Another example is Weatherford, a services firm with around \$10 billion of annual sales. The firm hired around 2,800 workers in Houston. When Congressman Doggett proposed to tax companies where their management and decision makers reside, Transocean and Weatherford packed up and shipped their top management to Geneva. This resulted in an exodus of top management from the United States.

US tax law almost forces US-based MNCs to keep their money overseas, rather than bring it home and pay the US statutory rate of 35 percent (minus any credit for foreign taxes paid). John Chambers, CEO of Cisco, claimed that Cisco has almost \$40 billion overseas that could be brought back with a repatriation holiday. The total amount of money US companies have trapped overseas, according to Lesley Stahl, is \$1.2 trillion. Chambers advocates tax relief, along the model used in the American Jobs Creation Act in 2004: a 5 percent rate on repatriated funds—in essence a quasi-territorial system. However the Treasury Department opposes a repatriation holiday, as spelled out in box 2.

1. In 1962, Congress enacted the subpart F regime, which taxes US parent on some types of income earned by a controlled foreign corporation (CFC), regardless of whether the income is brought back to the United States or repatriated in the form of a dividend. When enacted, the subpart F regime specifically excluded foreign shipping income from its operation. In the Tax Reduction Act of 1975, Congress designated foreign shipping income of a CFC as subpart F income but provided that such income would not be subject to subpart F to the extent the income was reinvested by the CFC in its foreign shipping operations. In the 1986 Act, the reinvestment exception was repealed.

2. For the sources of this data, see Kies (2007, footnote 2).

3. One example was the Singapore-based Neptune Orient Lines' acquisition of US-based American President Lines in 1997. American President Lines was the largest US shipper at the time. As another example, Denmark-based A.P. Moller Group acquired the international liner business of Sea-Land Services Inc., a subsidiary of CSV Corp. in 1999. CSV Corps was previously the largest US shipper of containers.

4. The US cabotage laws, commonly referred to as the Jones Act, require all commercial vessels transporting merchandise between ports in the United States to be built, owned, operated, and manned by US citizens and to be registered under the US flag. The law applies to any vessel operating between two US ports, whether in the continental United States or noncontiguous states of Hawaii and Alaska and also Puerto Rico. It functions as a barrier to entry for low-cost foreign carriers, which are not subject to the same wage, labor, and environmental regulations faced by US shipbuilders and operators. See American Shipping Company, Jones Act Background, www.americanshippingco.com (accessed on March 22, 2011).

5. For the sources of this data, see footnote 3 in Kies (2007).

6. Marcus et al. (2002, page iii, Executive Summary).

7. Reform debate got under way when, in January 2002, the World Trade Organization (WTO) Appellate Body held that US extraterritorial income (ETI) tax benefits—like its predecessor, the foreign sales corporation rules—constitute a prohibited export subsidy. This prompted Congress to start phasing out ETI benefits but also enact a number of reforms in US international tax rules.

8. David Cay Johnston, "U.S. Companies File in Bermuda to Slash Tax Bills," *New York Times*, February 18, 2002, www.nytimes.com (accessed on March 21, 2011); Dan Ackman, "Stanley Works Stay Home," *Forbes.com*, August 2, 2001, www.forbes.com (accessed March 21, 2011); Bob Williams and Jonathon Werve, "Gimme Shelter (From Taxes): U.S. oil and gas companies have 882 subsidiaries in tax haven countries," *Politics of Oil*, Center for Public Integrity, July 15, 2004, <http://projects.publicintegrity.org> (accessed on March 21, 2011); Desai and Hines (2002, 416).

9. See Gary Clyde Hufbauer, "Corporate Inversions," congressional testimony before the Committee on Ways and Means, United States House of Representatives, June 6, 2002, www.piiie.com (accessed on March 21, 2011).

10. There are many other forms of "do-it-yourself" tax relief, and Martin Sullivan, an economist with *Tax Notes*, estimated during his interview on the CBS News program 60 Minutes that between 2007 and 2009 Pfizer succeeded in lowering its tax rate to 17 percent and Merck to 12.5 percent. Of course the great recession of 2008–09 had a lot to do with reducing corporate taxes during this period.

11. Johnston, "U.S. Companies File in Bermuda to Slash Tax Bills," *New York Times*, February 18, 2002.

12. Williams and Werve, *Politics of Oil*, July 15, 2004.

13. The company's revenue remained relatively steady during the period. In 2001, its revenue was \$2.3 billion while in 2003 it was \$1.9 billion (Williams and Werve, *Politics of Oil*, July 15, 2004).

14. Williams and Werve, *Politics of Oil*, July 15, 2004.

15. Williams and Werve, *Politics of Oil*, July 15, 2004.

16. The company's revenue was steady those years at about \$1 billion in 2001, compared with about \$987 million in 2003 (Williams and Werve, *Politics of Oil*, July 15, 2004).

17. For more details, see Hufbauer and Assa (2003, 5).

(continued on next page)

Box 1 The impact of burdensome corporate taxes: Case examples (continued)

18. See Webber (2010, 28) for more detail. Even though these penalties were being put in place, few companies were persuaded to come back to the United States. Ingersoll-Rand in their annual general meeting of shareholders in May 29, 2003, voted 59 percent against the proposal to reincorporate Ingersoll-Rand as a US-based company. This proposal was defeated again in the company's 2004 annual meeting with 89 percent of shareholders voting against the proposal. In 2009, 97 percent of the votes were cast in favor of moving the Ingersoll-Rand headquarters to Ireland from Bermuda (Joseph R. Perone, "Ingersoll-Rand moves headquarters to Ireland from Bermuda," *New Jersey Business*, June 4, 2009, www.nj.com [accessed March 23, 2011]). Evidently, even lower Irish taxes are the main motivation behind this move. Similarly, the shareholders of Tyco International defeated a motion to incorporate back the United States during the company's 2003 annual meeting. Only 26 percent of shareholders voted in favor of leaving Bermuda in 2003 and this proposal was rejected again in 2004 (Andrew Ross Sorkin, "Tyco Shareholders Vote to Keep Headquarters in Bermuda," *New York Times*, March 7, 2003, www.nytimes.com [accessed on March 23, 2011]; Amanda Banks, "Tyco Shareholders Reject Reincorporation to the United States," *Tax-News.com*, March 29, 2004, www.tax-news.com [accessed on March 23, 2011]). In 2010, the *Houston Chronicle* reported that Noble Corp. reincorporated in Switzerland from the Cayman Islands (Brett Clanton, "No.7: Noble Corp," *Houston Chronicle*, May 22, 2010, www.chron.com (accessed on March 23, 2011)).

19. Laura Mandaro, "Halliburton's Dubai move raises issue of expat taxes," *MarketWatch*, March 13, 2007, www.marketwatch.com (accessed on March 22, 2011).

20. CBS News, "The New Tax Havens," 60 Minutes, March 27, 2011, www.cbsnews.com (accessed on March 29, 2011).

know-how—but by no means is the United States at the top of the OECD (table 12). Business firms from Israel (at 3.4 percent of GDP in 2006), Japan (2.6 percent of GDP in 2006), Korea (2.4 percent of GDP in 2006), and Switzerland (2.1 percent of GDP in 2006) all spend a larger fraction of GDP on R&D than US business (table 12). Moreover, the relatively good US performance on R&D outlays probably does not compensate for the poor performance in fixed assets.³⁶ Tax policy is a contributing factor to this poor performance—and better tax policy would boost investment not only in fixed assets but also in R&D.

Various authors have attempted to calculate the response of investment in fixed assets to changes in the tax rate. Often the estimates start by assembling the costs of capital investment (interest payments, tax charges, and depreciation allowances) into a single equation. The next step is to investigate the responsiveness of changes in the capital stock to changes in these overall costs. For example, Robert Chirinko, Stephen Fazzari, and Andrew Meyer (1999) used a dataset with 26,000 observations to calculate the responsiveness of the capital stock (both plant and equipment) held by numerous firms to the "user cost of capital." The "user cost of capital" attempts to measure what would be paid for leasing a piece of equipment or a whole plant if a rental market existed for the asset. The authors arrived at a coefficient of -0.25 . This coefficient is substantially smaller than the unit value assumed by other scholars such as Lawrence Christiano and Martin Eichenbaum (1992) and Roger Farmer (1997). In any event, Chirinko, Fazzari, and Meyer indicate that a 10 percent investment tax credit would lower the user cost of capital by 14.25 percent, which in turn would increase the business capital stock by 3.56 percent and output (GDP) by 1.07 percent.³⁷ Allowing 100 percent expensing of investment outlays (i.e., 100 percent deduction in the first year) would have nearly the same effect on the business capital stock and output. If the responsiveness of the capital stock is closer to -1.0 than -0.25 (the contention of Christiano and Eichenbaum 1992 and Farmer 1997), the effect of a 10 percent investment tax credit on 100 percent expensing would be roughly four times the magnitudes calculated by Chirinko, Fazzari, and Meyer.

Taking a different approach, Simeon Djankov et al. (2010) used panel data on 85 countries to estimate the adverse effect of taxes on both investment and entrepreneurship. According to their findings, a 10 percentage point increase in the first year effective corporate tax rate reduces the aggregate investment to GDP ratio by about 2.17 percentage points; a 10 percentage point increase in the five-year effective corporate tax rate reduces the aggregate investment to GDP ratio by about 2.47 percentage points.³⁸ In terms of entrepreneurship effects, a 10 percentage point increase in the first year effective corporate tax rate reduces business density by 1.9 firms per 100 people (average is 5), and the average entry rate

36. Rational business firms, in rough terms, equate the expected return (adjusted for risk) from a portfolio of R&D projects to that from a portfolio of fixed assets. Consequently, the payoff from R&D outlays may exceed the payoff from fixed investment outlays (since R&D is more risky), but probably not by a huge margin.

37. Their coefficient for the elasticity of output with respect to the capital stock is 0.3.

38. See Djankov et al. (2010, table 5). The authors also calculated the impact of tax changes on the ratio of inward foreign direct investment to GDP. They found that a 10 percentage point tax increase reduces the inward FDI to GDP ratio by about 2.26 percentage points, and a five-year 10 percentage point increase likewise reduces the FDI to GDP ratio by about 2.23 percentage points.

by 1.4 percentage points (average is 8).³⁹ While Djankov et al. did not calculate the implications of these findings for the business capital stock or GDP, the effects would be large.

Djankov et al. did calculate the investment impact of a consumption tax in the VAT family. A 10 percentage point increase in the VAT had no significant impact on the aggregate investment to GDP ratio. Likewise, the impact of a VAT on entrepreneurship (estimated by business density and the average firm entry rate) is negative but insignificant.⁴⁰ All taxes introduce distortions, but on this evidence the investment distortions associated with a VAT are small compared with the corporate tax income. The VAT is explored further in a later section of this policy brief.

IRET Scenarios for Corporate Taxation

The Institute for Research on the Economics of Taxation (IRET) has constructed a model of the US economy to examine tax policy.⁴¹ The IRET model assumes a Cobb-Douglas production function for GDP.⁴² In this model, the equilibrium capital stock responds to the tax rate and the labor supply responds to the real wage rate.⁴³ A larger capital stock increases labor productivity and thus the real wage rate. For a given change in the corporate tax regime, the model can determine changes in the capital stock and employment; in turn these changes generate a predicted change in GDP.⁴⁴ The reported GDP estimates are equilibrium results, with about 75 percent of the adjustments happening in 5 years and the rest within 10 years.⁴⁵ Along with the predicted change in GDP, the IRET model calculates the predicted change both in federal and state tax receipts.

At our request, IRET ran simulations to estimate the potential economic impact of a 10 percentage point corporate rate cut and a 100 percent expensing rule. Each of these alternative reforms would have significant benefits. The outcomes predicted by the IRET model, both for GDP and tax revenues, are summarized below.

10 Percentage Point Corporate Rate Cut

A 10 percentage point cut in the federal corporate tax rate would prompt a jump of 6.3 percent in the equilibrium level of the private business capital stock, an increase of \$1,749 billion from the 2008 baseline. With a larger capital stock, the average wage rate would increase by 1.9 percent over the baseline, and the total hours of private business work would increase by 0.4 percent. These changes would increase equilibrium GDP by \$326 billion, about 2.3 percent (table 13).

In this scenario, federal receipts from corporate taxation would drop by 28.7 percent, or \$52 billion, while state and local receipts from corporate taxation would decrease slightly, by 0.1 percent.⁴⁶ However, owing to higher wages, receipts from personal income taxation would increase by 3.9 percent at the federal level, some \$43 billion. Social Security and Medicare taxes would additionally increase by 2.3 percent, bringing another \$22 billion. State and local level receipts from personal taxation would increase by 3.8 percent, \$11 billion. In total, federal receipts would increase by \$19 billion (0.8 percent), while state and local receipts would increase by \$48 billion (2.4 percent). In other words, the loss of corporate tax revenue is more than offset by the gain in revenue from personal income taxes and other taxes.

39. Djankov et al. (2010) examined entrepreneurship through two measures: number of business establishments and the rate of new business registration. These data are collected by the World Bank's Entrepreneurship Survey from national business registries and other sources.

40. See Djankov et al. (2010, table 5b). However, a 10 percentage point increase in the VAT rate was found to reduce the aggregate FDI to GDP ratio by about 1.0 percentage points, holding constant the statutory corporate rate, the first-year effective tax rate, and five-year effective tax rate.

41. See www.iret.org (accessed on March 9, 2011).

42. The simplest Cobb-Douglas production function takes the form $GDP = \alpha K^a L^b$, where α is a constant, K is the national capital stock, L is the number of hours worked, and the sum of coefficient a and b is 1.0 (implying constant returns to scale). To reflect technical progress, α can, for example, be modeled to increase over time or as a function of R&D.

43. As the literature review indicates, when corporate tax rates drop, the capital stock rises. The labor supply curve is constructed so that total hours of work increase when the real wage increases.

44. See Entin (2004, Appendix A) for greater detail.

45. It takes about 5 years for equipment to adjust and 10 years for structures.

46. The IRET model assumes that state and local corporate tax rates are not reduced.

Unfortunately, as presently scored by the Joint Committee on Taxation (JCT) and the Treasury Department, the favorable consequences of corporate tax cuts on the capital stock, hours worked, GDP, and personal tax revenues are all ignored. Consequently, any cut in the corporate rate is simply (and wrongly) blamed for leading to an overall loss of tax revenue.

100 Percent Expensing Rule

For the year 2010, to foster economic recovery, Congress allowed business firms to claim a deduction of 100 percent of new investment (in other words, an expensing rule of 100 percent). The IRET simulation scenario (table 14) assumes that the 100 percent expensing rule is made a permanent feature of the tax code. By contrast, the IRET baseline scenario assumes 50 percent expensing, the rule actually in place in 2009. An increase to 100 percent expensing would trigger a 7.5 percent jump in the equilibrium level of the private business capital stock, an increase of \$2,077 billion. The average wage rate would increase by 2.3 percent, and the total hours of private business hours of work would increase by 0.5 percent. Compared with the baseline model equilibrium, GDP would rise by \$385 billion, some 2.7 percent (table 14).

