Reasons for the Decline in Corporate Tax Revenues

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Summary

Corporate tax revenues have declined over the last six decades. In the post-World War II era, corporate tax revenue as a percentage of gross domestic product (GDP) peaked in 1952 at 6.1%. Today, the corporate tax generates revenue equal to approximately 1.3% of GDP. The corporate tax has also decreased in importance relative to other revenue sources. At its post-WWII peak in 1952, the corporate tax generated 32.1% of all federal tax revenue. In that same year the individual tax accounted for 42.2% of federal revenue, and the payroll tax accounted for 9.7% of revenue. Today, the corporate tax accounts for 8.9% of federal tax revenue, whereas the individual and payroll taxes generate 41.5% and 40.0%, respectively, of federal revenue.

This report discusses the three main factors for the decline in corporate tax revenue. First, the average effective corporate tax rate has decreased over time, mostly as a result of reductions in the statutory rate and changes affecting the tax treatment of investment and capital recovery (depreciation). Second, an increasing fraction of business activity is being carried out by partnerships and S corporations, which are not subject to the corporate income tax. This has led to an erosion of the corporate tax base. And third, corporate sector profitability has fallen over time, leading to a further erosion of the corporate tax base.

Understanding the decline in corporate tax revenue could be helpful in preserving any tax reforms enacted, or structuring a reform to obtain a desired revenue effect, such as revenue neutrality or enhancement. The House Committee on Ways and Means and the Senate Committee on Finance have held hearings on tax reform throughout the first session of the 112th Congress. The President, in his 2011 State of the Union address, called for corporate tax reform that did not add to the deficit. Generally, the corporate tax reform discussion has focused on reducing statutory rates and achieving revenue neutrality through broadening the tax base by eliminating various deductions, exemptions, and credits, among other things.

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Corporate tax revenues have been declining for the last six decades. This report discusses the three main factors for the decline. First, the average effective corporate tax rate has decreased over time, mostly due to reductions in the statutory rate and changes affecting the tax treatment of investment and capital recovery (depreciation). Second, an increasing fraction of business activity is being carried out by partnerships and S corporations, which are not subject to the corporate income tax. This has led to an erosion of the corporate tax base. And third, corporate sector profitability has fallen over time, leading to a further erosion of the corporate tax base.

As Congress considers options for tax reform, background on the decline in corporate tax revenue could prove useful in preserving any tax reforms enacted, or structuring a reform to obtain a desired revenue effect, such as revenue neutrality or enhancement. The House Committee on Ways and Means and the Senate Committee on Finance have held hearings on tax reform throughout the first session of the 112th Congress.[1] In his 2011 State of the Union address the President called for corporate tax reform that did not add to the deficit.[2] Generally, the corporate tax reform discussion has focused on reducing statutory rates and achieving revenue neutrality through broadening the tax base by eliminating various deductions, exemptions, and credits, among other things, such as shifting to a territorial tax system.

This report begins by documenting the decline in corporate tax revenue. An analysis of the three main factors explaining this decline is then presented. The data and calculations used in this report may be found in the **Appendix**. The analysis in this report focuses only on nonfinancial corporations for two reasons.[3] First, nonfinancial corporations are the firms primarily affected by investment- and depreciation-related tax changes since they account for the majority of physical capital investment. Second, the bulk of revenue that is generated from the corporate tax comes from taxing nonfinancial companies.

Corporate Tax Trends

Corporate tax revenues are low by historical standards. In the post-World War II era, corporate tax revenue as a share of gross domestic product (GDP) peaked in 1952 at 6.1% and generally declined since (see **Figure 1**). Today, the corporate tax generates revenue equal to approximately 1.3% of GDP, although projections (not shown here) have the corporate tax raising revenue over 2.4% of GDP in several years as the economy recovers and temporary bonus depreciation provisions expire.

