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New Estimates of Effective Corporate Tax Rates on Business Investment

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In his State of the Union address, President Obama discussed cutting America's high corporate tax rate. Treasury Secretary Timothy Geithner and congressional leaders are also interested in corporate tax reform. Should Japan cut its corporate tax rate in April as planned, the U.S. statutory rate of about 40 percent—including federal and state taxes—will be the highest in the Organization for Economic Cooperation and Development.

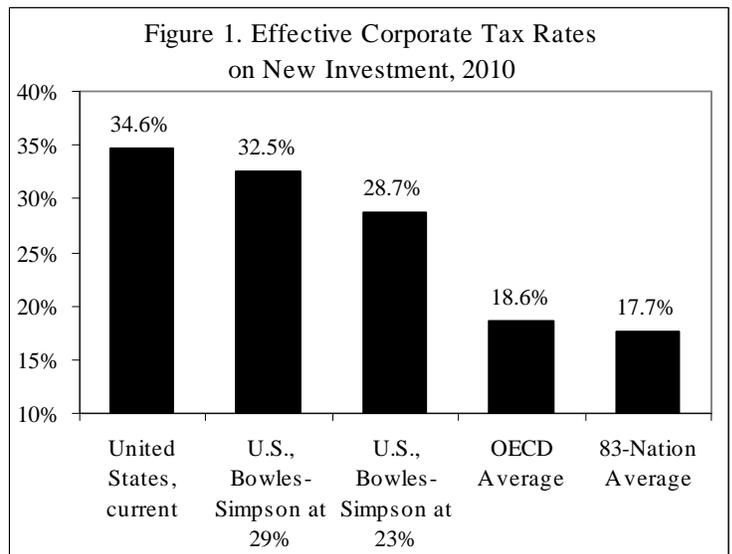
This bulletin presents estimates of effective corporate tax rates on new capital investment for 83 countries. "Effective" tax rates take into account statutory rates plus tax-base items that affect taxes paid on new investment, such as depreciation deductions, inventory allowances, and interest deductions. Our calculations also account for other taxes that affect investment, such as retail sales taxes on capital purchases and asset-based taxes.

We find that the U.S. effective corporate tax rate on new investment was 34.6 percent in 2010, which was the highest rate in the OECD and the fifth-highest rate among 83 countries. The average OECD rate was 18.6 percent, and the average rate for 83 countries was 17.7 percent.

Tax Rates on New Investment: The Global Picture

Figure 1 summarizes our calculations of effective corporate tax rates on new business investment. The U.S. effective rate of 34.6 percent is far higher than the average of 33 OECD nations and the full group of 83 nations.¹ Only four countries had a higher effective corporate tax rate than the United States: Argentina, Chad, Brazil, and Uzbekistan. These countries are outliers in the global trend of cutting corporate tax rates to attract investment and promote economic growth.

The figure includes our estimates of the U.S. effective corporate tax rate under two options proposed by President Obama's Fiscal Commission, headed by Erskine Bowles and Alan Simpson.² Unfortunately, the Bowles-Simpson reforms would make only modest progress in reducing the



U.S. rate to competitive levels, as discussed below.

Many industrial and emerging countries have reduced their corporate tax rates over the last decade or so. The largest rate cuts were in Austria, Bulgaria, Canada, the Czech Republic, Germany, Greece, Iceland, Ireland, Italy, Netherlands, Poland, Slovakia, Turkey, Egypt, Georgia, Kazakhstan, Lesotho, Mauritius, and Singapore. America's largest trading partner, Canada, cut its statutory corporate rate from 43 percent to 29 percent, which helped to bring down its effective rate from 44 percent to 21 percent, according to our calculations. Substantial cuts were also achieved in Australia, Belgium, China, Denmark, Finland, Korea, Luxembourg, Mexico, New Zealand, Taiwan, and the United Kingdom. Taiwan cut its statutory rate from 25 percent to 17 percent in 2010, and now has an effective rate of just 10.9 percent.