Not surprisingly, federal corporate tax receipts decrease by about 11.8 percent, a total of \$21 billion. State and local corporate tax receipts likewise decrease by 11.8 percent, some \$6 billion.⁴⁷ However, federal receipts from personal income taxation increase by 4.7 percent, around \$51 billion, and state receipts increase by 4.5 percent, \$13 billion. All told, federal receipts increase by \$62 billion (2.5 percent) while state and local receipts increase by \$51 billion (2.5 percent).

As with a 10 percentage point cut in the corporate tax rate, the loss of corporate tax revenue is more than offset by the gain in revenue from personal income taxes and other taxes. In fact, a 100 percent expensing rule has macroeconomic features that are quite similar to 10 percentage point cut in the corporate tax rate. As between individual corporations, however, the effects of the two approaches could differ sharply, depending on the profitability and investment outlays of each firm. Congressmen who want a guaranteed “bang for the buck” in fixed asset outlays are likely to favor the expensing approach, because tax concessions are tightly linked to new fixed investment. However, the expensing approach is not particularly favorable for high-tech firms (e.g., Apple, Oracle, and 3M) that earn most of their corporate profits from know-how rather than physical capital. This distinction is an important consideration for the US economy, which increasingly relies on better know-how rather than more fixed assets for economic growth. The policy implication is that a cut in the corporate tax rate would be more neutral than greater expensing as between “smokestack” firms and “geek” companies.

Finally, we must note a body of evidence that suggests that the IRET model might overstate the loss of corporate tax revenue from a cut in the statutory rate. OECD experience over the past three decades suggests that lowering the statutory corporate rate within a broad range has not decreased corporate revenue as a percent of GDP. Table 15 reports a panel regression of corporate tax revenue as a percent of GDP regressed against the statutory rate (federal, state, and local combined). The regression equation includes a dummy variable for each country to control for “fixed effects,” namely idiosyncratic country differences in revenue yield for a given statutory rate. The very small though statistically significant regression coefficient, -0.04 , indicates that a one-percentage point increase in the corporate tax rate, if anything, slightly decreases corporate tax revenue expressed as a percentage of GDP. In other words, there is a very small negative connection between tax revenue and statutory tax rates within the range of rates implemented by OECD countries over the past quarter century—a range that covers statutory rates between roughly 20 and 40 percent. When they cut statutory rates, many OECD countries have simultaneously enlarged the corporate tax base by eliminating loopholes. Possibly more important, Laffer Curve effects—changes in real activity, shifts between the corporate and noncorporate business sectors, and less intense use of tax avoidance techniques—have served to eliminate any revenue loss from lower statutory rates.⁴⁸

47. This assumes state and local jurisdictions follow the federal lead and also allow 100 percent expensing. If this assumption was not followed, the state corporate profit revenue decrease of 11.8 percent wouldn't occur and instead would increase proportional to GDP.

48. See Laffer (2004). As an example of the Laffer Curve, Peter Merrill (2007) finds evidence that high corporate income tax rates relative to individual income tax rates may reduce the share of US business activity conducted in corporate form.

If it makes so much sense to cut the corporate tax rate, why hasn't the US Congress already acted? Three contrary arguments stand out in the debate: the progressive taxation argument; the "incorporated pocketbook" argument; and the exchange rate argument.

Progressive Taxation Argument

Prominent among defenses of high corporate taxes are arguments to the effect that these taxes reach the pockets of the rich. How effective is the corporate tax at extracting money from well-off Americans? Table 16 presents a standard tax distribution table prepared by the Tax Policy Center, showing tax burdens by income quintile. Such tables are regularly published by the Joint Committee on Taxation (JCT). As table 16 indicates, federal taxes overall are progressive—the effective tax rate rises with the individual income level. In 2009, for example, the average combined effective federal tax rate (combining the individual income tax, the payroll tax, the corporate income tax, and the estate tax) was –0.9 percent for the lowest quintile of the income distribution, 13.4 percent for the middle quintile, and 22.9 percent for the top quintile (table 16).

Distribution tables are derived from a large sample of individual tax returns; in these tables the distribution of the corporate tax between income quintiles is calculated by attributing the corporate tax according to the estimated shareholdings of individual taxpayers. This calculation totally ignores the substantial impact of corporate taxation on the supply of capital and hence the real wage. The distinguished economist Arnold Harberger (1995), for example, convincingly argued that, in an open economy, the burden of corporate taxation entirely falls on wage income, by depressing the supply of capital. Taking capital supply effects into account would sharply revamp the way corporate taxes are scored in standard distribution tables. Today, however, the scoring approach used in the standard tables is part of tax lore accepted on Capitol Hill and the White House. Thus, the corporate income tax burden, when attributed to individuals according to their estimated holdings of shares, was said to be 0.5 percent for the lowest quintile, 2.8 percent for the top quintile, and 5.7 percent for the top 1 percent of American households in 2009 (table 16).

The attribution of corporate taxes in the standard distribution table suggests an interesting mental calculation. If the average effective corporate tax rate was cut in half, to the neighborhood of 15 percent (implying a statutory rate of around 20 percent), the supposed loss of progressivity could be easily offset by a small increase in individual tax rates on upper bracket households. For example, the top rate for households in the 80th to 95th percentile range might be raised by 0.5 percent; for households in the 95th to 99th percentile range, by 2.0 percent, and for households in the top one percentile by 3.0 percent. In other words, an enormous drag on US business could be slashed, and progressivity as calculated (if erroneously) in the standard distribution tables could be preserved by a small rise in individual tax rates for upper bracket Americans.⁴⁹

Incorporated Pocketbook Argument

When the top individual statutory tax rate (say 40 percent) substantially exceeds the top corporate statutory tax rate (say 20 percent), high income earners will be tempted to create "incorporated pocketbooks" to shelter their salaries, rents, royalties, and dividends from personal taxation. But this is not a big problem. Such corporations can be compelled to acquire the status of pass-through entities, so that their income is actually or constructively distributed to the beneficial owners.⁵⁰ In recent years, Canada, France, Germany, and the United Kingdom have all imposed personal tax rates up to and exceeding 20 percentage points higher than the applicable corporate rate—for example, Canada's marginal individual income tax rate is 46.4 percent while its marginal corporate tax rate is 19.5 percent.⁵¹ Yet all these countries have coped with the "incorporated pocketbook" problem.

49. For reasons already noted, higher personal taxes are not necessarily required, on revenue grounds, to make up fictitious "lost" revenue from a corporate rate cut.

50. Currently, as explained earlier, pass-through entities are widely used to *avoid* high corporate taxes. Following corporate tax reform, the role of pass-through entities would be reversed: Their use would be required to *deter avoidance* of personal taxes.

51. Figures are from the World Tax Database of the Office of Tax Policy Research at the Michigan Ross School of Business and the OECD Tax Database.

Exchange Rate Argument

The argument is often made that dollar devaluation, coupled with appropriate macroeconomic policies, can solve the competitive problems that the United States faces in the global economy—problems arising from a bad tax system, an inferior education system, crumbling infrastructure, and insufficient innovation. In a very narrow sense the argument is unassailable. If US competitive problems are conceived solely in terms of the trade deficit, then dollar devaluation, accompanied by an improved savings/investment balance, will indeed address the national illness. As the trade deficit shrinks, US firms that produce traded goods and services in competition with foreign suppliers will enjoy larger pre-tax profits—at some point sufficiently large to offset their high corporate tax burdens. Likewise, their larger profits will compensate for ill-trained workers, port congestion, and lagging innovation.

But a competitive “solution” that relies solely on a lower exchange rate and macroeconomic discipline has its own problems. First, the solution entails a decline in US living standards, since a devalued dollar means that US imports become more expensive to American firms and households while US exports become cheaper to foreign buyers. Second, the macro-balance component could just as easily spell a contraction of domestic investment as a rise of domestic savings—not the right prescription for a country that aspires to remain on the economic frontier. Finally, so long as the dollar remains the world’s leading currency, foreign demand for dollar assets will be highly elastic. Consequently, a deliberate policy of dollar devaluation may require substantial and sustained purchases of foreign currency assets by the Treasury or Fed in order to achieve an exchange rate that is consistent with the trade balance target. At some point, these purchases will create their own political backlash, both in the US Congress and in foreign finance ministries.

We agree that the exchange rate and the macro-balance must play a crucial role in narrowing the persistently large US trade deficit. But we also assert that corporate tax reforms—along with policies to improve education, rebuild infrastructure, and spur innovation—are essential for improving the competitive position of the United States in the global economy.

THE TERRITORIAL TAX CLUB

Territorial taxation—meaning rules that tax corporate profits earned at home but not corporate profits earned abroad—has become the world norm. Japan and the United Kingdom were the latest countries to join the “territorial tax club” (table 17). The United States remains an exception, to its disadvantage as an export power and global competitor. Yet, if he has his way, President Obama would put even more distance between the US tax system and the territorial club.

President Obama’s Approach

In his first budget blueprint,⁵² released in February 2009 for fiscal year 2010, President Obama proposed to deliver on one of his campaign promises: “When I am President, I will end the tax giveaways to companies that ship our jobs overseas, and I will put the money in the pockets of working Americans, and seniors, and homeowners who deserve a break.”⁵³ The FY2010 budget laid down a marker that sharply divided the Obama administration from nearly all CEOs of US-based multinational corporations (MNCs). Obama’s “reforms,” estimated to raise \$210 billion in tax revenues over 10 years from (2010 to 2019), proposed nine changes in the US system of taxing foreign income, of which the first four were the big ticket items:⁵⁴

1. reform business entity classification rules (designed to raise \$86.5 billion from 2010 to 2019);
2. defer deduction of expenses, except research and experimentation (R&E) expenses, related to deferred income (designed to raise \$60.1 billion from 2010 to 2019);

52. A New Era of Responsibility, Renewing America’s Promise, Budget of the United States Government, Fiscal Year 2010, www.gpoaccess.gov (accessed on December 8, 2010).

53. Remarks of Senator Barack Obama, “A Change We Can Believe In,” Spartanburg, SC, November 3, 2007, www.barackobama.com (accessed on February 15, 2011).

54. See the Updated Summary Tables, May 2009, Budget of the United States Government, Fiscal Year 2010, www.gpoaccess.gov (accessed on December 8, 2010).

3. reform foreign tax credit: determine the foreign tax credit on a pooling basis (designed to raise \$24.5 billion from 2010 to 2019); and
4. reform foreign tax credit: prevent splitting of foreign income and foreign taxes (designed to raise \$18.5 billion from 2010 to 2019).

Not surprisingly, the agenda was ignored by Congress and roundly criticized for hampering the ability of MNCs to conduct business in the global marketplace. Nevertheless, in his next budget blueprint, released in February 2010 for FY2011, Obama pursued the same themes, though on a smaller scale. The FY2011 proposals were intended to raise about \$122 billion over 10 years (from 2011 to 2020) and repeated several contentious elements from the FY2010 agenda.⁵⁵

President Obama's latest budget message, for FY2012, called for "immediate action to rid the corporate tax code of special interest loopholes and to lower the corporate rate to restore competitiveness and encourage job creation—while not adding a dime to the deficit."⁵⁶ In other words, while corporate profit earned abroad would be taxed more heavily under the president's proposal, the new revenue would be used to lower the statutory corporate tax rate. This translated into a plan to raise around \$129 billion (over 10 years) from higher taxes on profits earned abroad. The new list of big ticket items was altered somewhat from the previous agenda:⁵⁷

1. reform foreign tax credit: determine the foreign tax credit on a pooling basis (designed to raise \$51.4 billion from 2012 to 2021, an increase of about \$20 billion from the FY2011 estimates);
2. defer deduction of expenses related to deferred income (designed to raise \$37.7 billion from 2012 to 2021);
3. tax currently "excess returns" associated with the transfer of intangible assets to offshore companies (designed to raise \$20.8 billion from 2012 to 2021); and
4. modify tax rules for dual capacity taxpayers (designed to raise \$10.8 billion from 2012 to 2021)

To summarize, President Obama's budget proposals for three years running echoed his campaign rhetoric, often repeated after the 2008 election, despite a chilly reception from the business community (see box 2). However, after the November 2010 mid-term election, which returned a Republican majority to the House, Secretary of Treasury Timothy Geithner slightly changed the administration's tune. Rather than outright rejection, he gave a qualified nod to territorial taxation: "When we look at territorial tax systems, we've got to make sure that the ultimate outcome supports that objective."⁵⁸

Tax Systems Compared

Almost since its inception, the Internal Revenue Code of the United States has taxed US corporations on their worldwide income but allows a credit for foreign corporate taxes and defers US taxation until the income earned by foreign subsidiaries is repatriated to the United States.⁵⁹ Suppose, as the Obama team has proposed, that deferral was abolished,

55. Budget of the United States Government, Fiscal Year 2011, www.whitehouse.gov (accessed on December 1, 2010). The FY2011 blueprint called for limits on the foreign tax credit and deferral, an end to equity swaps that avoid dividend withholding taxes, repeal of the 80/20 and dual-capacity rules, and tighter rules to combat underreporting of income. The FY2011 blueprint dropped some of the FY2010 budget proposals, notably "check-the-box" rules for foreign entities, but added new provisions to tax "excess" returns associated with the transfer of intangibles to offshore entities and to disallow the deduction for "excess" reinsurance premiums paid to foreign affiliates. The Mid-Session Review for FY2011 dropped two of the smaller items and lowered the estimated tax revenue to around \$117 billion over 10 years. The two items dropped were ending the use of equity swaps to avoid dividend withholding taxes (estimated to raise \$1.2 billion over 10 years) and tighter rules to combat underreporting of income (estimated to raise \$5.4 billion over 10 years). Mid-Session Review, Budget of the US Government, Fiscal Year 2011, www.whitehouse.gov (accessed on February 17, 2011).

56. Budget of the United States Government, Fiscal Year 2011, page 5, www.whitehouse.gov (accessed on February 16, 2011).

57. Two items were dropped from the latest agenda: the repeal of 80/20 company rules and the prevention of splitting foreign income from foreign taxes.

58. Christie Rebecca and Richard Rubin, "Geithner Says U.S. Must Face Budget, Tax Challenges," Bloomberg, February 16, 2011, www.bloomberg.com (accessed on February 17, 2011).

59. See Hufbauer and Assa (2007, chapter 3).

Box 2 President Obama and multinational corporations

In his January 2010 State of the Union address, President Obama declared that “it is time to finally slash the tax breaks for companies that ship our jobs overseas, and give those tax breaks to companies that create jobs right here in the United States of America.”¹ Speaking in Milwaukee in September 2010, Obama repeated his vision: “...instead of giving tax breaks to companies that are shipping jobs overseas, we’re cutting taxes to companies that are putting our people to work right here in the United States of America.”² He added, “I don’t want to buy stuff from someplace else. I want to grow our exports so that we’re selling to someplace else—products that say ‘Made in the U.S.A.’” A month later, in his October 16, 2010 weekly radio address, Obama again emphasized that “...our tax code has actually given billions of dollars in tax breaks that encourage companies to create jobs and profits in other countries.”³

However, during his visit to India in November 2010, after the mid-term elections that delivered the Democrats a “shellacking,” President Obama shifted from the anti-MNC themes that played so prominently in his public remarks beginning with the 2008 presidential campaign. In India, Obama characterized as old stereotypes the perception that Indian call centers and back offices cost American jobs or that American products threaten Indian livelihoods. Putting a positive spin on commerce, Obama asserted that “... in 2010, trade between our countries is not just a one-way street of American jobs and companies moving to India. It is a dynamic, two-way relationship that is creating jobs, growth, and higher living standards in both our countries. And that is the truth.”⁴ He went on to say that “...while I make no apologies about doing whatever it takes to encourage job creation and business investment in America, I still work to make sure our efforts don’t unfairly target companies and workers from this nation [India] or any nation.”

