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By

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Corporate Tax Cuts: Examining the Record in Advanced Economies

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Reform of the widely criticized corporate tax in the United States is among the top agenda items of the Trump administration and the Republican leadership of Congress, and even many Democrats say the time has come to revamp the tax to make US-based multinational corporations more competitive in the global economy. The administration has not unveiled a detailed plan for tax reform, but officials say they want to reduce the federal corporate income tax rate to 15 percent from the current 35 percent. A multitude of problems stand in the way of such an overhaul, such as whether the change in the tax code will add to the federal deficit, require the elimination of tax preferences, or require increases in other taxes to replace lost revenues—and, most important, whether the tax changes can be negotiated in a bipartisan manner. As the administration prepares to undertake this task for the first time in more than 30 years, it might do well to consider the episodes of tax rate cuts in other advanced economies.

This discussion paper examines evidence from 39 economies where cuts in the corporate income tax rate have been implemented since 1986. The paper also summarizes the findings of nearly two dozen studies on the fiscal effects of corporate tax rate cuts. The main conclusion from these analyses is that radical tax rate cuts, of 15 or more percentage points, are rare and usually happen only after major fiscal disruptions that weaken the political influence of business sectors that oppose reductions in the tax preferences from which they have benefited. In contrast, more modest corporate tax cuts of about 10 percentage points are typically effected in normal economic conditions and are practical to implement as they do not trigger large fiscal imbalances.

The last major tax reform in the United States was in 1986, when a bipartisan effort in the Congress succeeded in slashing the corporate tax rate from 48 percent to 34 percent and broadened the tax base by eliminating a number of tax preferences and managed to maintain fiscal neutrality. In the three decades since then, advanced market economies—primarily in Europe—have substantially reduced their corporate tax rates.[1] Cuts of over 20 percentage points were effected in Austria in 1989, Sweden in 1991, Norway in 1992, Finland in 1993, Hungary in

[1] Advanced market economies are defined as all countries of the Organization for Economic Cooperation and Development (OECD) plus six European Union countries that are not OECD members (Bulgaria, Croatia, Cyprus, Lithuania, Malta, and Romania).

1995, and Ireland in 2003. In the first five cases, the reform took place in the midst of fiscal crises, with budget deficits hovering around 10 percent of GDP. To recoup revenues, governments did away with corporate tax preferences and thus made fiscally possible the radical reduction in the general rate. In Ireland, the tax cut was part of a gradual 6-year reform to improve international competitiveness and attract investment.

In addition, six countries implemented a corporate income tax rate cut of 15 to 20 percentage points: Bulgaria (starting in 1997), Croatia (2001), Cyprus (1990), Denmark (1989), Italy (1997), and New Zealand (1987). In all but Bulgaria tax reform was preceded by fiscal or banking crises, with governments running excess deficits of 3–5 percent of GDP and wanting to eliminate or reduce tax preferences.

Some advanced economies have cut corporate taxes in benign fiscal conditions—consistent with the current conditions in the United States.[2] Canada, for example, pared 11 percentage points from its corporate tax between 2007 and 2012, bringing it down to 26 percent. The United Kingdom is gradually reducing the corporate income tax from 30 percent in 2007 to 17 percent in 2020. Such cuts, of around 10 percentage points, are only partially motivated by the desire to reduce budget deficits and often stem from policy programs to assist small businesses or encourage job creation.

The US federal budget deficit, at 3.2 percent of GDP in 2016, is average in a historical context. This contrasts with the situation at the time of the last tax rate cut: in 1984–85 the federal deficit was over 5 percent of GDP, its highest level since World War II. Today the *prospect* of a widened deficit is causing significant political anxiety, particularly as interest rates may rise fast, either because of escalating inflation or doubts about US creditworthiness.

The analysis in this discussion paper leads to the conclusion that a corporate tax cut of around 10-15 percentage points would bring the US federal corporate tax rate to 20–25 percent, in line with the average rate among other advanced economies (23 percent).

1. The US Corporate Tax Rate in Comparison with Other Advanced Economies

The United States has the highest statutory corporate income tax rate among advanced economies,[3] and this high rate coexists with a number of large preferences and exceptions. The corporate income tax brought in $473 billion in 2016. At the same time, the US Government Accountability Office estimates that the tax code allows corporate deductions, credits, and deferrals to the tune of $180 billion a year, or about 40 percent of the actual corporate income tax revenue (GAO 2013). Also, more than half of US business activity, measured by sales, is conducted by pass-through entities, which do not pay taxes.