While corporate tax revenues have fallen, overall federal tax revenues have remained relatively stable, averaging around 17.7% of GDP since 1946 (aside from business cycle fluctuations). Revenues generated from the individual tax have exhibited similar relative stability, averaging around 8.1% of economic output. Two other tax revenue sources, however, have not remained

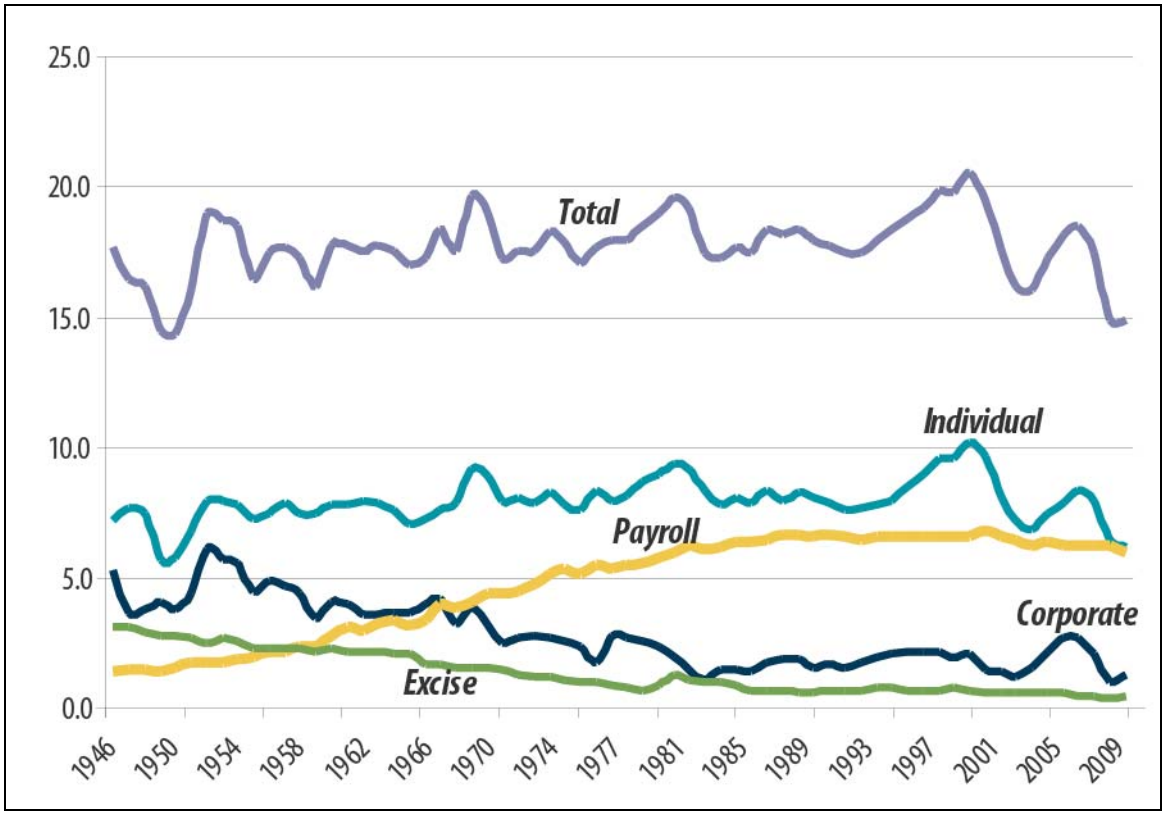
[1] For a list of recent hearings, see http://waysandmeans.house.gov/Calendar/ and http://finance.senate.gov/hearings/.

[2] The White House, The State of the Union, 2010, speech available at http://www.whitehouse.gov/state-of-the-union-2011.

[3] Previous research has focused on nonfinancial corporations for the same reasons. See, for example, Alan J. Auerbach and James M. Poterba, "Why Have Corporate Tax Revenues Declined?" *Tax Policy and the Economy*, vol. 1 (1987), pp. 1-28; and Alan J. Auerbach, "Why Have Corporate Tax Revenues Declined? Another Look," *CESifo Economic Studies*, June 2007, pp. 153-171.

stable. Payroll tax revenue has increased from 1.4% of GDP in 1946 to 6.0% in 2010, while at the same time excise tax revenue has decreased from 3.1% to 0.5% of GDP.

Figure 1. Tax Revenue By Source As Percentage of GDP, 1946-2010



Source: Office of Management and Budget, Table 2.3, http://www.whitehouse.gov/omb/budget/Historicals.