During his State of the Union address in January 2011, President Obama shifted even further from his anti-MNC stance. He called for the United States to “win the future,” by investing in innovation, education, and infrastructure.⁵ These investments “will make America a better place to do business and create jobs.” The president went on to say, “To help our companies compete, we also have to knock down barriers that stand in the way of their success.” Then the president repeated his tax refrains, “Over the years, a parade of lobbyists has rigged the tax code to benefit particular companies and industries. Those with accountants or lawyers to work the system can end up paying no taxes at all. But all the rest are hit with one of the highest corporate tax rates in the world. It makes no sense, and it has to change.”

The president’s sentiments irritate the business community. George Buckley, chief executive and chairman of 3M, for example, told the *Financial Times* that “we know that his instincts are—they are Robin Hood-esque. He is anti-business.” Buckley emphasized that “there is a sense among companies that this is a difficult place to do business. It is about regulation, taxation, seemingly anti-business policies in Washington, attitudes towards science. Politicians forget that business has choice. We’re not indentured servants and we will do business where it’s good and friendly. If it’s hostile, incrementally, things will slip away. We’ve got a real choice between manufacturing in Canada and Mexico—which tend to be pro-business—or America.”⁶

Recently, there was buzz that the Obama administration might be warming up to a repatriation holiday—in other words, a low US tax (say 5 percent) on profits repatriated by a US parent firm from its foreign subsidiaries. But a Treasury official’s post on the department’s website, dated March 23, 2011, silenced that hope. Michael Mundaca argued that “there is no evidence that [the American Jobs Creation Act repatriation tax holiday in 2005] increased U.S. investment or jobs, and it cost taxpayers billions.”⁷ He cited estimates from the Congressional Research Service (not the only estimates available) that most of the largest beneficiaries of the repatriation holiday cut jobs in 2005 and 2006 and that many used the repatriated funds to repurchase stock or pay dividends. As of March 2011, it is safe to say that the Obama administration adheres to the view that MNCs should be taxed more heavily, not less heavily, on their foreign income.

1. Remarks by the President in the State of the Union Address, January 27, 2010, www.whitehouse.gov (accessed on November 23, 2010).

2. Remarks by the President at Laborfest in Milwaukee, Wisconsin, September 6, 2010, www.whitehouse.gov (accessed on November 23, 2010).

3. Weekly Address—President Obama: Washington Republicans “rewarding corporations that create jobs and profits overseas,” October 16, 2010, Office of the Press Secretary, the White House, www.whitehouse.gov (accessed on November 23, 2010).

4. Remarks by the President to U.S.-India Business Council and Entrepreneurship Summit, November 8, 2010, Office of the Press Secretary, the White House, www.whitehouse.gov (accessed on November 23, 2010).

5. Remarks of President Barack Obama, State of the Union Address, January 25, 2011—as prepared for delivery, www.whitehouse.gov.

6. Hal Weitzman, “3M chief labels Obama ‘anti-business,’” *Financial Times*, February 28, 2011, front page.

7. Michael Mundaca, “Just the Facts: The Costs of a Repatriation Tax Holiday,” *Treasury Notes*, US Department of the Treasury, March 23, 2011, www.treasury.gov (accessed on March 25, 2011).

and US taxation was applied in the year profits are earned abroad rather than the year when they are repatriated as dividends. The result would be a sharp increase in taxes paid by US-based MNCs. The resulting system might not be so damaging to US-based MNCs if, at the same time, the US statutory corporate tax rate was slashed, say to 20 percent. But that has not been announced as part of President Obama's plan.

Instead, under the Obama plan, the tax burden faced by US-owned subsidiaries operating abroad would be raised to 30 percent or higher, making the firms far less competitive in local foreign markets. Even without the Obama "reforms," the current US system hinders investment at home, here in the United States. The reason: When a US-owned subsidiary company earns a profit, the additional US tax levied on dividends paid to its US parent discourages such remittances and thereby reduces the reinvestment of foreign earnings in the United States.⁶⁰

Table 17 outlines the different tax methods applied to foreign-source dividends paid by corporate subsidiaries to their parent firms in various OECD countries. Most OECD countries (27 out of 34) employ a territorial tax system in contrast to the US system. Of the 7 countries that tax worldwide income, the United States has the highest tax rate at 39.2 percent. The other 6 countries (Chile, Ireland, Israel, Mexico, Poland, and South Korea) generally have much lower corporate tax rates. Excluding Ireland (which has a 12.5 percent tax rate), they undertake very little foreign investment (together accounting for less than 2 percent of the world's outward FDI in 2009).⁶¹

Taxes and Exports

In the same January 2010 State of the Union address that declared tax war on MNCs, President Obama also called for the doubling of US exports in five years. If achieved, this would entail an increase of goods and services exports from the depressed 2009 level, some \$1,570 billion, to \$3,140 billion in 2014.⁶² MNCs have long been essential agents for US export success; if US exports are to double by 2014, MNCs must play a major role. In 2008, before the great recession led to a collapse of trade, MNC-associated exports of US merchandise—exports by both US-based and foreign-based MNCs—accounted for about \$828 billion, or 64 percent of total US merchandise exports (table 18). US-based MNCs exported about two-thirds of this figure, some \$596 billion, while foreign-based MNCs exported the other one-third, \$232 billion.⁶³ No program to boost US exports can succeed without the engaged participation of these MNCs.

MNCs enjoy great advantages when selling into the global marketplace. First, they are able to spread the very high fixed costs of engaging in international commerce over a large volume of sales of goods and services.⁶⁴ Second, they are able to draw on intangible assets that may not show up on balance sheets, such as trade names, managerial and distribution know-how, and government permits. These assets enable MNCs to sell abroad, even though their underlying production costs may be higher than the costs of their local competitors.

Contrary to Obama's budget proposals for FY2010, FY2011, and FY2012, revamping US tax policy to retard outward MNC investment would hamper US export performance by eroding the unique advantages that MNCs enjoy in spreading fixed costs and connecting to foreign buyers. Hufbauer and Moran (2010) summarize studies that show that outward-bound US firms consistently export more than purely domestic firms. The positive relationship between outward investment and exports holds for both US low-tech and high-tech industries, as well as for both heavily unionized and nonunionized industries. It is worth skipping lightly over these studies.

Edward M. Graham (2000) of the Peterson Institute found that outbound foreign direct investment (FDI) by US manufacturing firms was associated with greater US exports and had no significant impact on US imports. Mihir Desai, Fritz Foley, and James Hines (2005) showed that, in years when American MNCs make greater capital outlays

60. Testimony of Robert A. McDonald before the House Committee on Ways and Means, January 20, 2011, <http://waysandmeans.house.gov> (accessed on February 17, 2011).

61. *Ibid.*

62. The 2009 export figure is taken from the Bureau of Economic Analysis.

63. The 65 percent figure probably understates the role of large exporting firms. According to statistics gathered by Andrew B. Bernard, J. Bradford Jensen, and Peter K. Schott (2005), just 1,600 large firms, merely 0.03 percent of all US firms, accounted for 80 percent of US merchandise exports in 2000.

64. Among the high fixed costs of international commerce that often preclude small and medium-sized enterprises (SMEs) from entering foreign markets are familiarity with customs rules and procedures, distribution know-how, connecting to foreign buyers, security requirements, the complexities of sea, road, and rail transport, and establishing offices for after-sales service.

abroad, they also make greater capital outlays at home. In fact, 10 percent greater FDI by MNCs was found to trigger 2.2 percent additional domestic investment. Further work by Desai, Foley, and Hines (2009) revealed a strong positive connection between domestic and foreign operations of American manufacturing firms between 1982 and 2004. The authors estimated that, over this entire period, 10 percent greater foreign investment was associated with 2.6 percent greater domestic investment, and 10 percent greater foreign employee compensation was associated with 3.7 percent greater domestic employee compensation. Gravity model analysis by Dean DeRosa (2009) reached supporting results: When outward FDI stocks in the importing country expand by 10 percent, US exports to the country expand by nearly 1 percent.

Does this literature mean that American MNCs are exporting to full capacity? Of course not. Barry Bosworth and Susan Collins (2010) show that US merchandise exports are well below the norms established by Japan and the European Union. One reason for the shortfall is that American multinationals produce abroad for local markets to a greater extent than their Japanese and European peers.

But the good export performance by Japanese and European MNCs cannot be explained by the tax sticks that President Obama has recommended for American MNCs. In fact, MNCs based in Japan, Europe, and other countries that compete with the United States for export markets are taxed on a territorial basis: Only income earned in the home country is subject to the home country's corporate tax.

Moreover, when Japanese, European, or other non-American MNCs export goods and services from their home territory, those sales enjoy a rebate of VAT or goods and services tax (GST).⁶⁵ Likewise, when non-American MNCs ship goods manufactured abroad back to their home countries, the imports must pay the home country VAT or GST. At a typical rate of 15 percent, a VAT or GST is essentially equivalent—in terms of altering the price of traded goods and services relative to nontraded products—to an exchange rate devaluation of 15 percent. Since the United States so far has resolutely rejected the VAT or GST, American MNCs do not enjoy these tax incentives for exports and home production.

As table 8 shows, nearly all countries are “low-tax jurisdictions” compared with the United States. Curtailing deferral and the foreign tax credit—President Obama's recommendations—would not deliver the long-term export boost he is seeking. Instead, over the space of a decade or two, these “reforms” would work as a powerful solvent to break the ties between foreign subsidiaries and their American parent corporations. The reason is simple: Earnings of the foreign subsidiaries would be taxed at significantly lower rates if the subsidiaries were owned by MNCs based in Japan, Europe, China, Brazil, India, or almost any other sophisticated country. The predictable result is that US exports would no longer enjoy the supply chain ties that now link US production to the vast global marketplace.

The United States should join the “territorial tax club.” Simply put, the United States should exempt from US taxation income earned by MNC subsidiaries when doing business abroad.⁶⁶ Moreover, the exemption should cover not only dividends remitted from foreign subsidiaries but also half of the income earned from MNCs when they export goods and services from the United States itself.⁶⁷

Corporate Taxation and Headquarters Location

MNCs engage in two distinct activities: headquarters services and traditional production and distribution activities. Headquarters services cover top management, legal and accounting services, research and development (R&D) activities, and other tasks that are efficiently carried out at a single location. Headquarters are prized units of a global enterprise, both for the prestige they confer on a country or city and for the well-paid jobs they create. From a national perspective, headquarters activities are highly desirable because they spur the industries of the future. Headquarters services are an incubator of human capital; since human capital is highly mobile, the spillover effects are potentially large. Key employees often use their acquired knowledge to start new firms and energize old firms.

65. Canada and Australia are leading users of the GST.

66. As Hufbauer and Assa (2007) explain in detail, territorial taxation must distinguish between “active” and “passive” income and attend to many other details not discussed here.

67. Thus, the foreign base company sales and service income—now subject to US taxation under the provisions of Subpart F—should be exempt. For a fuller expansion, see Hufbauer and Assa (2007).

Once created, most headquarters services can be used throughout a far-flung enterprise with little extra cost. But firms find it difficult to license these services to unrelated firms on a profitable basis while keeping control of proprietary know-how. For this reason, as Stephen Hymer (1976) observed long ago, most large firms set up their own production facilities around the world, even when the MNCs do not, at the outset, have a competitive advantage in manufacturing or distributing the product abroad.

Not surprising, the world's most affluent metropolitan areas are headquarters to a disproportionate number of the world's largest corporations.⁶⁸ Table 19 shows that, in 2005, of the 500 largest firms in the world measured by revenue, 189 were based in the United States, around 38 percent of the total. Around 5 percent of the world's largest firms were located in or around New York, while five other US metropolitan areas were collectively home to another 9 percent of the Fortune 500 global total.⁶⁹ But by 2010, only 139 of the world's 500 largest firms were located in the United States, around 28 percent of the global total. Of these, 4 percent were located in or around New York, while five other US metropolitan areas were collectively home to another 5 percent (table 19). The trend evidenced by these numbers is not moving in the right direction for the United States.

There are various reasons for the decline in US prominence as a headquarters country. Most important, perhaps, is the rise of Brazil, India, China, and other emerging-market countries, but the US tax system must be counted as a negative force, if not a major cause. The US system of worldwide taxation—as opposed to the global norm of territorial taxation—means that all the foreign subsidiaries of a parent company headquartered in the United States are subject to US taxation on their profits. Obviously this is a disadvantage compared with territorial systems that exempt foreign profits from home-country taxation.

Major metropolitan areas in the United States enjoy an advantage in providing headquarters services owing to their highly educated population and quality infrastructure. Switching to a territorial tax system would eliminate a significant drag on America's ability to maintain its standing as a headquarters country.

A NATIONAL CONSUMPTION TAX

Consumption taxes form an important source of public revenue. Most prominent are the value-added tax and its functional equivalent, the goods and services tax—broad-based consumption taxes imposed at each stage of the supply chain from primary producer to retail merchant.⁷⁰ In principal, the VAT or GST can avoid some of the complications of corporate and personal income taxes, such as the definition of myriad deductions and exemptions, and the application of multiple tax rates and tax credits to different categories of income. Moreover, since VAT and GST payments are remitted by business firms, they avoid the hassle of collecting taxes from millions of households.

The VAT and GST are the leading means of taxing consumption in 29 out of the 30 OECD countries—with the United States being the exception. VAT and GST now account for around 19 percent of all revenue collected by governments across the OECD (excluding the United States) and almost 7 percent of GDP.⁷¹ By contrast, taxes on specific goods and services (excise taxes) are lesser forms of consumption taxation in terms of revenue collected. On average, excise taxes account for around 3.5 percent of GDP in a sample of OECD countries (excluding the United States) but only 1.6 percent in the United States.⁷²

68. Hufbauer and Assa (2007, table 5.5, page 117).

69. Figures are from Hufbauer and Assa (2007, table 5.5, page 117). The five metropolitan areas are Chicago (includes immediate environs like Elk Grove, Abbott Park, etc.), Los Angeles (includes immediate environs like Burbank, Thousand Oaks, etc.), Atlanta, Houston, and the Bay Area (San Francisco, San Jose, Santa Clara, and Palo Alto).

70. The general consumption tax systems adopted by different countries come under different names—VAT (in the European Union and the United Kingdom), GST (in Canada, Australia, and New Zealand), or simply consumption tax in Japan. While the names are different, the taxes all entail collection in stages, with successive business taxpayers entitled to deduct the tax paid on purchases and charge the tax on sales. In this way, the tax collected from multiple stages equals the VAT or GST paid by the final consumer to the last vendor.

71. Figures are from OECD, 2010, Revenue Statistics, 1965–2009. Most states in the United States impose retail sales taxes—single stage taxes collected by retail merchants, typically at rates between 4 and 8 percent. Retail sales taxes are the closest US approximation to the VAT and GST. In 2008, retail sales taxes accounted for around 8 percent of all US tax revenue (federal, state, and local) and 2 percent of GDP.