The starting point for comparison of statutory rates for the United States is the 15 early members of the European Union (EU15), all of which are also OECD members. Since 1986 the average

[2] The reforms were in Australia, Canada, Iceland (twice), Latvia, Turkey, and the United Kingdom.
[3] 2016 data are available at www.doingbusiness.org/data/exploretopics/paying-taxes, accessed February 9, 2017.

corporate profit tax rate in the EU15 has plunged 22 percentage points from an average of 48 percent to 26 percent in 2016 (Åslund and Djankov 2017). France tops the list with a 34.4 percent corporate tax rate, while Ireland's rate is below average at 12.5 percent (table 1). Germany has the fourth-highest corporate income tax rate in the European Union, at 30.2 percent (Belgium is second, at 34.0 percent; Italy is third, at 31.4 percent).

After the fall of the Berlin Wall the postcommunist countries entered the corporate tax rate competition in Europe. Eastern European "governments have repeatedly lowered corporate tax rates…to attract and motivate investment, and their public statements indicate that they are paying attention to the tax rates set by their counterparts abroad" (Åslund and Djankov 2017, p. 67). Starting with Estonia in 1992 and Hungary in 1995, every Eastern European country has implemented significant tax rate cuts. Poland's tax rate reduction from 26 percent to 19 percent in 2004 propelled a chain of tax cuts in Central Europe. Slovakia reduced its corporate tax rate to 19 percent the same year. The Czech Republic reduced its rate from 31 to 24 percent in 2006 (and to 19 percent in 2010). In 2007, Bulgaria adopted a corporate income tax of 10 percent, the lowest in Europe. Eastern European corporate tax rates currently range between 10 and 22 percent.

Initially, some of the original EU members (notably Austria, France, and Germany) attacked Eastern European countries for "tax dumping."[4] Eventually, though, both Austria and Germany reduced their own corporate profit tax rates.

Among non-European major economies, Australia, Japan, and Mexico have a corporate tax rate of 30 percent. Turkey has the lowest non-OECD corporate tax rate, at 20 percent.

Across all economies shown in table 1, the average corporate income tax rate in 2016 was 23 percent. The United States would have to raise $160 billion in fiscal revenue a year to effect such a statutory corporate income tax rate in a fiscally neutral manner.

Previous success in achieving fiscal neutrality has relied on increased revenue from another source. So far the only identifiable such source in the United States is the proposal for a "border adjustment tax" sponsored by House Speaker Paul Ryan and other House Republicans. The Ryan-Brady proposal suggests that the border adjustment tax proposal could bring in $100 billion a year. This revenue would be enough to reduce the corporate income tax to 28 percentage points if the two changes were implemented simultaneously. But many industries oppose the border adjustment tax, as it hurts net importers (imports are taxed and exports not) and industries where the capital cost share of production is high. One such industry is car manufacturing, which employs hundreds of thousands of workers across a half-dozen states critical to presidential elections.

Some analysts claim that lowering the corporate tax rate will encourage US companies to repatriate the profits they have kept abroad to optimize tax payments. By 2016 US Fortune 500 corporations avoided up to half a trillion dollars in federal income taxes by holding $2.6 trillion

[4] Simon Kennedy, "Tax-cut war widens in Europe," *New York Times*, May 28, 2007.

of "permanently reinvested" profits offshore.[5] The problem with this claim is that even if the US corporate tax rate were cut by around 10 percentage points, the new rate would still be higher than the effective tax rate that US corporations face in Ireland, Luxembourg, and the Netherlands, as well as in the various business-friendly tax havens around the world that some US corporations use.[6] The incentive to repatriate profits will be small, unless the threat of other policy actions is used.

A final possibility is that the corporate tax cut is implemented even if it increases the federal budget deficit. This possibility faces two difficulties. First, in 2013 the Republican majority in Congress proposed a 10-year, $4.6 trillion balanced budget plan.[7] An additional federal deficit of 1 percentage point a year would be hard to reconcile with this plan. Second, the increased deficit would need to be reduced within several years, as otherwise it would run up against the Byrd rule in the US Senate.[8] However, the 2013 commitment was made before President Trump took office, and the Byrd rule has been repeatedly flouted.