Taken together, the corporate tax has also decreased in importance relative to other revenue sources. At its post-WWII peak in 1952, the corporate tax generated 32.1% of all federal tax revenue. In that same year the individual tax accounted for 42.2% of federal revenue, and the payroll tax accounted for 9.7% of revenue. Today, the corporate tax accounts for 8.9% of federal tax revenue, whereas the individual and payroll taxes generate 41.5% and 40.0%, respectively, of federal revenue.

Understanding the Decline

There are a number of possible explanations for the decline in corporate tax revenues. The amount of revenue collected from any tax depends on the tax rate and the dollar size of what is being taxed, also known as the "tax base." If the corporate tax rate falls, all else equal, so too will revenue. The same relationship holds between revenue and the corporate tax base. A number of factors can impact the tax base, including the number of firms operating in the corporate form and corporate profitability. So the decline in corporate tax revenues may be due to either a reduction in corporate tax rates, a reduction in the corporate tax base, or both. The analysis presented below suggests that both factors have played a role in the decline in revenues generated by the corporate tax.

Average Effective Tax Rate

A lower average effective corporate tax rate explains a portion of the decline in corporate tax revenue. The effective tax rate is the rate at which income is actually (or effectively) taxed. As **Figure 2** shows, this rate has decreased from a post-WWII high of 55.8% in 1951 to 28.4% in 2010.[4] The decrease in the effective rate would have resulted in lower corporate tax revenue if the corporate tax base remained constant. The subsequent sections provide evidence that the tax base has decreased as well.

The fall in the average effective tax rate appears to be driven by three primary factors. First, there has been a reduction in the top statutory rate over this time (see **Figure 2**), from a high of around 50% in the 1950s and 1960s to its current rate of 35%. The statutory tax rate is the rate specified in the Internal Revenue Code, and along with special tax credits, deductions, and other tax benefits, determines the effective rate corporations face. As a result, a reduction in the statutory rate naturally reduces the effective rate.

Second, aside from two very brief periods, corporations were allowed to claim an investment tax credit equal to a fraction of certain new investments made between 1962 and 1986. The credit rate, particular rules, and eligible investments varied over time, but overall the credit had the effect of reducing the effective corporate tax rate below the statutory rate. Since 2004, corporations (and non-corporate businesses) have been able to claim the Section 199 deductions for certain activities, primarily concentrated in the domestic manufacturing industry.[5] Like the investment tax credit, the Section 199 deduction has the effect of reducing the effective tax rate on corporate income.

Third, changes to the rules governing depreciation contributed to the reduced effective tax rates.[6] Depreciation deductions became more valuable following significant changes in 1954, 1962, 1971, and 1981, which allowed for more rapid capital recovery. The Tax Reform Act of 1986 (P.L. 99-514) reversed this trend by bringing tax depreciation closer in line with physical depreciation. Depreciation was once again enhanced temporarily via "bonus depreciation" in 2002 and 2009 in attempts to stimulate the economy.

According to research by economists Alan Auerbach and James Poterba, other factors that could explain falling effective corporate tax rates have had relative small effects.[7] Inflation, the foreign tax credit, and other corporate tax credits have at times reduced the effective tax rate, and at other times increased the effective corporate tax rate. The net effect of these other factors has been small relative to effects of accelerated depreciation and the investment tax credit.