72. Figures are from OECD, 2010, Revenue Statistics, 1965–2009.

Growth Payoff

In our view, a tax in the VAT family is both the logical substitute for high corporate tax rates (if a substitute is needed)⁷³ and the source of additional revenue to narrow the fiscal deficit. In terms of the growth payoff, we recapitulate here the benefits from lower corporate tax rates, already summarized in the previous section, and leave aside the considerable benefits of a fiscal trajectory that caps the debt-to-GDP ratio below 90 percent.

According to estimates by Djankov et al. (2010) summarized earlier, the penalty from a 10 percentage point *rise* in the first year effective corporate tax rate is a 2.0 percentage point decrease in the aggregate investment to GDP ratio (the mean is 21 percent) and a 1.4 percentage point decrease in average new business registrations (a measure of entrepreneurial activity). On the flip side, the IRET simulations show that a 10 percentage point *drop* in the corporate tax rate would result in a 2.5 percent increase in GDP, a 2.6 percent increase in private business output, and a 6.8 percent increase in the private business capital stock.

A tax in the VAT family enables a low rate for a given amount of revenue, thereby reducing distortion. Drawing on this theme, Dale Jorgenson and Kun-Young Yun (1996) estimated the growth payoff from broad-based consumption taxes. In one set of simulations, corporate and individual income taxes were replaced by a “subtraction method” consumption tax at a rate of 19 percent.⁷⁴ The discounted present value of total gains was roughly 25 to 42 percent of GDP.⁷⁵ Converted into annual flows, the annual gains were in the range of 1.1 to 1.9 percent of GDP.⁷⁶ Expressed in terms of 2010 GDP, the discounted present value of total gains would range from \$3.7 trillion to \$6.2 trillion, and the annual gains would range from \$161 billion to \$278 billion. Very few, if any, government initiatives can deliver a payoff of this magnitude.

Trade Balance

A major advantage of any broad-based tax in the VAT family is that the tax can be rebated on exports of goods and services and imposed on imports. To a considerable extent, these border adjustments would substitute for dollar devaluation, by making US exports more competitive in world markets and by requiring US imports to pay their share of the national tax burden.⁷⁷ The same border adjustment feature applies to retail sales and excise taxes, but these are less important sources of revenue than VAT or GST: In the United States, for example, retail sales and excise taxes together are around 3.7 percent of US GDP (table 20). As a consequence, border adjustments are less significant for the United States than for nearly all of its trading partners.⁷⁸

Table 21 reports the VAT and GST rates implemented by a sample of OECD countries. If the United States adopted a similar tax at a rate of 10 percent, and adjusted the tax at the border (exempted on exports of goods and services, imposed on imports), the net export-boosting effect would be roughly similar to a 10 percent devaluation of the dollar. According to estimates by William Cline, a 10 percent devaluation of the dollar would reduce the US trade deficit by about 1.5 percent of GDP after 4 years.⁷⁹ Cline’s calculations indicate that about 80 percent of the change comes from a reduction in the deficit on goods and services trade, with the remaining 20 percent reflecting changes in payments on international assets and liabilities (inward and outward foreign direct investment, private portfolio investment, and

73. To repeat and emphasize a point made earlier, it is by no means clear that a sharp reduction in the corporate tax rate will reduce federal revenue.

74. The “subtraction method” tax was patterned after the flat tax proposals of Hall and Rabushka (1995). Under this approach a firm would deduct the cost of all purchases from other businesses (including investment goods) to calculate its tax base. Wage and salary payments and fringe benefits would also be deducted from the tax base and instead would be taxed at the household level.

75. A discount rate of 4.45 percent was used in this calculation. 1997 GDP data are from the Bureau of Economic Analysis.

76. See Jorgenson and Yun (1997) for more information.

77. So long as US imports of goods and services exceed US exports, any tax in the VAT family would also generate a positive revenue flow from international transactions alone—in addition to the main source of revenue, taxes paid on domestic transactions.

78. Moreover, for administrative reasons, most states find it very difficult to collect retail sales taxes (or so-called use taxes) from purchases made from another state or a foreign country. The result is that US states effectively adjust their retail sales taxes on exports at their borders but not their retail sales taxes on imports from abroad or other states.

79. William R. Cline, “Estimating the Impact of the Exchange Rate on the Trade Balance and Jobs,” Peterson Institute Real Time Economic Issues Watch, November 1, 2010, www.piie.com (accessed February 26, 2011).

central bank holdings of dollars). With US GDP in 2010 at about \$14.5 trillion, a change of 1.5 percent over four years would amount to \$218 billion in the current account and \$175 billion in the trade balance (80 percent of the change in the current account). In 2010, the US trade deficit was \$498 billion and the current account deficit was \$479 billion.⁸⁰ Based on these calculations, a 10 percent tax in the VAT family would reduce the trade and current account deficits by about 40 percent.

Recommendations from the Academy

Drawing on European experience, many tax experts have proposed a credit-invoice VAT. For example, Michael J. Graetz (2008) estimated that a VAT at a rate of 10 to 14 percent would raise enough money to exempt families earning less than \$100,000—about 90 percent of households—from the federal income tax and would lower rates for everyone else.⁸¹

William G. Gale and Benjamin H. Harris (2010) from the Brookings Institution proposed an “American VAT.” Their VAT structure would include a very broad base, income tax credits (rather than product exemptions) to achieve progressivity and would require that the tax be listed separately on all receipts.⁸² The “American VAT” would be coupled with explicit links to discipline federal spending. Gale and Harris (2010) calculated that a 10 percent VAT with a broad base could raise about 2 percent of GDP in revenues, after reducing other taxes and compensating households for VAT payments on a modest level of consumption.

Hufbauer and Grieco (2005) advocated a “subtraction method” VAT, which they called the “corporate activity tax” (CAT).⁸³ In administrative terms, the CAT is designed to fit within the framework of the existing US corporate tax system since the CAT would be imposed on firms, not on transactions. As a “subtraction method” VAT, the CAT is a tax on overall enterprise activity, by contrast with the European style “credit-invoice” VAT, which is akin to a tax on individual transactions. If political considerations dictate, small firms could be exempted from the CAT by applying a threshold level of annual receipts. The CAT’s base would be domestic sales of goods and services by firms that qualify above the threshold, minus purchases from other US firms that are subject to the CAT.

While other scholars have recommended their own variations of tax systems in the VAT family, these three examples illustrate offerings from the academy.

Proposals on the Policy Table

Among the deficit reduction plans outlined in table 2, only two argued for a broad-based consumption tax: Congressman Paul Ryan’s (R-WI) Roadmap for the Future and the Rivlin-Domenici Debt Reduction Task Force. Ryan proposed an 8.5 percent business consumption tax (BCT) on goods and services. This tax would be calculated and administered using the “subtraction method”: a business enterprise would determine its tax base by subtracting its total purchases from its total sales. The BCT would be imposed on this tax base—roughly the firm’s value added—and paid to the federal government. As already mentioned, a “subtraction method” tax resembles, in administrative structure, the familiar corporate income tax system, since it is levied on the overall activity of each enterprise and not transaction-by-transaction.⁸⁴ By contrast, the credit-invoice method customarily used in VAT and GST systems requires a paper (or electronic) trail of each transaction—a trail that follows the tax paid on purchases and the tax collected on sales.

80. Figures are from the Bureau of Economic Analysis. The 2010 annual current account deficit figure is extrapolated from available data—the first three quarters of 2010.

81. Also see Lori Montgomery, “Once Considered Unthinkable, U.S. Sales Tax Gets Fresh Look,” *Washington Post*, May 27, 2009, www.washingtonpost.com (accessed on December 20, 2010).

82. A major disadvantage of the credit-invoice system of VAT, as practiced in Europe, is that the tax can be disguised, making it somewhat easier to increase than other taxes. One way to keep a broad-based consumption tax from turning into a “money machine” is to make the tax highly visible to the public by requiring that it be printed on all receipts.

83. For more information, see Hufbauer and Grieco (2005).

84. In explaining his reasons for proposing a subtraction method VAT, Congressman Ryan quoted Hufbauer and Grieco (2005): the closer resemblance of the US corporate income tax to the subtraction method tax than to a credit-invoice VAT or NRST; the avoidance of overlap with existing state and local retail sales taxes and thus fewer political obstacles; lower administrative burdens due to fewer collection points; and less scope for multiple rates than a credit-invoice VAT.

Co-chairs of the Debt Reduction Task Force, Alice Rivlin and former senator Pete Domenici (R-NM) called for a 6.5 percent debt reduction sales tax (DRST), phased in over two years. The DRST would be designed roughly like VAT and GST systems used in over 150 countries—the main difference is the name, not the tax mechanics.⁸⁵ The idea is to offset the political pain of implementing a tax in the VAT family with the political pleasure of reducing the deficit. An alternative method of balancing pain with pleasure might entail a coupling of the new tax with health care outlays, specifically Medicare and Medicaid.⁸⁶ This alternative might gain more traction, especially considering that 29 Republican governors have requested permission to limit Medicaid eligibility in their states.⁸⁷

Political Realities

Since the initial wave of European adoption in the 1960s, nearly every country that has introduced a VAT or GST has encountered fierce political opposition. The same would be true in the United States. Indeed, the United States has already considered and rejected a tax in the VAT family on two occasions.⁸⁸

Five anti-VAT arguments are often voiced in the public debate: first, its regressive character; second, its intrusion into revenue sources that have historically been assigned to the states; third, its role as a facilitator of excessive government spending; fourth, the prospect that the VAT or GST will acquire a “jagged profile” over time; and fifth the administrative burden of a new tax. Briefly we rehearse answers to each of these arguments. Yet in the end a national consumption tax will be adopted by the United States, if at all, only when public finances are in peril and only when it is generally accepted, to paraphrase what Winston Churchill said about democracy, that “[VAT is] the worst form of tax except all the others that have been tried.”⁸⁹

Regressive Character

If the VAT rate is uniform across goods and services, the tax burden will be roughly proportional to consumption. Because lower-income households spend a large proportion of their income than higher-income households (and save less), the VAT imposes a higher burden—as a share of current income—on lower-income households. This supposed defect can be corrected, as Graetz (2008) has argued, by eliminating lower-income households from the federal income tax system or, as Gale and Harris (2010) have argued, by giving a tax credit to households equal to the estimated VAT paid on a modest level of consumption.

State Revenue Sources

There is no question that a national VAT or GST would overlap a tax base historically claimed by states and cities with their retail sales taxes. The intrusion is sharper with a national retail sales tax (NRST), and is considerably less evident with the BCT, advocated by Congressman Ryan, which is imposed on enterprises not on retail transactions. But whether obvious or not, the real or imagined overlap will be a major issue in US political debate.

One way to deal with the overlap is to follow the approach adopted by Prime Minister John Howard of Australia, who sold the GST by assigning the revenue to the Australian states. Another variant, suggested by Gale and Harris (2010), would invite the state and cities to repeal their retail sales taxes and “piggyback” their own tax rates on the

85. Like the VAT, the DRST would be collected at each stage of the supply chain with a credit for payments at the prior stage. This facilitates tax compliance because firms that operate outside the system cannot claim tax credits for purchases from other firms.

86. As a twist to placate the states, part of the political bargain could entail federal responsibility for part of Medicaid costs. This option is discussed later (table 22).

87. The governors complain about a huge swelling of Medicaid outlays, so that Medicaid is now tied with education as the top state expense. Sara Murray, Janet Adamy, and Neil King Jr., “Governors scramble to rein in Medicaid costs,” *Wall Street Journal*, February 28, 2011, front page.

88. See Hufbauer and Grieco (2005, box 4.1, page 41).

89. The original Churchill quote is, “It has been said that democracy is the worst form of government except all the others that have been tried” (Winston Churchill Quotes, Quotes & Sayings, www.quotesandsayings.com [accessed on March 1, 2011]).

national rate.⁹⁰ Still a third variant, mentioned earlier, is to couple the new tax with federal assumption of state obligations for Medicaid or simply assign a formula portion of the national revenue to the states.

Table 22 provides the groundwork for evaluating federal-state relations in the context of a national consumption tax. In this table we have assumed a “yield ratio” of around 0.38—the “yield ratio” is the tax rate divided by the revenue expressed as a percent of GDP. A yield ratio of 0.38 means that a 10 percent national consumption tax raises 3.8 percent of GDP in revenues.⁹¹ By implication, some 62 percent of GDP is excluded from the consumption tax base or preferentially taxed. Based on the work of Toder and Rosenberg (2010), a yield ratio of 0.45 would be fairly high (implying that 55 percent of GDP is excluded from the tax base) while 0.28 would be fairly low (implying 72 percent of GDP is excluded from the tax base).⁹² Table 22 assumes a yield ratio between these values.⁹³

As the calculations indicate, the DRST at a rate of 6.5 percent would generate revenues of around 2.5 percent of GDP; the BCT, at rate of 8.5 percent, would generate revenues of around 3.2 percent of GDP; while the American VAT at a rate of 10 percent would generate revenues of around 3.8 percent of GDP (table 22).

While the revenues generated from these alternative national consumption taxes are substantial, the data in table 22 show why still more would be needed to compensate states for their Medicaid outlays or retail sales tax receipts. Drawing on CBO projections, which assume that 43 percent of total Medicaid costs will be paid by the states under current law, state Medicaid outlays will reach 1.3 percent of GDP in 2020. Optimistically, the costs will stay at that level. State retail sales taxes—the taxes that overlap with a national consumption tax—are projected to remain at 2.0 percent of GDP.

Evidently none of the three national consumption taxes generate enough revenue to absorb state Medicaid outlays or substitute for state retail sales taxes, after narrowing the federal fiscal gap. We have estimated (table 3) that the United States needs additional revenue of around 4 percent of GDP to achieve a sustainable fiscal outlook—and even that daunting target requires a severe and painful compression of entitlement spending. The revenue figures in table 22 indicate that deficit reduction will claim all the revenue from a national consumption tax, even at a rate of 10 percent.

To compensate the states either for Medicaid outlays or for retail sales tax receipts, the national consumption tax rate and the yield ratio would both need to be higher. Optimistically assuming a “yield ratio” of 0.45, the national consumption tax rate would still have to reach 12 percent for the federal government to pay the current state share of Medicaid outlays.⁹⁴ Alternatively, the average rate of consumption tax, with states “piggybacking” on the national system, would have to be 13 percent to compensate states for the elimination of retail sales taxes.⁹⁵

If a “grand bargain” between the states and federal government entails both federal payment of all Medicaid costs and state elimination of retail sales tax, the national consumption tax rate would have to average 15 percent and the yield ratio would have to reach 0.45. In political terms, this is a revolutionary combination, but perhaps fiscal revolution is what the times require.

Money Machine

Among conservatives, a contrary argument is that a national consumption tax would become a “money machine,” enabling ever higher public spending and making it much harder to shrink the federal government. Cause and effect can certainly be debated. However, in advanced OECD countries, when a larger share of total tax revenue is contributed by VAT or GST, government expenditures tend to claim a larger share of GDP (see table 23). In fact, the correlation coefficient between government expenditure expressed as a percent of GDP and general consumption taxes as a percent

90. Among other administrative virtues this would enable the states to capture revenue from transactions that are otherwise difficult to tax, such as mail order and internet sales.