2. Episodes of Corporate Tax Rate Cuts

Politicians favor lower corporate tax rates because "[e]ffective corporate tax rates have a large and significant adverse effect on corporate investment and entrepreneurship, even when controlling for other related variables" (Djankov et al. 2010, p.31).

The reductions in the corporate income tax rate in advanced economies in the past 30 years started from the United States. In 1974 University of Southern California economist Arthur Laffer introduced the Laffer curve concept, following a meeting with Ford administration officials Dick Cheney and Donald Rumsfeld (Fullerton 2008). The main implication of the Laffer curve is that increasing tax rates beyond a certain point is counterproductive for raising tax revenue. Professor Laffer never speculated what this inflexion point was, but his simple graph has become a regular feature of tax cut proposals.

Several years later, in 1981, two Stanford University professors, Robert Hall and Alvin Rabushka, put forward a tax reform plan for a 19 percent tax rate on both corporate and personal income in the United States. Hall and Rabushka contended that their proposal was "so simple that everyone could file their income taxes on a postcard and that a single rate of 19 percent, including a large personal exemption, would collect the same revenue as the existing income tax." [9] Following this assertion, the US Department of the Treasury issued a report, *Tax Reform*

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[5] Letter to House Ways and Means Chairman Brady and Ranking Member Neal from the Joint Committee on Taxation, September 29, 2016. Accessed on May 1, 2017.

[6] Hufbauer and Lu (2017) evaluate the tax burden faced by a typical US-based multinational corporation, calculating actual average corporate tax rates in a variety of jurisdictions. In related research, Chen and Mintz (2015) calculate the marginal effective corporate tax rates for multinational corporations.

[7] Richard Cowan and David Lawder, "Republicans unveil 10-year plan to shrink deficit," *Reuters*, March 12, 2013.

[8] The Senate Byrd rule amended the Congressional Budget Act of 1974 to allow senators to block a piece of legislation if it significantly increases the federal deficit beyond a ten-year term.

[9] Robert E. Hall and Alvin Rabushka, "A Proposal to Simplify Our Tax System," *Wall Street Journal,* December 10, 1981.

for Fairness, Simplicity, and Economic Growth, recommending a modified version of the flat tax (Regan 1984).

The academic and political debate around the Laffer curve and the Hall/Rabushka flat tax proposal provided the basis for the US corporate income tax cut in 1986 from 48 percent to 34 percent. The impact spread beyond the United States. In 1987 New Zealand's finance minister Roger Douglas lowered the corporate tax rate from 48 percent to 33 percent. After the fall of the Berlin Wall in 1989 reformers in Eastern Europe wanted to demonstrate a commitment to free markets and did so by cutting taxes and privatizing state-owned enterprises. An additional rationale for their lowering taxes was the fight against the informal economy, which by the early 1990s accounted for 70 percent in some postcommunist economies (Johnson, Kaufmann, and Shleifer 1997). Estonia was the first to propose a reduction in the corporate income tax rate in 1994, from 35 to 26 percent. Over the next 15 years—by 2007 when Bulgaria cut its rate to 10 percent—the average corporate income tax rate in Eastern Europe plunged from 42 percent to 16 percent.

The European Union has never undertaken coordinated corporate tax cuts, as corporate tax law is not part of the European Commission's responsibilities. Instead, changes in the EU15 have been driven either by banking crises or perceived tax competition from the East. In Northern Europe, the banking crises of the early 1990s ushered in a period of tax cuts (Auerbach, Hassett, and Södersten 1995). Sweden, for example, slashed its corporate rate from 57 percent to 30 percent in 1991. Finland reduced its tax rate gradually from 52 percent to 25 percent between 1989 and 1993. These changes did not spread beyond the crisis-affected countries. However, once Estonia and Hungary implemented a low corporate income tax in 1994 and 1995, respectively, a domino effect followed. Poland and Slovakia were next, introducing a 19 percent flat tax in 2004. Austria, which had intended to reduce its corporate income tax rate from 34 to 31 percent, instead announced a reduction to 25 percent in 2005 (Goliaš 2004), and Germany went from 38.9 percent to 30.2 percent two years later.