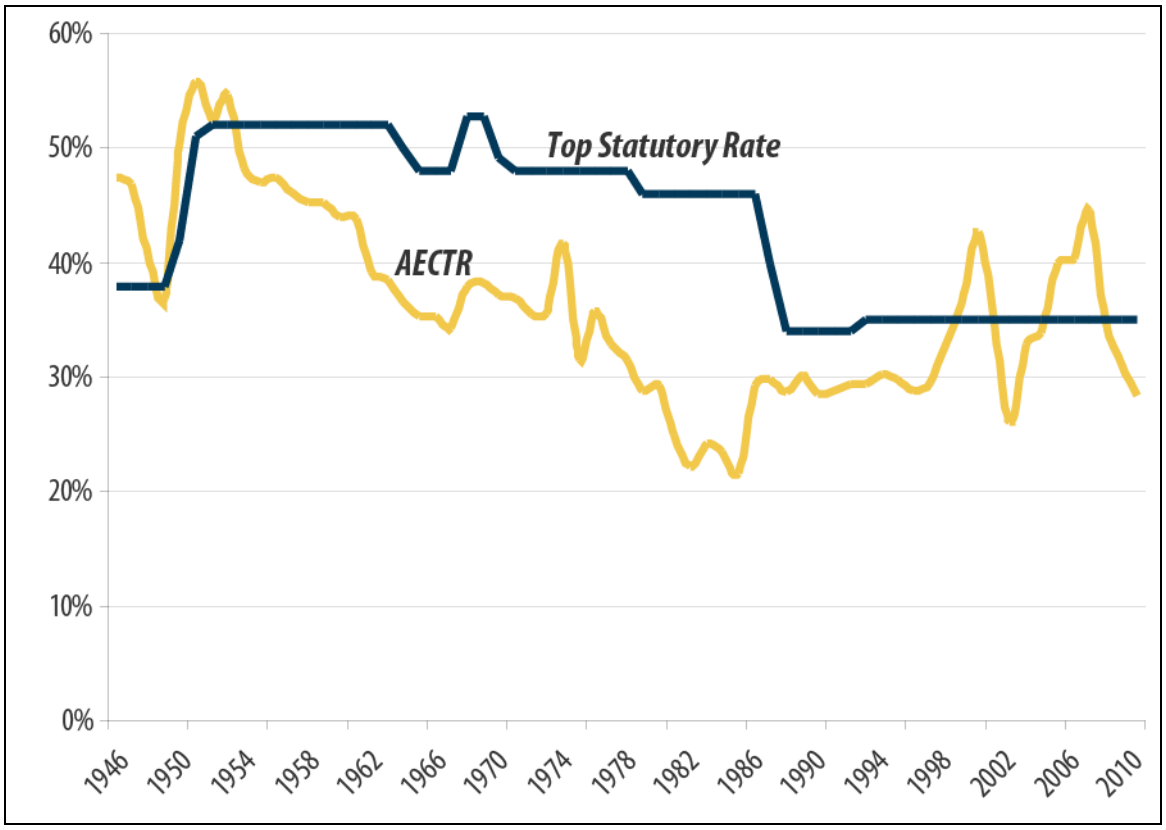
[4] Details of how average effective tax rates were computed may be found in the **Appendix**.

[5] See CRS Report R41988, *The Section 199 Production Activities Deduction: Background and Analysis*, by (name red acted).

[6] See (name redacted), *The Economic Effects of Taxing Capital Income* (Cambridge, MA: MIT Press, 1994), pp. 263-267, for a detailed history of depreciation rules.

[7] Alan J. Auerbach and James M. Poterba, "Why Have Corporate Tax Revenues Declined?" *Tax Policy and the Economy*, vol. 1 (1987), pp. 1-28; and Alan J. Auerbach, "Why Have Corporate Tax Revenues Declined? Another Look," *CESifo Economic Studies*, June 2007, pp. 153-171.

Figure 2. Statutory and Average Effective Nonfinancial Corporate Tax Rate, 1946-2010



Source: CRS calculations, and Tax Policy Center, http://www.taxpolicycenter.org/TaxFacts/listdocs.cfm?topic2id=70.

Notes: The average effective corporate tax rate was computed only for non-financial corporations. See **Appendix** for details on the AECTR calculation.

Although effective rates have generally fallen over time, **Figure 2** shows two recent effective tax rate spikes. The average effective corporate tax rate rose above the 35% top statutory rate around 2000, and then again around 2007. In both instances, the economy was in a recession and some businesses were experiencing losses. Businesses are typically allowed to use current losses to reduce, or offset, income paid in the previous two years.[8] This "carrying back" of losses allows businesses to receive a tax refund equal to the reduction in taxes paid in prior years, thus reducing the average effective rate for these firms.

When losses are large, such as in a recession, two years may not be long enough to allow firms to fully utilize current losses via carrybacks. As a result, the taxes of struggling corporations are higher than they would be with a longer carryback period (i.e., their tax refunds are smaller). This leads overall average tax rates to rise above the statutory rate. In response, Congress temporarily extended the carryback period from two years to five years in 2002 and 2008 in attempt to stimulate the economy.