91. The revenue figure does not make allowance for companion policies designed to compensate low-income households or other companion policies.

92. A yield ratio of 0.45 means that the VAT or GST tax base has to include controversial items, such as legal and medical expenses, basic foods, and rent payments (Toder and Rosenberg 2010).

93. For comparison, the yield ratio for Australia is 0.35, France is 0.37, Germany is 0.37, Japan is very high at 0.5, and Korea is also high at 0.43. These calculations were made using figures in tables 20 and 21.

94. A yield ratio as high as 0.45 means that unfamiliar items like legal fees and rent payments would have to be included in the tax base.

95. The “piggyback” option is spelled out by Gale and Harris (2010). This option offers many advantages to the states, including raising substantial revenue in a less distortionary manner, lowering state administrative costs, and allowing the taxation of previously difficult-to-tax transactions, like mail order or internet sales.

of total taxation is 0.60 (significant at the 95 percent level). This means that higher VAT and GST rates generally go hand-in-hand with bigger government.

A close examination of national experience within the OECD might reveal that public insistence on social spending often preceded the rise in VAT or GST rates. But the conservative riposte to this possibility is that legislators can certainly detect a “money machine” hiding in the closet. Their ability to raise VAT and GST rates tomorrow enables them to enact generous health and retirement plans today.

One way to control the “money machine” syndrome is to require that the national consumption tax be separately stated on all invoices and retail shopping receipts.⁹⁶ This would ensure that an aroused public can object to proposed tax increases and vote proponents out of office. Another way, perhaps complementary, is to require a super-majority of the House and Senate (say three-fifths) to raise the national consumption tax rate.⁹⁷

Jagged Profile

A GAO report (2008) emphasized that all of its study countries (Australia, Canada, France, New Zealand, and the United Kingdom) totally or partially exempted certain goods and services, such as food, health care, commercial property, and sales of religious and cultural services from the tax base for social, political, or administrative reasons. Moreover, France and the United Kingdom collected less than half of the revenue that might have been raised, owing to preferential treatment of numerous sectors, along with widespread evasion. Complexity invites noncompliance, since it is easy to avoid tax by wrongly classifying goods or services.

The OECD in 2008 conducted a study on consumption tax trends and concluded that VAT exemptions and rate preferences tend to cover five categories: (1) basic essentials such as medical and hospital care, food, and water supplies; (2) certain activities considered traditionally to be utilities (public transport, postal services, and public television); (3) activities that are considered socially desirable (charitable services, culture, and sport); (4) geographic areas that are considered to deserve preferential treatment (islands, territories far away from metropolitan areas, and border areas); and (5) certain sectors for historical and practical reasons (which might be subject to specific taxes, e.g., property, insurance, and financial services).⁹⁸

If the United States adopts a national consumption tax, all these exemptions and rate preferences will be debated in Congress. Based on decades of legislative experience with the income tax, it is fair to predict that the US Congress would be highly susceptible to pressures for special treatment, expressed as lower tax rates for preferred items and outright exemptions. These pressures will emerge at the outset and continue indefinitely. The unfortunate result could be a jagged rate profile, and a tax base packed with exemptions, which of course would undermine the efficiency and growth benefits of a national consumption tax and sharply erode the revenue.⁹⁹ There is no easy answer to this problem—constant vigilance by the public and noisy opposition by the Treasury Department are the best we can prescribe.

Administrative Costs

According to the GAO (2008), a broad-based VAT would cost less to administer than the current federal income tax.¹⁰⁰ The GAO (2008, 11) acknowledges that its estimates of the total compliance burden are uncertain because neither the government nor business maintains regular accounts of compliance costs. Some of the required record keeping and reporting is already done for other purposes. However, from a review of studies, the GAO concluded that individual

96. In other words, the national consumption tax would be equally evident to voters as the familiar, and much disliked, retail sales tax.

97. A three-fifths super majority would coincide with the number of senators required to limit debate and preclude a filibuster and thus requires no change in accustomed senatorial procedures. In the House, however, a three-fifths super majority would require a special rule that would need to be reenacted in each Congress.

98. See OECD (2008) for further information on specific exemptions and the VAT structure of OECD countries.

99. A jagged profile of rates and exemptions is completely at odds with a “yield ratio” as high as 0.45.

100. The United Kingdom estimated that, in 2006, collection costs for the VAT were approximately 0.6 percent of revenue collected, compared with 1.3 percent for income taxes. Likewise, according to European Commission officials, VAT systems in Europe cost between 0.5 and 1 percent of VAT revenue collected (GAO 2008, 15–26).

and corporate compliance costs for the existing income tax system are at least 1 percent of GDP. Some studies estimate the private costs are as high as 1.5 percent of GDP (GAO 2005). With a sensible design, the private costs of a national consumption tax would be considerably lower. However, unless the existing income tax system is abolished—which seems nearly impossible—the administrative costs of a new national consumption tax would be additional to the administrative costs of the existing income tax system.

Australia, Canada, and New Zealand—countries that implemented VAT systems well after Europe—all built on preexisting administrative structures. While all three countries already had various national consumption taxes assessed on business firms, the new tax required new policies and processes, entailed additional staff, and engaged multiple agencies. The countries took 15 to 24 months to implement their VAT and GST systems, and a great deal of time and effort was devoted to public education. Australian officials targeted key players such as local chambers of commerce. Both Canada and Australia provided funds to qualifying small businesses to defray the costs of new bookkeeping and reporting requirements. Despite significant efforts to encourage firms to register early, both Australia and Canada had difficulty getting businesses to register prior to the VAT implementation date. In Canada, for example, less than a third of the total registrants (about 1.6 million firms) had voluntarily registered three months prior to VAT implementation.

These observations suggest that a national consumption tax will trigger both increased administrative costs (because the administrative costs of the present federal tax system will not go away) and implementation headaches. As we have said already, only the prospect of a truly painful fiscal crisis makes the new costs and headaches bearable.

CONCLUSION

Late in 2010, the Program for Public Consultation conducted a comprehensive survey that gave a representative sample of Americans a chance to deal with the budget crisis in an integrated framework.¹⁰¹ The goal was to confront respondents with the challenges and choices that face policymakers. When shown federal budget projections for the year 2015, respondents recommended an average annual cut in federal spending of \$146 billion (0.9 percent of 2015 GDP) and an average annual increase in federal revenue of \$292 billion (1.9 percent of 2015 GDP), resulting in an annual deficit reduction of \$437 billion (2.8 percent of 2015 GDP). Fiscal reforms of this magnitude, if enacted, would avert the looming budget disaster.

Drilling down, some 65 percent of respondents voted to increase the corporate tax rate, supposedly generating \$26.3 billion of additional revenue.¹⁰² Only 34 percent of respondents voted to raise revenue through a VAT, and most (23 percent of the full sample) picked a 2.5 percent VAT rate and only 4 percent picked a 10 percent VAT rate.¹⁰³ Based on responses in this survey the public is aware of the bleak fiscal outlook. Unfortunately, the tenor of solutions was sharply at odds with what the country needs and what this policy brief recommends. Given the tenor of public opinion, the White House and Capitol Hill face a major challenge to channel reforms in the right direction.

The United States collects around 8 percentage points less in tax revenue as a percent of GDP compared with the other OECD countries (federal, state, and local combined) yet spends only around 5 percentage points less (table 4). As Americans clearly recognize, these numbers point to a fiscal crash. What the public might not know is that the burdensome US corporate tax system undermines the nation's growth prospects as seen in box 1 earlier. Higher corporate taxes should not be part of the answer to the looming budget disaster. Instead, US corporate taxes should be sharply cut, and this can be done with little loss of revenue. However, a serious obstacle to sensible policy is the incorrect scoring of corporate tax reform by the JCT, by the Treasury, and by organizations such as the Program for Public Consultation. If scoring can be done correctly, the road will be opened for constructive changes and for a more competitive economy.

101. The Program for Public Consultation is a joint program of the Center on Policy Attitudes and the School of Public Policy, University of Maryland, and Knowledge Networks.

102. Program for Public Consultation (2011, 16). The respondents were told that the average corporate tax rate is 14.7 percent, and they voted to increase the rate to 15.9 percent. The 14.7 percent rate bears no resemblance to the rates shown in our table 8, and is highly misleading. The low figure may have biased respondents to vote for higher corporate taxes; even so, the proposed rate increase was just 1.2 percentage points. Another misstatement that may have confused respondents was the single-minded, but erroneous, schedule that claimed higher tax rates would generate significantly more revenue.

103. Program for Public Consultation (2011, 23).

Box 3 Hatchet job on GE

David Kocieniewski, writing in the *New York Times* on March 24, 2011, claimed that General Electric, the nation's largest corporation, paid no US taxes in 2010.¹ His article goes on to assert that "GE has been cutting the percentage of its American profits paid to the Internal Revenue Service for years, resulting in a far lower rate than at most multinational companies (MNCs)."

GE's success is supposedly based on a tax strategy that mixes fierce lobbying with innovative accounting. In a back-handed compliment, the article characterized GE's tax department, headed by former Treasury official John Samuels, as "the world's best tax law firm," having lowered the company's provisioning for US taxes to just 7.4 percent of its profits in 2010.² No doubt Samuels is a successful lobbyist and the article supplies juicy details about his persuasive efforts, which arguably saved GE about \$1 billion in tax obligations on one occasion. But lobbying is a hallowed ingredient of shaping legislation in most democracies around the world. Perhaps lobbying in the United States should be subject to stricter limits. But it's strange to single out corporate tax lobbyists as more troublesome than, for example, trial lawyers, defense contractors, financial giants, or health insurers.

In any event, the *New York Times* article triggered media calls to hammer GE and set back the cause of corporate tax reform.³ This episode demonstrates that anecdotes, misleadingly told, can shape policy. Our objection to Kocieniewski's colorful article is that it did not give proper weight to GE's massive losses incurred in the great recession of 2008–09 or the fact that the US corporate tax system is out of step with global realities. Moreover, the author said little about the outlandishly high statutory US corporate tax rate (nearly 40 percent, federal and state combined, far above the average for OECD countries or China).

Loss Carryforwards

In 2007, before the great recession, the US average effective tax rate for the consolidated GE group, including its financial subsidiary GE Capital Services (GECS), was 15.1 percent of the group's global income, and the consolidated provision for income taxes was \$4.2 billion.⁴ These numbers dropped sharply during the great recession, when GECS incurred massive losses.⁵ Some \$2.4 billion of these losses were carried forward to tax year 2010 and used to offset earnings in that year—the subject of the *New York Times* article.⁶ Loss carryforward provisions are a perfectly normal provision of the corporate tax code in the United States and other countries.⁷ Consequently, the consolidated tax return of the GE parent firm and its US subsidiaries showed little profit in 2010. The huge GECS losses translated into a 7.2 percent reduction in GE's provision for US income taxes, expressed as a percentage of pre-tax income.⁸

Deferred Tax on Foreign Income

Like many uninformed commentators, the *New York Times* author wrongly assumes that the foreign profits of US-based MNCs should be taxed by the United States in the year the profits are earned—regardless whether the profits are reinvested abroad or repatriated to the United States. If it existed, this system would conform to the norms of what is known, technically speaking, as capital export neutrality (CEN). According to the strict CEN standard, deferred taxation of foreign income or the permanent exclusion of foreign income from US taxation (known as territorial taxation) are aberrations. But CEN has never been the norm for the United States and is now virtually unknown among countries that compete with the United States.

GE's consolidated US profits before income taxes was \$5.1 billion in 2010, while the corresponding amount for non-US operations was \$9.1 billion in 2010.⁹ The *New York Times* author suggests there's something wrong when GE lodges nearly all of its leasing and lending profits abroad. However, to subject the \$9.1 billion to current US taxation—a 35 percent federal tax rate while low-tax countries charge 10 or 15 percent tax—would practically compel GE to sell its leasing and lending business to competitors based in Canada, Europe, Japan, or China, all taxed at much lower rates on their foreign income. These countries, like nearly all others, practice territorial taxation as the norm for corporate taxation, which means that leasing and lending business carried out by subsidiaries based in low-tax countries pays at most a corporate tax rate of 15 percent.

1. David Kocieniewski, "G.E.'s Strategies Let it Avoid Taxes Altogether," *New York Times*, March 24, 2011, www.nytimes.com (accessed on March 28, 2011).

2. Provisioning includes some deferred tax obligations on 2010 income, as well as taxes currently paid to the IRS. Profits include earnings repatriated from foreign subsidiaries. In addition to US tax liabilities, foreign earnings are also subject to foreign taxes.

(continued on next page)

Box 3 Hatchet job on GE (continued)

3. For other examples, see the CNNMoney.com articles on March 25, 2011 and April 16, 2010. Charles Riley, "White House, taxes and the CEO who shall not be named," CNNMoney.com, March 25, 2011; Annalyn Censky, "GE: 7,000 tax returns, \$0 U.S. tax bill," CNNMoney.com, April 16, 2010. President Obama's choice of GE CEO Jeff Immelt as a senior outside advisor was widely questioned.
4. The consolidated tax rate figure is from GE 2009 Annual Report, Reconciliation of U.S. Federal Statutory Income Tax Rate to Actual Income Tax Rate table, page 93, while the consolidated provision for income taxes is from Provision for Income Taxes table, page 91, www.ge.com (accessed on March 30, 2011).
5. GECS reported a loss of \$2.6 billion from continuing operations before income taxes in 2009 (GE 2010 Annual Report, Statement of Earnings, page 69).
6. See GECS current tax benefit in 2010 at GE 2010 Annual Report, Provision for Income Taxes table, page 103.
7. The basic idea is that corporate income fluctuates sharply over the business cycle, and the Treasury has a stake in the losses as well as the profits.
8. The tax rate reduction figure is from GE 2010 Annual Report, Reconciliation of U.S. Federal Statutory Income Tax Rate to Actual Income Tax Rate table, page 103.
9. GE 2010 Annual Report, page 101.

But the road to sweeping corporate tax reform is still long and arduous. The danger remains that future tax increases will fall heavily on business activity and weaken the seeds of American growth.

To illustrate the risks ahead, certain tax policy measures advocated by President Obama in his January 2011 State of the Union address pointed in the wrong direction; moreover, the looming fiscal disaster was not sufficiently stressed.¹⁰⁴ Stronger medicine is needed to avert a budget crash—most importantly a meaningful cap on federal spending and an endorsement of the national consumption tax. To fire up competitive American spirits, the president should propose, and the Congress should enact, deep cuts in corporate tax rates and a territorial tax system.

A national consumption tax fits Winston Churchill's axiom. We recognize that many members of Congress and large segments of the public violently oppose a national consumption tax. Their arguments are strong but equally strong are the answers that can be put to their objections. As seen from Trumka's remarks quoted earlier, organized labor rightly acknowledges that most US competitors have VAT systems, which favor exports. Without substantial new tax revenue of the magnitude that a VAT system could deliver, the United States must either sharply raise individual and corporate incomes taxes or rely on draconian budget cuts, much deeper than a large majority of Americans will support.¹⁰⁵ These alternatives are highly implausible. The United States shares the federal spending habits of other advanced economies, and these habits are deeply ingrained, but the United States remains the only OECD country that has not implemented a national consumption tax. Circumstances compel the United States to join up.