A number of countries are initiating or phasing-in further corporate tax-rate cuts in coming years, including Australia, Canada, Ecuador, Israel, Japan, New Zealand,

Table 1. Effective Corporate Tax Rates
on New Investment, 2010

United States	34.6%		
Argentina	43.1%	Thailand	17.0%
Chad	36.3%	Rwanda	16.9%
Brazil	35.1%	Netherlands	16.8%
Uzbekistan	34.9%	Luxembourg	16.8%
France	34.0%	China	16.6%
India	33.6%	Hungary	15.9%
Russia	31.9%	Uganda	15.4%
Japan	29.5%	Nigeria	15.1%
Korea	29.5%	Madagascar	14.6%
UK	27.9%	Israel	14.6%
Italy	26.9%	South Africa	14.5%
Australia	26.0%	Bangladesh	14.5%
Spain	25.4%	Poland	14.3%
Lesotho	25.3%	Morocco	13.9%
Austria	25.3%	Botswana	13.6%
Costa Rica	25.2%	Trinidad	13.1%
Norway	24.7%	Greece	13.0%
Pakistan	24.1%	Ghana	12.9%
Germany	23.8%	Czech Rep	12.0%
Peru	23.0%	Vietnam	11.7%
Bolivia	22.9%	Slovenia	11.6%
Tunisia	21.9%	Slovak Republic	11.2%
Portugal	20.8%	Ireland	10.9%
Iran	20.6%	Taiwan	10.9%
Fiji	20.6%	Ethiopia	9.8%
Indonesia	20.5%	Croatia	9.5%
Canada	20.5%	Iceland	8.9%
Kazakhstan	19.9%	Romania	8.6%
Tanzania	19.3%	Singapore	8.5%
Sierra Leon	19.0%	Mauritius	7.8%
Sweden	18.9%	Egypt	7.0%
Georgia	18.9%	Chile	6.7%
Denmark	18.5%	Turkey	5.6%
Finland	18.3%	Latvia	5.6%
Malaysia	18.0%	Bulgaria	4.6%
Jamaica	17.9%	Kenya	4.5%
Ecuador	17.9%	Hong Kong	4.0%
Jordan	17.6%	Ukraine	3.1%
Switzerland	17.6%	Belgium	-1.7%
New Zealand	17.6%	Serbia	<u>-5.1%</u>
Mexico	17.5%	Average of	
Zambia	17.2%	83 nations	17.7%

and the United Kingdom. In some countries, such as Israel and Japan, these are straight rate cuts. In other countries, such as New Zealand and the United Kingdom, rate cuts are being paired with base-broadening measures. When these reforms are in place, the average effective tax rate in 2014 will be 18.0 percent in the OECD and 17.4 percent among all 83 countries.

Table 1 shows our calculations of effective corporate tax rates for 83 countries. The calculations include both national and subnational corporate taxes in each country.

Effective Tax Rates: Which One?

Treasury Secretary Geithner recently said, “Although our effective tax rates for corporations ... are roughly the average of the other major economies, our statutory rates are much higher.”³ However, the frequent claim that the U.S. effective corporate rate is average or low is off-base. It is true that often dubious tax preferences help many companies pay federal tax at an *average* effective rate lower than the 35 percent statutory rate. But we find that the *marginal* effective tax rate on new investment is 34.6 percent, and thus just about as high as the statutory rate.

It is also true that temporary capital expensing or “bonus depreciation” rules recently passed by Congress have reduced effective tax rates for 2011. We do not think that temporary or narrow tax breaks are good policy. Potential investors usually look at the longer-term tax structure in making major investment decisions. Under the temporary U.S. rules, businesses may deduct 100 percent of the cost of new capital equipment in the first year.⁴ We calculate that this provision reduces the U.S. effective tax rate to as low as 17.5 percent, but this is only a single-year windfall. It does not create certainty for businesses in their capital planning, and it may simply accelerate investment ahead of the normal replacement schedule.

Bonus depreciation also discriminates against investment in the services sector relative to the manufacturing sector. That is because businesses in the services sector use relatively fewer shorter-lived capital assets (e.g., equipment with a useful life of 20 years or less), which qualify for bonus depreciation, and relatively more longer-lived capital assets (e.g., office buildings), which do not qualify for bonus depreciation. Therefore, bonus depreciation is an inferior policy to a substantial statutory tax-rate cut, which would improve long-term investment incentives broadly across the economy. For these reasons, we do not include the effect of the bonus depreciation in our effective tax-rate calculations.