Altogether, since 1986 there have been 94 corporate income tax rate cuts in 39 countries, or more than two tax cuts per country (table 2).[10] These cuts share three features. First, few countries have done a large cut at once, and changes often take half a dozen years on average to phase in. For example, Ireland took 10 years (1994–2003) to go from a 40 percent to a 12.5 percent statutory corporate tax rate, in two tax code reforms; the United Kingdom is reducing the corporate tax rate from 30 percent to 18 percent over 14 years (2007 to 2020); Israel took 9 years (2003–11) to go from 36 percent to 24 percent; and France took 5 years (1998–2002) to go from 41.7 percent to 35.4 percent. On average, it takes more than three years to phase in a tax rate cut.

Second, the average reduction in a single corporate tax rate change is 8.75 percentage points, although 13 countries have managed a cut of 15 percentage points or more in a single rate

[10] A tax cut is defined as a reduction in the general tax rate by at least 3 percentage points and permanent in intention. The latter assumption is important as countries frequently implement temporary tax rate changes during fiscal crises. For example, a number of EU countries increased the corporate tax rate during the eurozone crisis (Åslund and Djankov 2017).

change. The incidence of such large tax cuts is nearly one in seven (14 of 94 cases). There are another 16 episodes (about 1 in six) of corporate tax cuts of 10 to 15 percentage points.[11]

Third, 10 of the dozen radical corporate tax rate cuts (of 15 percentage points or more) took place during periods of significant fiscal shortfalls.[12] In contrast, the evidence on tax rate cuts of 10 to 15 percentage points is mixed: 8 took place during fiscal deficits above 3 percent of GDP, 4 in a time of fiscal surplus, and 3 were effected in periods of moderate fiscal deficits. This evidence suggests that radical policy change is associated with recent or existing fiscal difficulties, but that double-digit tax cuts can be implemented in normal economic conditions too.

3. Effect on Revenues

Nearly every attempt at reducing the corporate tax rate is premised on a fiscally neutral proposal. For example, in the June 2016 proposal put forward by Ryan and House Ways and Means Committee chair Kevin Brady, *A Better Way Forward on Tax Reform*, fiscal neutrality "is achieved by eliminating dozens of crony tax carve-outs that hinder the nation's economic potential and keep rates artificially high for everyone."[13] Other examples of fiscally neutral proposals in the United States are President Bush's tax reform commission (President's Advisory Panel 2005) and the Tax Reform Act (TRA) of 1986 (Hufbauer and Vieiro 2012).

3a. Achieving Fiscal Neutrality

Fiscal neutrality is not overly difficult to achieve, as corporate income taxes do not generate a large share of revenues in advanced economies because big companies shop around the world for the most beneficial tax treatment. European corporate income tax revenues averaged just 3.4 percent of GDP in 2006–07. They declined with the global financial crisis but recovered to 2.5 percent of GDP in 2016 (Åslund and Djankov 2017). Similarly, Japan collects 3.5 percent of GDP in corporate taxes, while the US government collects about 2 percent of GDP by taxing corporations (OECD 2016).[14]

Fiscal neutrality in tax reform can be achieved by coupling the reduction in the general tax rate with closed preferences elsewhere in the tax code or by instituting or raising other taxes, as demonstrated in several countries. The tax cut proposal of President Reagan, for example, aimed to achieve revenue neutrality in 1986 by offsetting the 48 percent to 34 percent corporate tax cut with the elimination of $60 billion in tax preferences, slower depreciation of assets, and an alternative minimum tax on corporations (Steuerle 1992).

[11] The data on corporate tax rate cuts from 2005 to 2016 are verified with the World Bank's *Doing Business* dataset on Paying Taxes, available at www.doingbusiness.org.
[12] And all 13 increases in the corporate tax rate during 1986–2016 took place in periods of fiscal deficits.
[13] Kevin Brady, "The GOP Plan for Tax Sanity," *Wall Street Journal*, June 24, 2016.
[14] 2016 country revenue statistics are available from the Organization for Economic Cooperation and Development (https://stats.oecd.org/Index.aspx?DataSetCode=REV, accessed April 30, 2017).