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104. Contributing negatively to these discussions are misguided articles or reports in the media such as the March 24, 2011, *New York Times* article highlighted in box 3.

105. Less than a quarter of Americans support making significant cuts to Social Security or Medicare to tackle the country's mounting deficit. King Jr., Neil, and Scott Greenberg, "Poll shows budget-cuts dilemma," *Wall Street Journal*, March 3, 2011, A5.

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Table 1 Projected federal fiscal budget from 2010 to 2030 (billions of 2005 dollars, percent of GDP in parentheses)

Category	2010	2015	2020	2025	2030
Revenues					
Individual income taxes ^a	833 (6.3)	1,417 (9.0)	1,588 (9.0)	1,774 (9.0)	1,967 (9.0)
Corporate income taxes ^b	129 (1.0)	331 (2.1)	371 (2.1)	414 (2.1)	459 (2.1)
Payroll/social insurance taxes ^c	773 (5.9)	976 (6.2)	1,094 (6.2)	1,222 (6.2)	1,355 (6.2)
Other ^d	180 (1.4)	177 (1.1)	191 (1.1)	221 (1.1)	245 (1.1)
Total revenues^e	1,914 (14.5)	2,901 (18.4)	3,243 (18.4)	3,630 (18.4)	4,025 (18.4)
Outlays/spending					
Discretionary spending ^f	1,243 (9.4)	1,291 (8.2)	1,403 (8.0)	1,710 (8.7)	2,098 (9.6)
Defense ^g	626 (4.7)	686 (4.4)	751 (4.3)	916 (4.6)	1,124 (5.1)
Nondefense ^h	618 (4.7)	605 (3.8)	652 (3.7)	794 (4.0)	974 (4.5)
Mandatory/entitlement spendingⁱ	1,767 (13.4)	2,095 (13.3)	2,566 (14.5)	2,921 (14.8)	3,321 (15.2)
Social Security ^j	634 (4.8)	756 (4.8)	917 (5.2)	1,104 (5.6)	1,311 (6.0)
Medicare ^k	422 (3.2)	567 (3.6)	723 (4.1)	926 (4.7)	1,202 (5.5)
Medicaid ^l	251 (1.9)	283 (1.8)	353 (2.0)	434 (2.2)	524 (2.4)
Other ^m	460 (3.5)	489 (3.1)	573 (3.2)	458 (2.3)	284 (1.3)
Net interest ⁿ	185 (1.4)	472 (3.0)	882 (5.0)	1,281 (6.5)	1,836 (8.4)
Total outlays	3,195 (24.2)	3,858 (24.5)	4,852 (27.5)	5,912 (30.0)	7,255 (33.2)
Deficit (-)	-1,281 (-9.7)	-957 (-6.1)	-1,609 (-9.1)	-2,282 (-11.6)	-3,230 (-14.8)

(continues on next page)

Table 1 Projected federal fiscal budget from 2010 to 2030 (billions of 2005 dollars, percent of GDP in parentheses) *(continued)*

<i>Memorandum:</i>					
Real GDP ^a	13,203	15,746	17,643	19,707	21,852
Debt held by the public	8,014	13,179	19,372	27,866	39,596
	(60.7)	(83.7)	(109.8)	(141.4)	(181.2)

- a. Individual income taxes for 2010 are taken from GAO estimates. For 2015 and onwards, the 2015 percentage of GDP estimates from the White House Office of Management and Budget are assumed to apply.
- b. Corporate income taxes for 2010 are taken from GAO estimates. For 2015 and onwards, the 2015 percentage of GDP estimates from the White House Office of Management and Budget are assumed to apply.
- c. Payroll taxes for 2010 are taken from GAO estimates. For 2015 and onwards, the 2015 percentage of GDP estimates from the White House Office of Management and Budget are assumed to apply.
- d. Other revenue proportion estimates come from CBO (2010, Table 1-3).
- e. Revenue numbers for 2010 are from GAO, based on CBO's January 2010 estimates but assuming expiring tax provisions (including those enacted in 2001, 2003, and 2009) are extended. From 2015 onwards, revenue numbers are calculated by the authors.
- f. Discretionary spending other than Recovery Act spending is estimated by GAO to grow with GDP after 2010 (i.e., remains constant with 8.7 percent of GDP). Recovery Act provisions included but assumed to be temporary.
- g. Defense spending estimates come from CBO (2010, Table 3-1).
- h. Nondefense spending estimates come from CBO (2010, Table 3-1).
- i. Mandatory spending is estimated to be the leftover from total outlays after discretionary spending and net interest has been taken out.
- j. Social Security spending is based on CBO's January 2010 baseline estimates through 2020. Thereafter it is based on 2009 Social Security Trustees' intermediate projections adjusted to reflect wage growth implied in GAO's simulations.
- k. Medicare spending is based on the Centers for Medicare & Medicaid Services' (CMS) alternative scenario that assumes physician fees will remain at current levels (i.e., a physician fee schedule update of 0 percent) instead of being reduced as scheduled under current law.
- l. Medicaid spending is based on CBO's January 2010 baseline through 2020. Thereafter CBO's June 2009 long-term projections are adjusted to reflect excess cost growth consistent with the 2009 Medicare Trustees' intermediate projections.
- m. Other mandatory spending is based on CBO's January 2010 baseline through 2020 but adjusted for extension of certain tax credits. Thereafter it is phased back to 2.2 percent of GDP by 2025.
- n. The net interest payments are primarily determined by market interest rates and the amount of debt held by the public. The GAO interest rate on publicly held debt is based on the rate implied by CBO's January 2010 baseline net interest payment projections through 2020. Thereafter it is 5.0 percent, the rate implied in 2020. From CBO (2010, Summary Table 2), the projected annual average interest rates for three-month treasury bill rate from 2012 to 2014 is 2.9 percent. From 2015 to 2020 it is 4.6 percent. The interest rates for ten-year treasury note rate is a projected annual average of 4.5 percent from 2012 to 2014. From 2015 to 2020 it is 5.5 percent.
- o. GDP is determined by labor force, capital stock, and total factor productivity. It is held constant across GAO simulations and does not respond to changes in fiscal policy. Its labor input assumptions are from the Social Security Administration actuaries underlying the intermediate projections in the most recent *Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Trust Funds*. For more information, refer to GAO's January 2010 analysis. The compound annual GDP growth rate is around 2.7 percent.

Note: The GAO numbers are based on CBO's January 2010 numbers. CBO has since come up with March 2010 numbers but GAO won't be updated until fall 2010. Unless otherwise mentioned, the budget breakdown estimates until 2020 use CBO's January 2010 budget proportions. Figures after 2020 are assumed to follow the same proportions as those from CBO's 2020 estimates.

Source: GAO's January 2010 analysis based on the Trustees' assumptions for Social Security and Medicare (GAO 2010); White House, Office of Management and Budget, Historical Tables, 2010.

Table 2 Comparison of fiscal proposals

Item	Fiscal Commission Proposal	Fiscal Commission Co-Chair Proposal ^a	Schakowsky Deficit Reduction Plan ^b	Debt Reduction Task Force ^c	Wyden-Gregg ^d	Roadmap for the Future ^e	Esquire Commission ^f	Galston and MacGuineas (2010)
Corporate tax rate	Single rate, between 23% and 29%	Single rate, 26% ^g	n.a.	27%	Single flat tax rate of 24%	Replaced with a consumption tax of 8.5%	n.a.	Revenue neutral reform to decrease rates
Spending target in 2020 (percent of GDP)	21.8%	22.0%	23.5%	23.0%	22.7%	22.3%	20.8%	22.0%
Revenue target in 2020 (percent of GDP)	20.6%	20.5%	20.2%	21.4%	18.4%	18.5%	20.8%	21.4%
Deficit/surplus in 2020 (percent of GDP)	-1.2%	-1.4%	-3.3%	-1.5%	-4.3%	-3.8%	0.1% ^h	-0.7%
Debt held by the public in 2020 (percent of GDP)	66%	65%	n.a.	60%	70%	69%	52%	60% ⁱ
Adoption of a broad-based consumption tax (VAT) ^j	n.a.	n.a.	n.a.	Debt reduction sales tax of 6.5%	n.a.	Business consumption tax of 8.5%	n.a.	n.a.
Adoption of territorial tax system	Yes	Yes	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

n.a. = these proposals do not touch the subject

a. Former Senator Alan Simpson (R-WY) and Erskine Bowles were chairs.

b. Schakowsky's spending, revenue, and deficit targets are for 2015. Revenue, spending, and deficit targets are based on the proposal's primary balance chart and projected \$426.95 billion deficit reduction in 2015. Revenue and spending targets, expressed in percentages of GDP, are calculated by the authors.

c. Alice Rivlin and former Senator Pete Domenici (R-NM) chaired this group.

d. Calculations of economic indicators are done by Campbell and Nell (2010).

e. The Roadmap for the Future initiative has been started by US Congressman Paul Ryan (R-WI).

f. The Esquire Commission is made up of former Senator Gary Hart (D-CO), former Senator Bill Bradley (D-NJ), former Senator Bob Packwood (R-OR), former Senator John Danforth (R-MO), and chaired by Lawrence O'Donnell.

g. The Co-Chairs' proposal has three scenarios. The 26 percent rate figure is part of the Option 2 from the Wyden-Gregg style reform scenario.

h. The Esquire Commission's surplus as a percentage of GDP is based on the GDP figures calculated from the spending and revenue targets' nominal and GDP percentage figures. The projected nominal surplus is \$12 billion in 2020.

i. The 60 percent figure is eye-balled from the chart in Galston and MacGuineas (2010).

j. While they did not put forth a fiscal outlook, Gale and Harris (2010) noted that a 10 percent VAT with a broad base could raise about 2 percent of GDP in revenues, even after reducing other taxes and compensating households for VAT payments on a reasonable level of consumption. Likewise, in his 2008 book, Michael J. Graetz estimated that a VAT of 10 to 14 percent would raise enough money to exempt families earning less than \$100,000—about 90 percent of households—from the income tax and would lower rates for everyone else.

Sources: National Commission on Fiscal Responsibility and Reform (2010); Simpson and Bowles (2010); Schakowsky (2010); Rivlin and Domenici (2010); The Bipartisan Tax Fairness and Simplification Act of 2010; Ryan (2010); Esquire Commission (2010); Galston and MacGuineas (2010); Gale and Harris (2010); Graetz (2008); and authors' calculation.

Table 3 Possible scenario of a sustainable federal fiscal budget from 2015 to 2030 (billions of 2005 dollars, percent of GDP in parentheses)

Category	2010	2015	2020	2025	2030
Revenue target ^a	1,914 (14.5)	3,297 (22.0)	3,742 (22.0)	4,247 (22.0)	4,820 (22.0)
GOP revenue target (Ryan) ^c	n.a. n.a.	3,237 (17.8)	4,142 (18.2)	n.a. n.a.	n.a. n.a.
Outlay target ^b	3,195 (24.2)	3,626 (24.2)	4,116 (24.2)	4,672 (24.2)	5,302 (24.2)
GOP outlay target (Ryan) ^c	n.a. n.a.	3,671 (20.2)	4,544 (19.9)	n.a. n.a.	n.a. n.a.
Projected deficit (-)	-1,281 (-9.7)	-330 (-2.2)	-374 (-2.2)	-425 (-2.2)	-482 (-2.2)
GOP deficit target (Ryan) ^c	n.a. n.a.	-434 (-2.5)	-402 (-1.8)	n.a. n.a.	n.a. n.a.
<i>Memorandum:</i>					
Real GDP ^d	13,203	14,985	17,008	19,305	21,911
Debt held by the public ^e	8,014 (60.7)	13,179 (87.9)	14,961 (88.0)	16,984 (88.0)	19,279 (88.0)
GOP debt target (Ryan) ^c	n.a. n.a.	13,326 (73.2)	15,681 (68.7)	n.a. n.a.	n.a. n.a.

n.a. = not applicable

a. Revenue target figures are projected to stabilize at 22 percent of GDP in the long term.

b. Outlay target figures are projected to be capped at 24.2 percent of GDP in 2020 and beyond.

c. The GOP figures are based on the plan offered by Congressman Paul Ryan (R-WI). See House Committee on the Budget (2011).

d. Real GDP figures are based on 2010 figures from table 1 and are assumed to grow at an annual real compound rate of 2.7 percent from 2010 onwards.

e. Debt held by public is calculated starting with the 2010 debt level and adding annual deficits up to the year in question.

Note: 2010 figures are from table 1.

Source: Table 1 figures; House Committee on the Budget (2011); and authors' calculations.

Table 4 Tax revenues, public outlays, and fiscal balance comparisons between OECD countries, 2007 (combined revenues and outlays, federal, state, and local; percent of GDP)

Country	Total tax revenue	Total public outlays	One-off factors	Fiscal balance
Australia	29.5	33.3	5.5	1.7
Canada	33.0	39.4	7.8	1.4
France	43.5	52.3	6.1	-2.7
Germany	36.0	43.5	7.8	0.3
Italy	43.4	47.9	3.0	-1.5
Japan	28.3	35.9	5.2	-2.4
Korea	26.5	28.7	6.8	4.7
Netherlands	38.7	45.3	6.7	0.2
Poland	34.8	42.2	5.5	-1.9
Spain	37.3	39.2	3.8	1.9
Sweden	47.4	51.0	7.1	3.5
Switzerland	28.9	32.3	5.1	1.7
United Kingdom	36.2	44.1	5.1	-2.8
United States ^a	27.9	36.8	6.1	-2.9
OECD countries unweighted average, excluding United States	35.7	42.2	7.5	1.0

a. The US outlay figure is net of the operating surplus of public enterprises.

Notes: For details on total tax revenue figures, see OECD, 2010, Revenue Statistics 1965–2009.

Total outlays are defined as current outlays plus capital outlays. For details on each item, see Sources and Methods in *OECD Economic Outlook*. Fiscal balances include one-off factors, such as receipts from the sale of the mobile telephone licenses. For more details, see footnotes to Annex Tables 25 and 26 as well as Sources and Methods in *OECD Economic Outlook*, www.oecd.org/eco/sources-and-methods.

Sources: OECD, 2010, Revenue Statistics 1965–2009; *OECD Economic Outlook* 88 database.

Table 5 Approximate size of corporate tax base, 2007 (federal and state taxes combined)

Country	Average effective corporate tax rate (percent of profits)	Corporate tax revenue (percent of GDP)	Corporate tax base (percent of GDP)
Australia	27.2	6.8	25.1
Canada	25.5	3.5	13.7
France	8.3	3.0	35.7
Germany	22.7	2.2	9.6
Italy	28.0	3.8	13.6
Japan	34.0	4.8	14.0
Korea	18.6	4.0	21.5
Netherlands	21.8	3.2	14.9
Poland	13.0	2.8	21.2
Spain	22.2	4.7	21.0
Sweden	16.5	3.7	22.5
Switzerland	8.9	3.1	34.8
Turkey	16.8	1.6	9.7
United Kingdom	21.0	3.4	16.2
United States	23.5	3.0	13.0
OECD countries, unweighted average, excluding United States	17.3	3.9	22.4

Note: The average effective corporate income rate measures the amount of taxes borne by business, expressed as a percentage of commercial profits. For details on total corporate tax revenue figures, see OECD, 2010, Revenue Statistics 1965–2009. The corporate tax base is calculated by dividing the corporate tax revenue by the average effective corporate tax rate.