A Growing Consensus on Corporate Rate Reduction

New findings emerging from academic tax literature point strongly to the advantages of tax rate reductions for corporations. One finding is that when considering the efficiency characteristics of different taxes, corporate income taxes are the most distortive, and hence the most harmful for economic growth.⁵ Reductions in corporate tax rates can help boost domestic investment and spur inflows of foreign investment.⁶

Another finding is that corporate tax rate cuts in high-rate countries will probably not cause substantial revenue losses. Instead, in a global economy, aligning a nation's corporate tax rate with the international average rate or less is important to protecting the tax base. Keeping the corporate rate competitive helps avoid "income shifting" by multinational companies from high-tax to low-tax jurisdictions.⁷ Accordingly, there is less concern today about corporate tax rates "racing to the bottom." Rather, countries that are major trading partners often reduce their rates together over time, and all countries gain as the efficiency of tax systems are increased.⁸

A third message from recent studies is that corporate tax rate reduction should be accompanied by base broadening, but it should not be constrained by demanding corporate "revenue neutrality." Broader tax bases can raise a particular amount of revenue to support lower tax rates. But the purpose of base broadening should be to enhance tax neutrality, which allows businesses to make efficient decisions that reduce the misallocation of resources and minimizes tax planning and administration. Countries should avoid special tax breaks for particular industries or segments of business.⁹

Thus, countries should broaden their tax bases to improve neutrality while reducing rates. But if the rate is still above international norms, a further pure rate cut is in order regardless of "revenue neutrality." One reason is that revenue neutrality is often measured statically, without fully accounting for the positive dynamic effects of tax rate reduction. If reducing the corporate tax rate spurs capital investment and the shifting of profits into the United States, it will generate economic growth and higher overall revenue collections.

In sum, a consensus has emerged among corporate tax experts that tax reforms should aim at achieving longer-term efficiency and economic growth rather than just being guided by a revenue target.¹⁰

How Low Should the U.S. Corporate Rate Go?

President Obama's Fiscal Commission proposed reducing the federal statutory corporate tax rate from 35

percent to as low as 23 percent, while broadening the tax base. However, even with that lower federal rate, the combined federal-state U.S. *statutory* rate would still be 28 percent, which is higher than the OECD average statutory rate of 26 percent.¹¹ To reach the OECD average rate, the U.S. federal rate would have to fall to about 20 percent.

For the United States to match the average OECD *effective* rate, an even bigger statutory rate cut would be needed. The Bowles-Simpson plan of reducing the statutory rate to 23 percent with base broadening would reduce the U.S. effective rate to 28.7 percent. That would still be about 10 percentage points higher than the average OECD effective rate of 18.6 percent.

Reforming state-level taxes could also reduce the U.S. effective rate. State corporate income taxes, sales taxes on capital purchases, and capital-related taxes (e.g., the property portion of the Massachusetts excise tax and the capital portion of the Texas franchise tax) all fall on new investment. To appreciate how large these burdens are, consider that if all these state levies on capital investment were eliminated, the overall U.S. effective tax rate (with the Bowles-Simpson tax base) would drop to 28 percent. That would be the same reduction as cutting the federal statutory rate from 35 percent to 20 percent! The upshot is that state policymakers have an important role in making the U.S. tax environment for corporate investment more competitive.

One way to encourage state tax reforms would be for the federal government to disallow business deductions for state taxes in calculating the federal income tax base. That change would increase beneficial tax competition between the states, exposing them to open competition for investment. It would also improve tax transparency as the state portion of the tax burden on business investment would be more evident. Furthermore, the federal revenues gained by disallowing state tax deductions could be used to reduce the federal corporate tax rate. For example, by disallowing the deduction for state corporate income taxes, the federal revenue gain would support a rate reduction of about two percentage points.

Conclusions

A growing number of policymakers are recognizing that the U.S. corporate tax system is a major barrier to economic growth. The aim of corporate tax reforms should be to create a system that has a competitive rate and is neutral between different business activities. A sharp reduction to the federal corporate rate of 10 percentage points or more combined with tax base reforms would help generate higher growth and ultimately more jobs and

income. Such reforms would likely lose the government little, if any, revenue over the long run.