Actual corporate tax receipts fell below projections in each of the first five years after the tax cut; thus whereas in 1987 the US Congressional Budget Office forecast federal corporate tax collections of $138 billion for fiscal year 1990, actual receipts were $94 billion.[15] Analysis shows, however, that the tax reform of 1986 did raise federal corporate tax collections relative to what they would have been otherwise, but that a decline in corporate profits relative to their predicted level and a move toward Subchapter S corporation status (where income is taxed under the individual income tax) depressed corporate tax receipts (Poterba 1992).[16] The overall deficit was cut from 4.9 percent of GDP in 1986 to 3.1 percent of GDP in 1987 and 2.7 percent in 1989.

The New Zealand government eliminated various tax incentives for business, 24 in total, in 1987. It also imposed a new general services tax, akin to a value-added tax. The reform was judged a fiscal success: corporate tax as a percentage of GDP increased from 2.1 percent to 2.6 percent over 5 years, and to 4.1 percent over 10 years (Groenewegen 1988).

In Sweden, estimates presented by the Ministry of Finance indicated that rate cuts would reduce tax revenue by some 90 billion kronor, or about 5 percent of GDP. In combination with increased housing and child allowances, intended to cushion the distributional effects of the reform, a total revenue loss of 6–7 percent of GDP was projected. Almost 40 percent of this loss was to be offset by increased revenue from taxes on capital income, real estate, and owner-occupied housing. The second main source of financing, with a projected revenue increase of some 28 billion kronor, was a broadening of the value-added tax to include goods and services previously exempted or taxed at lower rates. The elimination of preferential rules for taxing earned income was estimated to yield additional revenue of almost 13 billion kronor, and the remaining revenue was expected to accrue through the dynamic effects of the tax reform (Kristoffersson 1995). In the event, corporate tax revenue as a share of GDP rose from 1.7 percent in 1991 to 2.6 percent in 1995.

In Slovakia, tax incentive schemes were scaled back: the reform cancelled legislation providing for tax holidays of up to 10 years for newly established firms. Tax base reductions for sectors such as agriculture and forestry were eliminated, as was the tax exemption on income from the sale of securities held for 3 years or more (Moore 2005). Corporate tax went up from 2.5 percent of GDP in 2004 to 3.1 percent of GDP in 2008.

These anecdotes are consistent with studies (summarized in Romer and Romer 2010) showing that 45 percent to 90 percent of corporate tax cuts are self-financing. The gap is filled by complementary tax policies, mostly the elimination of tax preferences and other base-broadening changes.

The main reason for the success of self-financing tax cuts is higher GDP growth. For the United States, Christina Romer and David Romer (2010) use the narrative record from presidential speeches, executive branch documents, and Congressional reports to identify the size, timing,

[15] Congressional Budget Office, "The Economic and Budget Outlook: Fiscal Years 1988-1992," January 1987. Available at https://www.cbo.gov/sites/default/files/100th-congress-1987-1988/reports/doc01b-entire_0.pdf. Accessed on May 1, 2017.
[16] Tax Foundation, 2013. *Federal Tax Revenue by Source, 1934–2018*. Available at https://taxfoundation.org/federal-tax-revenue-source-1934-2018/, accessed April 30, 2017.

and principal motivation for all major tax policy actions since World War II. Focusing on tax changes made to promote long-run growth or to reduce an inherited budget deficit, rather than those made for other reasons (such as to boost the economy in the short run), they find that tax changes have large and persistent effects: a tax cut of 1 percent of GDP increased real GDP by about 2–3 percent over the next several years.

Karel Mertens and Morten Ravn (2013, p.1214) also find that "implemented tax cuts, regardless of their timing, have expansionary effects on output…. Tax shocks are important impulses to the US business cycle." In particular, an unanticipated decrease in taxes (associated with an increase of 1 percentage point in the net-of-tax rate) leads to an increase in real GDP of 0.44 percent in the first year and 0.78 percent in the third year. James Cloyne (2013) follows a similar approach for the United Kingdom and finds somewhat larger effects.

3b. Overview of Findings

The cross-country data on corporate income tax revenue show that revenue rose within three years after the change in 48 (of 94) cases of tax cuts, did not change in 10 cases, and went down in 36 cases. The average change in corporate income tax revenue is -0.05 percent of GDP, suggesting that fiscal neutrality is usually achieved.

The corporate income tax revenue fell by more than 1 percent of GDP in only 7 countries as a result of tax cuts. In four postcommunist countries (Hungary in 1994, Poland in 1996, Bulgaria in 1997, and Slovakia in 1999) this shortfall was compensated by rising revenues from personal income taxes and value-added tax. The tax cuts in Spain (2006) and New Zealand (2007) were coupled with proposed increases in other taxes, but implementation coincided with the start of the global financial crisis, which reduced receipts across all taxes. Only in Luxembourg was the 2001 tax cut implemented without concomitant measures to maintain corporate income tax revenue.