Sources: Corporate income taxes are from World Bank, International Finance Corporation, and PricewaterhouseCoopers, *Paying Taxes 2009: The Global Picture*, November 10, 2008; corporate tax revenues are from OECD, 2010, Revenue Statistics 1965–2009; authors' calculations.

Table 6 Incorporated firms as a share of total firms in selected OECD countries (percent of total business firms)

Country	Share
Australia	36.4
Germany	30.2
Italy	20.5
Japan	49.8
Spain	42.3
Sweden	30.9
United Kingdom	23.9
United States	18.0
Unweighted average of sample countries, excluding the United States	33.4

Note: Year of data for each country ranges from 2003 to 2006. For details, see table 3 in the OECD (2007) survey.

Source: OECD (2007).

Table 7 US business activity by corporate firm (percent of business receipts)

Form of business	1980	1990	2000	2007
Subchapter C Corporations	86.2	74.7	68.0	62.1
Subchapter S Corporations (pass-through)	3.2	14.3	17.2	20.3

Source: Internal Revenue Service, 2010, Intergrated Business Data, SOI Tax Stats—Statistics of Income, www.irs.gov (accessed on March 9, 2011).

Table 8 Statutory, average, and marginal effective corporate tax rates for systemically important countries (percent)

Country	Statutory corporate tax rates, 2010 ^a	Average effective corporate tax rates ^a		Marginal effective corporate tax rates, 2010 ^b	
	OECD Tax Database	2009	2010	Chen and Mintz (2011)	Hassett and Mathur (2011)
		World Bank/ IFC/PwC	Hassett and Mathur (2011)		
Australia ^c	30.0	25.9	22.2	26.0	17.0
Brazil ^d	34.0	21.4	n.a.	35.1	n.a.
Canada	29.5	9.8	25.5	20.5	23.4
China ^e	25.0	6.0	n.a.	16.6	n.a.
France ^f	34.4	8.2	27.5	34.0	23.8
Germany ^g	30.2	22.9	24.2	23.8	20.7
India ^h	34.0	24.0	n.a.	33.6	n.a.
Italy ⁱ	27.5	22.8	24.3	26.9	22.6
Japan	39.5	27.9	33.0	29.5	30.5
Korea	24.2	15.3	18.1	29.5	13.6
Mexico	30.0	23.1	28.4	17.5	27.7
Netherlands ^j	25.5	20.9	19.4	16.8	15.1
Poland ^k	19.0	17.7	16.2	14.3	14.1
Russian Federation ^l	20.0	9.0	n.a.	31.9	n.a.
South Africa ^m	34.6	24.3	n.a.	14.5	n.a.
Spain	30.0	20.9	27.5	25.4	26.3
Sweden	26.3	16.4	18.5	18.9	12.6
Switzerland ⁿ	21.2	8.9	15.4	17.6	10.9
Turkey	20.0	17.0	13.1	5.6	7.3
United Kingdom ^o	28.0	23.2	22.3	27.9	18.8
United States ^p	39.2	27.6	29.0	34.6	23.6
Unweighted average, excluding US ^r	28.1	18.3	21.0	23.3	20.8

n.a. = not available

a. The statutory corporate tax rates for OECD countries (all countries except Brazil, China, India, Russia, and South Africa) show the combined central and sub-central corporate income tax rates. The sub-central coverage of statutory corporate tax rates for non-OECD countries is not necessarily consistent.

b. The marginal effective corporate tax rate measures the tax liability incurred on an additional dollar of investment and informs scaling choices, conditional on the location. The Chen and Mintz (2011) marginal effective rates do not include the effects of the 100 percent temporary capital expensing or "bonus depreciation" rules recently passed by Congress in December 2010 in the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010. This rule increased the current 50 percent bonus depreciation in the tax code's section 168(k) to 100 percent for qualified property placed in service before December 2011. Chen and Mintz calculated that this provision reduces the US effective tax rate to as low as 17.5 percent, but only for a single-year; it does not provide certainty for firms in their capital planning decisions, and it may simply accelerate investment outlays. For these reasons, Chen and Mintz (2011) excluded bonus depreciation effects in their marginal effective tax rate calculation. Hassett and Mathur (2011) calculated their marginal effective tax rates based on the approach outlined by Devereux and Griffith (1999).

c. Australia has a non-calendar tax year. Its statutory rates are in effect as of July 1.

d. The Brazilian statutory corporate income tax rate is 25 percent. In addition, social contribution on net profits at a rate of 9 percent are levied, leading to an overall rate of 34 percent. The 25 percent corporate income tax rate includes a 15 percent basic rate on net profits with tax adjustments and an additional income tax of 10 percent on the net profit which excess BRL240,000 per year.

e. For statutory rates, from January 2008, foreign and domestic entities are subject to a single enterprise corporate income tax at a rate of 25 percent. However, the rate for a low profit enterprise is 20 percent, and for a hi-tech enterprises the rate is 15 percent if certain conditions are met.

f. The French statutory rate includes a surcharge, but does not include the local business tax (*Taxe professionnelle*) or the turnover based solidarity tax (*Contribution de Solidarite*).

g. The German statutory rate includes the regional trade tax (*Gewerbesteuer*) and the surcharge.

(continued on next page)

Table 8 Statutory, average, and marginal effective corporate tax rates for systemically important countries (percent) (continued)

h. For statutory rates, domestic companies are generally taxed at the rate of 30 percent; however profits from life insurance business in India are taxed at a rate of 12.5 percent. Foreign companies are taxed at a rate of 40 percent. A minimum alternate tax (MAT) is levied at 15 percent of the adjusted profits of companies where the tax payable is less than 15 percent of their book profits. Dividend distribution tax (DDT) is levied at 15 percent on dividends distributed by a domestic company. Surcharge and education cess is applicable on the above taxes. A 10 percent surcharge in case of domestic companies and a 2.5 percent surcharge in case of foreign companies is applicable if total income is in excess of INR10 million. Education cess of 3 percent is applicable on income tax plus surcharge, if any. Wealth tax is imposed at a rate of 1 percent on the value of specified assets held by the taxpayer in excess of the basic exemption of INR3 million. Securities transaction tax (STT) is levied on the value of taxable securities transactions in equity shares and units of equity oriented funds.

i. The Italian statutory rates do not include the regional business tax (*Imposta Regionale sulle Attività Produttive*; IRAP).

j. The Dutch statutory corporate tax rate applies to taxable income over 200,000 euros.

k. There is no Polish sub-central government statutory tax. However, local authorities (at each level) participate in tax revenue at a specified percentage for each level of local authority.

l. The statutory corporate income tax is split into the federal tax (2 percent) and the regional tax (18 percent that can be reduced to 13.5 percent for some categories of taxpayers). Dividends distributed can be subject to a 9 percent or 0 percent withholding tax. Interest income on state securities can be subject to a 15 percent or 0 percent withholding tax percent.

m. The statutory corporate income tax rate is 28 percent. However, South Africa imposes an additional secondary tax on companies (STC) at 10 percent on any net dividends declared by them. Therefore, if a company distributes 100 percent of its after-tax earnings as a dividend, an effective tax rate of 34.55 percent will apply. This does not apply to gold mining companies (which are taxed on a formula basis) or to South African branches of foreign entities which are taxed at a rate of 33 percent. The STC may be replaced by a withholding tax in the future.

n. In Switzerland, church taxes cannot be avoided by enterprises. They are included in the statutory rates.

o. The United Kingdom has a non-calendar tax year. Its statutory rates are in effect as of April 1.

p. The US sub-central statutory corporate rate is a weighted average of state corporate marginal income tax rates. The US effective corporate rate excludes bonus depreciation.

q. The average effective corporate income rate measures the average rate a firm might expect to face on an investment project over the possible range of profitability outcomes. Hassett and Mathur (2011) calculated their average effective tax rates based on the approach outlined by Devereux and Griffith (1999).

r. Hassett and Mathur (2011) do not have the data for some countries in the table. Hence, the unweighted average calculated from their numbers supplements the missing cells with data from either Chen and Mintz (2011) or the World Bank (2011) to enable a guesstimate.

Sources: Corporate tax rates for OECD countries are from OECD Tax Database, 2011; corporate tax rates for non-OECD countries are from KPMG (2010); marginal effective corporate tax rates are from Chen and Mintz (2011); average effective corporate income taxes are from World Bank, International Finance Corporation, and PricewaterhouseCoopers, *Paying Taxes 2011: The Global Picture*, November 18, 2010; marginal and average effective corporate income taxes are from Hassett and Mathur (2011); and authors' calculations.

Table 9 Treasury Department estimates of corporate tax expenditures, fiscal years 2012–16 (billions of dollars)

Rank	Provision	2012	2012–16
1	Deferral of income from controlled foreign corporations (normal tax method) ^a	42.0	212.8
2	Accelerated depreciation of machinery and equipment (normal tax method)	5.3	109.4
3	Exclusion of interest on public purpose State and local bonds	11.9	73.1
4	Deduction for US production activities	11.1	62.5
5	Credit for low-income housing investments	6.0	34.3
6	Expensing of research and experimentation expenditures (normal tax method)	5.4	33.0
7	Inventory property sales source rules exception	3.2	18.8
8	Graduated corporation income tax rate (normal tax method)	3.2	17.8
9	Credit for increasing research activities	3.1	10.3
10	Exclusion of interest on life insurance savings	1.7	9.2
	Sum of top ten expenditures	92.8	581.2
	Percent of total tax expenditures	85.6	88.0

a. It is highly questionable whether deferral should be labeled a "tax expenditure".

Source: Office of Management and Budget, President's Budget for Fiscal Year 2012, Tax Expenditures Spreadsheet, Table 17-2.

Table 10 Rank correlation between statutory, average, and marginal effective corporate rates

Tax rates		Statutory corporate tax rates, 2010	Average effective corporate tax rates		Marginal effective corporate tax rates, 2010	
		OECD Tax Database	2009 World Bank/IFC/ PwC	2010 Hassett and Mathur (2011)	Chen and Mintz (2011)	Hassett and Mathur (2011)
		Statutory corporate tax rates, 2010	OECD Tax Database	1		
Average effective corporate tax rates	2009, World Bank/IFC/PwC	0.64***	1			
	2010, Hassett and Mathur (2011)	0.90***	0.50*	1		
Marginal effective corporate tax rates, 2010	Chen and Mintz (2011)	0.50**	0.22	0.59**	1	
	Hassett and Mathur (2011)	0.84***	0.45*	0.97***	0.50**	1

*** Null hypothesis of no association is rejected at the 1 percent level.

** Null hypothesis of no association is rejected at the 5 percent level.

* Null hypothesis of no association is rejected at the 10 percent level.

Source: Table 8 and authors' calculations.

Table 11 Gross fixed capital formation and selected components, sample countries, 2007 (percent of GDP)

Country	Gross fixed capital formation	Fixed investment by business firms	Business investment in machinery and equipment ^c
OECD countries			
Australia ^a	28.3	14.9	8.2
Canada	22.6	12.3	6.4
Denmark	22.3	13.9	8.5
France	21.6	11.3	5.6
Germany	18.8	11.1	7.7
Greece	21.4	7.5	8.4
Ireland	26.0	9.3	5.0
Italy	21.2	12.2	8.5
Japan	23.4	16.1	9.7
Korea	28.5	19.0	9.0
Netherlands	20.0	9.2	6.8
Norway	21.3	13.3	5.8
Poland	21.6	12.2	7.8
Portugal	21.8	13.8	7.1
Spain	30.7	17.0	7.4
Sweden	19.0	12.7	7.6
Switzerland ^b	21.5	14.7	9.7
United Kingdom	17.8	10.1	5.8
United States	18.9	9.6	5.8
Unweighted average, excluding United States	22.7	12.8	7.5
Big emerging-market countries			
Brazil	17.4	n.a.	n.a.
China	40.1	n.a.	n.a.
India	34.0	n.a.	n.a.
Indonesia	25.0	n.a.	n.a.
Russia	20.7	n.a.	n.a.
South Africa	21.1	n.a.	n.a.
Unweighted average	26.4	n.a.	n.a.

n.a. = not applicable

a. The 2006 machinery and equipment figure for Australia is from 2005.

b. The 2006 machinery and equipment figure for Switzerland is from 2005.

c. Unless otherwise noted, the machinery and equipment figures are from 2006.

Sources: OECD Main Economic Indicators, 2010; OECD Factbook, 2010; OECD, National Accounts at a Glance 2010.

Table 12 Business enterprise research and development outlays (percent of GDP)

Country	1995	2000	2006
Australia	0.8	0.7	1.1
Canada	1.0	1.1	1.1
Denmark ^a	1.0	1.4	1.6
Germany	1.5	1.7	1.7
Greece ^b	0.1	0.2	0.2
Iceland ^c	0.5	1.5	1.4
Ireland ^d	0.9	0.8	0.8
Israel	1.3	3.3	3.4
Italy	0.5	0.5	0.5
Japan	1.9	2.2	2.6
Korea	1.7	1.7	2.4
Netherlands	1.0	1.1	1.0
New Zealand ^e	0.3	0.3	0.5
Norway	1.0	0.9	0.8
Poland	0.2	0.2	0.2
Portugal ^f	0.1	0.2	0.3
Spain	0.4	0.5	0.6
Switzerland ^g	1.9	1.9	2.1
Turkey	0.1	0.2	0.2
United States	1.8	2.0	1.9
Unweighted average, excluding United States	0.9	1.1	1.2

a. The 2000 figure for Denmark is from 1999.

b. The 2006 figure for Greece is from from 2005.

c. The 2006 figure for Iceland is from 2005.

d. The 2006 figure for Ireland is from 2005.

e. The 2000 figure for New Zealand is from 1999 while the 2006 figure for New Zealand is from 2005.

f. The 2006 figure for Portugal is from 2005.

g. The 1995 figure for Switzerland is from 1996 while the 2006 figure for Switzerland is from 2004.

Note: The ANBERD figures are reported in current purchasing power parity (PPP) US dollars. The GDP percentage numbers are calculated by using current PPP US dollar GDP figures from the OECD.

Source: OECD, Analytical Business Enterprise Research and Development (ANBERD) database, 2009; OECD, National Accounts at a Glance 2010; and authors' calculations.

Table 13 IRET model: 10 percentage point cut in corporate tax rate

Item	2008 level (billions of dollars)		Change between baseline and simulation	
	Baseline	Simulation	Billions of dollars	Percent
Gross domestic product	14,441	14,767	326	2.3
Private business output	10,728	10,979	251	2.3
Private business capital stock	27,608	29,357	1,749	6.3
Wage rate (dollars per hour)	33	34	1	1.9
Private business hours of work (billion hours)	192	193	1	0.4
Federal tax receipts, of which:	2,503	2,522	19	0.8
Federal personal income taxes	1,102	1,146	43	3.9
Federal corporate profits tax (accruals)	181	129	-52	-28.7
Federal Social Security and Medicare receipts	974	997	22	2.3
State and local tax receipts, of which:	2,036	2,085	48	2.4
State and local personal income taxes	302	314	11	3.8
State and local corporate profits tax (accruals)	51	51	-0.1	-0.1

Note: The baseline and simulation scenarios both assume continuation of the expensing rule in place since 2008 (50 percent bonus expensing).