State governments also play an important role in business tax policy. Unfortunately, the average state corporate tax rate has not been cut in at least three decades, despite major reductions around the world since then. Furthermore, state retail sales taxes impose substantial burdens on capital purchases, which undermines investment and productivity. Thus, sales taxes should be reformed to remove taxation on business inputs.

Appendix

The estimates of effective tax rates on new investment (known formally as marginal effective tax rates on capital) are based on a methodology summarized in Duanjie Chen and Jack Mintz, “Taxing Business Investments: A New Ranking of Effective Tax Rates on Capital,” World Bank, 2008. Our model assumes a multinational company seeking to maximize value for its projects around the world, raising equity and debt financing from international markets. The company minimizes its cost of finance by choosing an optimal debt and dividend policy, taking into account tax and nontax factors that influence financial decisions (independent of the investment decision). The cost of equity and debt is determined by international markets and independent of the availability of a domestic savings in a small open economy. Therefore, personal income taxes on dividends, interest, and capital gains do not affect the multinational’s cost of financing even though those personal taxes do affect personal savings decisions.

To calculate the effective tax rate on new investments, similar investment projects in manufacturing and service industries are assumed in each country. The same capital structure for eight industries (manufacturing, construction, utilities, communications, transport, wholesale trade, retail trade, and other services) is assumed across countries, using data for capital stock weights developed by the Canadian government agency, Finance Canada. We also use Statistics Canada’s recently estimated economic depreciation rates, and apply them across all countries.

¹ Our calculations do not include Estonia, which joined the OECD on December 9, 2010.

² The National Commission on Fiscal Responsibility and Reform, “The Moment of Truth,” December 2010, www.fiscalcommission.gov. The report recommends reducing the federal corporate income tax rate and eliminating numerous targeted tax breaks. It would also broaden the tax base by ending the last-in first-out inventory accounting method, which is an alternative to the first-in first-out method.

³ Kim Dixon, “Geithner Gauging Support for Big Tax Change,” *Reuters*, January 12, 2011.

⁴ This provision was passed in December in the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010. It 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.

⁵ See Organization for Economic Cooperation and Development, *Tax Policy Reform and Economic Growth* (Paris: OECD, 2010), p. 10.

⁶ Using statistical analysis, we have examined whether our measured effective tax rates have an effect on foreign direct investment flows among countries during 2005–2008. Taking into account other factors that influence investment (inflation, political risk, GDP per capita, trade protection, human development, and the exchange rate), we have found that a one percentage point increase in the effective tax rate on new investment causes foreign direct investment flows as a share of GDP to decline between 0.05 to 0.08 percentage points. Given that the mean average of foreign direct investment to GDP is about 5.2 percent, this reduction is quite meaningful. A preliminary analysis is provided in M. Krzepkowski, J. Mintz, and J-F Wen, mimeograph, University of Calgary, 2010.

⁷ Several studies have shown that income shifting results in much smaller revenue losses from rate cuts and even a Laffer effect whereby reductions in high rates actually increase revenues. With regard to the latter, see, for example, Kimberly Clausing, “Corporate Tax Revenues in OECD Countries,” *International Tax and Public Finance* 14, no. 2 (2007): 115–134; Jack Mintz, “2007 Tax Competitiveness Report: A Call for Comprehensive Tax Reform,” C.D. Howe Institute, September 2007; and Alex Brill, “Corporate Tax Rates: Receipts and Distortions,” *Tax Notes*, December 22, 2008.

⁸ For example, Australia and New Zealand have taken turns in corporate tax rate reductions in recent years. Both countries realized that neither could keep its rate higher than the other for revenue reasons. Currently, New Zealand is reducing its corporate tax rate to 28 percent and Australia to 29 percent.

⁹ For example, there have been proposals for introducing a “patent box” in the United States, which would apply a reduced tax rate to income generated from patents. But such targeted tax reductions, while popular in Europe, should not be considered as a part of a U.S. tax overhaul aimed at enhancing tax efficiency.

¹⁰ For example, see Organization for Economic Cooperation and Development, “Tax Policy Reform and Fiscal Consolidation,” December 2010; and see Institute for Fiscal Studies, “Tax by Design,” *The Mirrlees Review*, November 2010, www.ifs.org.uk/mirrleesreview.

¹¹ For statutory corporate tax rates in the OECD and elsewhere, see KPMG, “Corporate and Indirect Tax Survey,” 2010.