In sum, the majority of countries undertaking corporate income tax cuts managed to compensate for the initial fall in revenue by raising revenues from other taxes. Even when fiscal neutrality was not of concern, budget deficits did not increase significantly.

4. Conclusions

A corporate income tax cut of 10 to 15 percentage points—from 35 percent to 20–25 percent at the federal level—has precedent in other advanced economies. Even if US politicians do not adopt simultaneous measures to rein in the budget deficit, the rise in economic activity as a result of the tax cut would offset half or more of the projected shortfall.

If the United States implements such a cut, its corporate tax rates will be similar to the average among advanced economies (23 percent). But it will still trail destinations such as Cyprus, Ireland, Luxembourg, and the Netherlands in attractiveness to US multinational companies that keep profits abroad to avoid taxes.

Table 1 Evolution of the corporate income tax rate since 1986

Country	1986	1996	2006	2016
Australia	49.0%	36.0%	30.0%	30.0%
Austria	55.0%	34.0%	25.0%	25.0%
Belgium	45.0%	40.2%	34.0%	34.0%
Bulgaria	40.0%	40.0%	15.0%	10.0%
Canada	49.8%	42.9%	33.9%	26.8%
Chile	10.0%	15.0%	17.0%	24.0%
Croatia	25.0%	25.0%	20.0%	20.0%
Cyprus	42.5%	25.0%	10.0%	12.5%
Czech Republic	45.0%	39.0%	24.0%	19.0%
Denmark	50.0%	34.0%	28.0%	22.0%
Estonia	35.0%	26.0%	23.0%	20.0%
Finland	51.5%	28.0%	26.0%	20.0%
France	45.0%	36.7%	34.4%	34.4%
Germany	60.0%	52.2%	38.9%	30.2%
Greece	49.0%	35.0%	29.0%	29.0%
Hungary	50.0%	18.0%	18.0%	19.0%
Iceland	51.0%	33.0%	18.0%	20.0%
Ireland	50.0%	36.0%	12.5%	12.5%
Israel	n.a.	36.0%	31.0%	25.0%
Italy	46.4%	53.2%	33.0%	31.4%
Japan	50.0%	50.0%	39.5%	30.0%
Latvia	25.0%	25.0%	15.0%	15.0%
Lithuania	29.0%	29.0%	15.0%	15.0%
Luxembourg	46.5%	40.3%	29.6%	29.2%
Malta	32.5%	35.0%	35.0%	35.0%
Mexico	42.0%	35.0%	30.0%	30.0%
Netherlands	42.0%	35.0%	30.0%	25.0%
New Zealand	48.0%	33.0%	33.0%	28.0%
Norway	50.8%	28.0%	28.0%	25.0%
Poland	40.0%	40.0%	19.0%	19.0%
Portugal	48.0%	40.0%	27.5%	21.0%
Romania	57.4%	38.0%	16.0%	16.0%
Slovakia	45.0%	40.0%	19.0%	22.0%
Slovenia	25.0%	30.0%	25.0%	17.0%
South Korea	n.a.	n.a.	27.5%	24.2%
Spain	35.0%	35.0%	35.0%	25.0%
Sweden	56.6%	28.0%	28.0%	22.0%
Switzerland	31.7%	28.5%	21.3%	21.2%
Turkey	46.0%	44.0%	20.0%	20.0%
United Kingdom	35.0%	33.0%	30.0%	20.0%

United States	48.0%	35.0%	35.0%	35.0%

n.a. = not available.
Note: For postcommunist countries, the first available data after the fall of the Berlin Wall are used as a 1986 proxy.
Source: World Bank Doing Business data, available at www.doingbusiness.org.