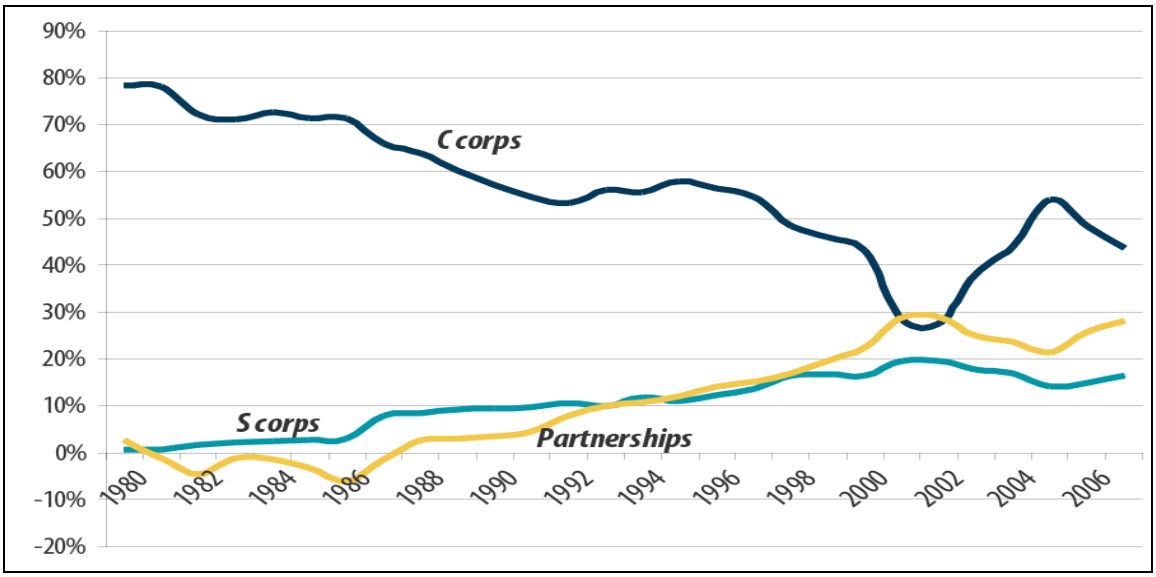
[8] For more information on loss carrybacks, see CRS Report RL34535, *Tax Treatment of Net Operating Losses*, by (name redacted).

A Smaller Corporate Sector

Lower effective tax rates do not appear to be the only cause of decline in corporate tax revenue. There is evidence that the nonfinancial corporate tax base has shrunk as an increasing share of business income has been generated by partnerships and S corporations.[9] Businesses that choose either one of these forms are, in general, not subject to the corporate income tax system. Rather, the income they earn is distributed directly to the individual business owners, and taxed according to the individual income tax system. Partnerships and S corporations are commonly referred to as "pass-throughs" because of this feature.

Figure 3 shows that in 1980, C corporations generated 78% of all business income in the United States. By 2007, however, they were responsible for only 44% of all business income.[10] Over the same time period, partnerships' share of income rose from 3% to 28%, and S corporations' share rose from 1% to nearly 17%. The shift in the distribution of business income from the corporate sector to the noncorporate sector has resulted in a smaller corporate tax base, and explains a portion of the drop in corporate tax revenues.

Figure 3. Share of Business Income by Business Type, 1980-2007



Source: Internal Revenue Service, Statistics of Income, Integrated Business Data, http://www.irs.gov/taxstats/bustaxstats/article/0,,id=152029,00.html.