Source: Institute for Research on the Economics of Taxation (IRET), 2010, www.iret.org.

Table 14 IRET model: 100 percent expensing of investment outlays

Item	2008 level (billions of dollars)		Change between baseline and simulation	
	Baseline	Simulation	Billions of dollars	Percent
Gross domestic product	14,441	14,827	385	2.7
Private business output	10,728	11,025	297	2.8
Private business capital stock	27,608	29,685	2,077	7.5
Wage rate (dollars per hour)	33	34	1	2.3
Private business hours of work (billion hours)	192	193	1	0.5
Federal tax receipts, of which:	2,503	2,565	62	2.5
Federal personal income taxes	1,102	1,154	51	4.7
Federal corporate profits tax (accruals)	181	159	-21	-11.8
Federal Social Security and Medicare receipts	974	1,001	26	2.7
State and local tax receipts, of which:	2,036	2,088	51	2.5
State and local personal income taxes	302	316	13	4.5
State and local corporate profits tax (accruals)	51	45	-6	-11.8

Note: The baseline and simulation scenarios both assume continuation of the expensing rule in place since 2008 (50 percent bonus expensing).

Source: Institute for Research on the Economics of Taxation (IRET), 2010, www.iret.org.

Table 15 Corporate tax revenues in OECD countries regressed on the consolidated corporate tax rate, 1981–2007

Dependent variable	Explanatory variables		R-Squared	Observations	Clusters
	Constant	Combined corporate tax rate			
All OECD countries					
Corporate tax revenues/GDP	4.42 *** (0.178)	−0.04 *** (0.005)	0.04	640	29

Notes: Standard errors of the coefficient estimates are reported in parentheses. Estimation using the underlying panel data set includes country fixed effects (not reported). *, **, *** denote statistical significance at the 10, 5, and 1 percent levels. Clusters are the number of countries covered by the panel dataset.

Source: Hufbauer and DeRosa (2010).

Table 16 Average effective tax rates under current law, by cash income percentile, 2009

Cash income percentile ^a	Average cash income ^b (dollars)	Average effective tax rate (percent)				All federal tax ^e
		Individual income tax ^c	Payroll tax ^d	Corporate income tax	Estate tax	
By quintile						
Lowest quintile	13,751	−10.2	8.8	0.5	0	−0.9
Second quintile	35,042	−4.1	10.1	0.6	0	6.6
Middle quintile	63,944	2.3	10.6	0.6	0	13.4
Fourth quintile	112,508	5.7	10.8	0.7	0	17.2
Top quintile	355,513	13.4	6.6	2.8	0.2	22.9
All	95,128	7.9	8.4	1.8	0.1	18.2
<i>Addendum:</i>						
80 to 90	177,563	8.0	10.3	1.1	0	19.4
90 to 95	254,911	11.4	9.5	1.0	0	22.0
95 to 99	443,618	15.0	6.1	2.2	0.2	23.5
Top 1 percent	2,262,666	17.9	1.9	5.7	0.6	26.1

a. Tax units with negative cash income are excluded from the lowest quintile but are included in the totals. Includes both filing and non-filing units but excludes those that are dependents of other tax units. For a description of cash income, see www.taxpolicycenter.org/TaxModel/income.cfm.

b. Average income is calculated in 2009 dollars but figures are for the year 2018 in the Urban-Brookings Tax Policy Center Microsimulation Model (version 0509-6).

c. After-tax credits (including refundable portion of earned income and child tax credits).

d. Includes both the employee and employer portion of Social Security and Medicare tax.

e. Excludes customs duties and excise taxes.

Notes: Data are for calendar year 2009.

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0509-2).

Table 17 OECD home-country method of taxing foreign-source dividends

Taxation method	Countries	Dividend exemption percentage	Statutory tax rate ^d (percent)
Countries with territorial tax systems (exempting foreign-source dividends from domestic taxation) ^a	Australia	100	
	Austria	100	
	Belgium	95	
	Canada	100	
	Czech Republic	100	
	Denmark	100	
	Finland	100	
	France ^c	95	
	Germany	95	
	Greece	100	
	Hungary	100	
	Iceland	100	
	Italy	95	
	Japan	95	
	Luxembourg	100	
	Netherlands	100	
	New Zealand	100	
	Norway	97	
	Portugal	100	
	Slovak Republic	100	
Slovenia	95		
Spain	100		
Sweden	100		
Switzerland ^b	100		
Turkey	100		
United Kingdom	100		
Countries with worldwide tax systems and foreign tax credits	Chile	0	17.0
	Ireland	0	12.5
	Israel	0	25.0
	Korea	0	21.2
	Mexico	0	30.0
	Poland	0	19.0
	United States	0	39.2

a. In general, territorial tax treatment of dividends depends on qualifying criteria (e.g., minimum ownership level, minimum holding period in the source country, and/or the source country tax rate).

b. The effective exemption may be reduced by up to 5 percent as a proxy for general and administrative expenses.

c. The exemption percentage is at least 95 percent but can be higher.

d. Refers to general applicable tax rate, including surcharges, of combined central and sub-central government taxes.

Sources: Country tax rates are from OECD Tax Database and Business Roundtable, 2010, "Roadmap for Growth."

Table 18 US merchandise trade by nonbank US-based and foreign-based multinational corporations (MNCs), 2008

Trade	Billions of dollars
MNC-associated US merchandise exports, total ^a	828.0
US-based MNCs ^b	595.6
Exports to affiliates	227.7
Exports to others	367.9
Foreign-based MNCs ^c	232.4
Exports to affiliates ^d	116.6
Exports to others ^d	115.9
<i>Addenda:</i>	
All US merchandise exports	1,287.4
MNC-associated exports as a percentage of total exports	64.3

a. The MNC-associated US exports total is calculated by adding the exports by US-based MNCs and foreign-based MNCs.

b. US-based MNCs are defined as the US parent and its majority-owned foreign affiliates. A US parent is a broadly defined "person" that owns or controls 10 percent or more of the voting securities, or the equivalent, of a foreign business enterprise. A majority-owned foreign affiliate is a foreign business enterprise where the combined ownership of all US parents exceeds 50 percent.

c. Foreign-based MNCs are defined as majority-owned US affiliates of foreign companies, which is a US business enterprise that is owned more than 50 percent by foreign parents.

d. For the years 2006 to 2007, the trade in goods data were collected for nonbank affiliates only. Because it is likely that goods trade by bank affiliates was insignificant, the data on affiliate trade in goods for 1987–2007 are broadly comparable with the data for 2008 (which includes both bank and nonbank affiliates).

Source: Bureau of Economic Analysis, U.S. Multinational Companies, Operations in the United States and Abroad in 2007, August 2009; U.S. Multinational Companies, Operations in the United States and Abroad in 2008, August 2010; U.S. Affiliates of Foreign Companies, Preliminary Results From the 2007 Benchmark Survey, November 2009; US Affiliates of Foreign Companies, Operations in 2008, November 2010.

Table 19 Global 500 companies in the United States

Area	Total number of companies	Percent of Global 500
2005 issue of <i>Fortune</i>		
United States, of which:	189	37.8
New York/Newark	25	5.0
Chicago ^a	10	2.0
Los Angeles ^b	9	1.8
Atlanta	8	1.6
Houston	8	1.6
Bay Area ^c	8	1.6
2010 issue of <i>Fortune</i>		
United States, of which:	139	27.8
New York/Newark	20	4.0
Chicago ^a	3	0.6
Los Angeles ^b	3	0.6
Atlanta	5	1.0
Houston	6	1.2
Bay Area ^c	10	2.0

a. Includes immediate environs (Elk Grove, Abott Park, etc).

b. Includes immediate environs (Burbank, Thousand Oaks, etc).

c. San Francisco, San Jose, Santa Clara, and Palo Alto.

Sources: Hufbauer and Assa (2007, table 5.5); Fortune Global 500 dataset, 2010 issue; and authors' calculations.

Table 20 Consumption and excise taxes, 2008
(percent of GDP)

Country	Taxes on general consumption (5110)	Taxes on specific goods and services (5120)
Australia	3.5	3.3
Canada	4.3	2.8
France	7.3	3.0
Germany	7.1	3.1
Italy	6.0	3.5
Japan	2.5	2.0
Korea	4.3	3.9
Mexico	3.8	8.5
Netherlands	7.2	3.4
Poland	7.9	4.7
Spain	5.2	2.6
Sweden	9.4	2.9
Switzerland	3.7	1.8
Turkey	4.9	5.6
United Kingdom	6.4	3.5
United States	2.1	1.6
Unweighted average OECD countries, excluding United States ^a	6.9	3.5

a. The unweighted average include OECD countries not listed in this table.

Notes: 5110 and 5120 refer to OECD codes.

Source: OECD, 2010, Revenue Statistics 1965-2009.

Table 21 Rates for value-added tax (VAT) or goods and services tax (GST) in selected OECD countries

Country	Type of tax	Year implemented	Rate, 2010 (percent)
Australia	GST	2000	10.0
Canada	GST	1991	5.0/13.0 ^a
France	VAT	1968	19.6
Germany	GST	1968	19.0
Italy	VAT	1973	20.0
Japan	Consumption	1989	5.0
Korea	VAT	1977	10.0
Mexico	VAT	1980	16.0
Netherlands	GST	1969	19.0
Poland	VAT	1993	22.0
Spain	VAT	1986	16.0
Sweden	VAT	1969	25.0
Switzerland	VAT	1995	7.6
Turkey	VAT	1985	18.0
United Kingdom	VAT	1973	17.5
Unweighted average			15.8

Canada: The provinces of Newfoundland and Labrador, New Brunswick, and Nova Scotia have harmonized their provincial sales taxes with the federal GST and levy a rate of GST/HST of 13.0 percent. The provinces of Ontario and British Columbia proposed to harmonize their provincial sales taxes with the federal Goods and Services Tax, effective July 1, 2010, at GST/HST rates of 13.0 and 12.0 percent, respectively. Other Canadian provinces, with the exception of Alberta, apply a provincial tax to certain goods and services. These provincial taxes apply in addition to GST.

France: Rates of 0.9, 2.1, 8.0, 13.0 percent apply in Corsica; rates of 1.05, 1.75, 2.1, 8.5 percent apply to overseas departments (DOM). There is no VAT in French Guyana.

Mexico: A VAT rate of 10.0 percent applies in the border regions (the border zone is usually up to 20 kilometers south of the US-Mexico border).

Spain: Rates of 2.0, 5.0, 9.0, 13.0 percent apply in the Canary Islands. The standard VAT rate was increased from 16.0 to 18.0 percent and the reduced rate from 7.0 to 8.0 percent on July 1, 2010.

a. The Canadian federal GST rate, 5.0 percent, is supplemented by provincial Harmonized System Taxes (HST), so that the national average GST/HST rate is around 13 percent.

Source: National delegates, OECD Tax Database, 2010; current tax rates are as of January 1, 2010.

Table 22 Revenue outlook for a national consumption tax and projections of state Medicaid outlays and retail sales tax receipts (billions of 2005 dollars, percent of national GDP in parentheses)

Tax proposal	2015	2020	2025	2030
Potential revenues, national consumption tax proposals				
Debt reduction sales tax, DRST (6.5 percent) ^a	345 (2.2)	439 (2.5)	490 (2.5)	544 (2.5)
Business consumption tax, BCT (8.5 percent) ^b	509 (3.2)	570 (3.2)	637 (3.2)	706 (3.2)
American VAT (10 percent) ^c	598 (3.8)	670 (3.8)	749 (3.8)	830 (3.8)
State level programs				
Outlays for Medicaid ^d	158 (1.0)	233 (1.3)	260 (1.3)	288 (1.3)
Retail sales taxes ^e	314 (2.0)	352 (2.0)	393 (2.0)	436 (2.0)
<i>Memorandum:</i>				
US real GDP	15,746	17,643	19,707	21,852

a. The DRST, proposed by the Rivlin-Domenici Debt Reduction Task Force, introduces a 6.5 percent tax which is phased in over 2 years (3 percent in 2012, 6.5 percent in 2013). The figures for years 2015 and 2020 are from their study. The figures after 2020 are extrapolated assuming a yield ratio of 0.38.

b. The BCT, proposed by Congressman Paul Ryan, introduces a 8.5 percent tax on goods and services based on the subtraction method. The figure here assume a yield ratio of 0.38.

c. The American VAT proposed by Gale and Harris (2010) contemplates a 10 percent rate. The figures here assume a yield ratio of 0.38.

d. State Medicaid expenses are calculated from the CBO's baseline projection for Medicaid expenses. The state share is approximately 43 percent of total Medicaid payments (see CBO 2010, page 30, Chapter 2).

e. From 2006 to 2008, general sales taxes accounted for an average of 69 percent of total state sales receipt while excise sales taxes accounted for an average of 31 percent of total state sales receipt.

Sources: Various consumption tax proposals are from sources mentioned in the text and table 1. The projections of Medicaid outlays and sales tax receipts are from: GAO, 2010, Long-Term State and Local Fiscal Model; CBO, *The Long-Term Budget Outlook*, 2010; OECD, 2010, Revenue Statistics 1965–2009; and authors' calculations.

Table 23 General government expenditure and general consumption tax comparisons, selected OECD countries

Country	2000		2005		2008	
	Government expenditure (percent of GDP)	General consumption tax (percent of total taxation)	Government expenditure (percent of GDP)	General consumption tax (percent of total taxation)	Government expenditure (percent of GDP)	General consumption tax (percent of total taxation)
Australia	35.5	8.7	33.7	12.0	35.3	13.0
Canada	41.1	14.0	39.3	14.2	39.8	13.9
France	51.6	17.4	53.4	16.9	52.8	17.0
Germany	45.1	17.4	46.8	18.4	43.8	19.5
Italy	46.2	13.8	48.2	15.4	48.8	14.3
Japan	39.0	5.4	38.4	9.1	37.1	8.8
Korea	22.4	17.8	26.6	17.0	30.4	15.8
Netherlands	44.2	15.6	44.8	17.4	46.0	19.4
Poland	41.1	17.1	43.4	21.2	43.2	23.5
Spain	39.1	15.9	38.4	17.5	41.3	16.2
Sweden	55.1	19.4	53.9	17.0	51.5	19.3
Switzerland	35.1	12.0	35.3	13.1	32.2	13.0
United Kingdom	39.1	19.0	44.1	18.2	47.4	18.2
United States ^a	33.9	8.0	36.3	7.6	38.9	7.8
Unweighted average, excluding United States	41.1	14.9	42.0	16.0	42.3	16.3

a. For the United States, consumption taxes are state and local retail sales taxes.

Note: The Spearman rank correlation coefficient is 0.60 between 2008 government expenditures as a percent of GDP and 2008 general consumption taxes as a percent of total taxation. The null hypothesis of no association between the two sets of data is rejected at the 95 percent confidence level.

Sources: OECD Tax Database, 2011; OECD, National Accounts at a Glance 2010; OECD, 2010, Revenue Statistics 1965-2009.