Table 2 Changes in the corporate tax rate since 1986

Country	Year start	Year end	Starting rate	Change in rate
Australia	1987	1988	49.0%	−10.0%
Australia	1992	1993	39.0%	−6.0%
Australia	1999	2001	36.0%	−6.0%
Austria	1988	1989	55.0%	−25.0%
Austria	2004	2005	34.0%	−9.0%
Belgium	2002	2003	40.2%	−6.2%
Bulgaria	1997	2002	40.0%	−17.0%
Bulgaria	2003	2005	23.0%	−8.0%
Bulgaria	2006	2007	15.0%	−5.0%
Canada	1986	1988	49.8%	−8.5%
Canada	1999	2005	42.9%	−8.7%
Canada	2007	2012	34.0%	−7.9%
Croatia	2001	2002	35.0%	−15.0%
Cyprus	1990	1991	42.5%	−17.5%
Cyprus	2002	2003	25.0%	−15.0%
Czech Rep	1993	1996	45.0%	−6.0%
Czech Rep	1997	1998	39.0%	−4.0%
Czech Rep	1999	2000	35.0%	−4.0%
Czech Rep	2003	2006	31.0%	−7.0%
Czech Rep	2007	2010	24.0%	−5.0%
Denmark	1989	1992	50.0%	−16.0%
Denmark	2006	2007	28.0%	−3.0%
Denmark	2013	2016	25.0%	−3.0%
Estonia	1993	1994	35.0%	−9.0%
Estonia	2004	2008	26.0%	−5.0%
Finland	1989	1993	52.5%	−27.5%
Finland	2004	2005	29.0%	−3.0%
Finland	2013	2014	24.5%	−4.5%
France	1987	1988	45.0%	−3.0%
France	1991	1993	42.0%	−8.7%
France	1998	2002	41.7%	−6.3%
Germany	1989	1990	60.0%	−5.5%

Germany	2000	2001	52.0%	−13.1%
Germany	2007	2008	38.9%	−8.7%
Greece	1988	1989	49.0%	−3.0%
Greece	1991	1993	46.0%	−11.0%
Greece	2000	2002	40.0%	−5.0%
Greece	2004	2007	35.0%	−10.0%
Hungary	1989	1990	50.0%	−10.0%
Hungary	1994	1995	40.0%	−22.0%
Iceland	1988	1990	51.0%	−6.0%
Iceland	1991	1993	45.0%	−12.0%
Iceland	1997	1998	33.0%	−3.0%
Iceland	2001	2002	30.0%	−12.0%
Ireland	1987	1989	50.0%	−7.0%
Ireland	1990	1991	43.0%	−3.0%
Ireland	1994	1996	40.0%	−4.0%
Ireland	1997	2003	36.0%	−23.5%
Israel	2003	2011	36.0%	−12.0%
Italy	1997	1998	53.2%	−16.2%
Italy	2002	2004	36.0%	−3.0%
Japan	1997	1999	50.0%	−9.1%
Japan	2014	2016	37.0%	−7.0%
Latvia	2001	2004	25.0%	−10.0%
Lithuania	1999	2000	29.0%	−5.0%
Lithuania	2001	2002	24.0%	−9.0%
Luxembourg	1986	1991	46.5%	−7.1%
Luxembourg	2001	2002	37.5%	−7.1%
Mexico	1986	1990	42.0%	−7.0%
Mexico	2002	2005	35.0%	−5.0%
Netherlands	1988	1989	42.0%	−7.0%
Netherlands	2004	2005	35.0%	−5.0%
Netherlands	2006	2007	30.0%	−5.0%
New Zealand	1987	1988	48.0%	−15.0%
New Zealand	2007	2008	33.0%	−3.0%
Norway	1991	1992	50.8%	−22.8%
Poland	1996	2001	40.0%	−12.0%
Poland	2002	2004	28.0%	−9.0%
Portugal	1988	1989	48.0%	−8.0%
Portugal	2003	2004	33.0%	−5.5%
Portugal	2013	2015	25.0%	−4.0%
Romania	1992	1993	57.4%	−12.4%
Romania	1994	1995	45.0%	−7.0%
Romania	1999	2000	38.0%	−13.0%
Romania	2004	2005	25.0%	−9.0%

Slovakia	1993	1994	45.0%	−5.0%
Slovakia	1999	2000	40.0%	−11.0%
Slovakia	2001	2002	29.0%	−4.0%
Slovakia	2003	2004	25.0%	−6.0%
Slovenia	2006	2010	25.0%	−5.0%
Slovenia	2011	2013	20.0%	−3.0%
South Korea	2008	2009	27.5%	−3.3%
Spain	2006	2008	35.0%	−5.0%
Spain	2014	2016	30.0%	−5.0%
Sweden	1990	1991	56.6%	−26.6%
Sweden	2012	2013	26.3%	−4.3%
Switzerland	1990	1991	30.6%	−2.9%
Switzerland	1997	1999	28.5%	−3.4%
Switzerland	2004	2005	24.1%	−2.8%
Turkey	1998	1999	46.0%	−21.0%
Turkey	2004	2006	33.0%	−13.0%
UK	1996	1999	33.0%	−3.0%
UK	2007	2020	30.0%	−13.0%
United States	1986	1987	48.0%	−14.0%

Source: World Bank Doing Business data, available at www.doingbusiness.org.

References

Åslund, Anders, and Simeon Djankov. 2017. *Europe's Growth Challenge.* London: Oxford University Press.

Auerbach, Alan, Kevin Hassett, and Jan Södersten. 1995. *Taxation and Corporate Investment: The Impact of the 1991 Swedish Tax Reform*. NBER Working Paper 5189. Cambridge, MA: National Bureau of Economic Research.

Chen, Duanjie, and Jack Mintz. 2015. The 2014 Global Tax Competitiveness Report: A Proposed Business Tax Reform Agenda. *SPP Research Papers*, Volume 8, Issue 4. Calgary: School of Public Policy, University of Calgary.

Cloyne, James. 2013. Discretionary Tax Changes and the Macroeconomy: New Narrative Evidence from the United Kingdom. *American Economic Review* 103, no. 4: 1507–28.

Djankov, Simeon, Tim Ganser, Caralee McLiesh, Rita Ramalho, and Andrei Shleifer. 2010. The Effect of Corporate Taxes on Investment and Entrepreneurship. *American Economic Journal: Macroeconomics* 2, no. 3: 31–64.

Fullerton, Don. 2008. Laffer curve. In *The New Palgrave Dictionary of Economics* (2nd ed.), ed. Steven N. Durlauf and Lawrence E. Blume. p. 839.

GAO (US Government Accountability Office). 2013. *Corporate Tax Expenditures: Information on Estimated Revenue Losses and Related Federal Spending Programs*. Working Paper 13-339. Washington.

Goliaš, Peter. 2004. *Fundamental Tax Reform in Slovakia*. Bratislava: Institute for Economic and Social Reforms (INEKO).

Groenewegen, Peter D. 1988. Tax Reform in Australia and New Zealand. *Government and Policy* 12, no. 6: 93–114.

Johnson, Simon, Daniel Kaufmann, and Andrei Shleifer. 1997. *The Unofficial Economy in Transition*. Brookings Papers on Economic Activity 1997, no. 2: 159–239.

Hufbauer, Gary, and Zhiyao Lu. 2017. *Lessons for US Business Tax Reform from International Tax Rates*. Policy Brief 17-2. Washington: Peterson Institute for International Economics.

Hufbauer, Gary, and Martin Vieiro. 2012. *Right Idea, Wrong Direction: Obama's Corporate Tax Reform Proposals*. Policy Brief 12-13. Washington: Peterson Institute for International Economics.

Kristoffersson, Anders. 1995. *Was the Tax Reform Fully Financed?* Tax Reform Evaluation Report No. 23. Stockholm: National Institute of Economic Research.

Mertens, Karel, and Morten Ravn. 2013. The Dynamic Effects of Personal and Corporate Income Tax Changes in the United States. *American Economic Review* 103, no. 4: 1212–47.

Moore, David. 2005. *Slovakia's 2004 Tax and Welfare Reforms*. IMF Working Paper 05/133. Washington: European Department, International Monetary Fund.

Poterba, James. 1992. Why Didn't the Tax Reform Act of 1986 Raise Corporate Taxes? *Tax Policy and the Economy* 6, no. 2: 43–58.

President's Advisory Panel on Federal Tax Reform. 2005. *Simple, Fair, and Pro-Growth: Proposals to Fix America's Tax System*. Washington.

Regan, Donald. 1984. *Tax Reform for Fairness, Simplicity, and Economic Growth*. Washington: US Department of the Treasury.

Romer, Christina D., and David H. Romer. 2010. The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks. *American Economic Review* 100, no. 3: 763–801.

Steuerle, Eugene. 1992. *The Tax Decade: How Taxes Came to Dominate the Public Agenda*. Washington: Urban Institute.