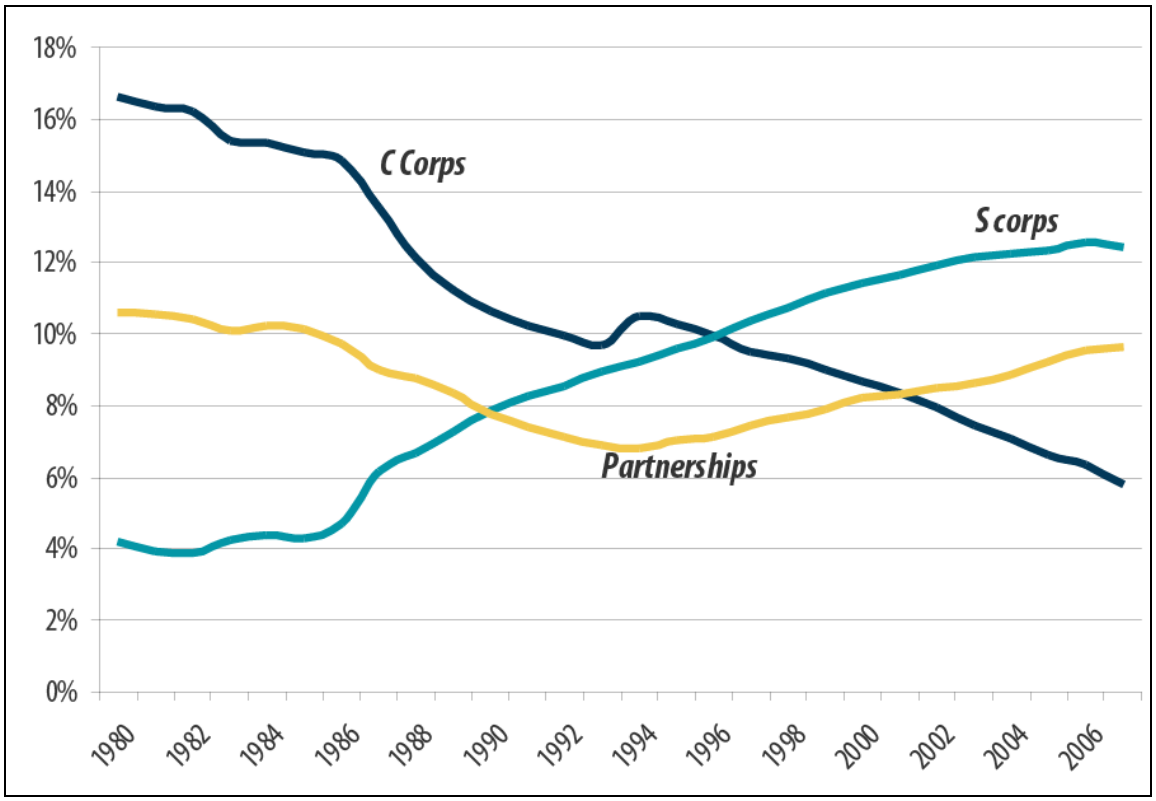
At the same time that there was a change in the distribution of business income, there was also a change in the distribution of businesses themselves. C corporations accounted for 17% of all businesses in 1980, but only 6% of all businesses by 2007 (see **Figure 4**). S corporations, however, increased in popularity, especially after 1986, when the Tax Reform Act of 1986 set the highest individual tax rate at 28% and the highest corporate tax rate at 34%. This gave businesses

[9] For a more detailed analysis of this shift, see CRS Report R40748, *Business Organizational Choices: Taxation and Responses to Legislative Changes*, by (name redacted)

[10] Although the S corporation option has been available since 1958, and the partnership option much longer, data availability limits this portion of the analysis to 1980 and later. The IRS data include limited liability companies (LLCs) as part of its partnership series.

an incentive to organize as S corporations. Legislation eventually increased the S corporation shareholder limit from 35 to 100, which made the S corporation form more attractive and practical.[11] By 2007, S corporations represented 12% of businesses, up from 4% in 1980.[12]

Figure 4. Share of Businesses by Type, 1980-2007



Source: Internal Revenue Service, Statistics of Income, Integrated Business Data, http://www.irs.gov/taxstats/bustaxstats/article/0,,id=152029,00.html.

Notes: Sole proprietorships are excluded from the figure because they remained a relatively constant fraction of all businesses at around 70%.

Reduced Corporate Profitability

A reduction in the profitability of those firms comprising the corporate sector has compounded the effect on the tax base from a shrinking corporate sector. Although profitability can be summarized a number of different ways, a popular measure used by economists is the ratio of profit to net assets (also known as net worth). The net asset component accounts for the size and amount of productive resources in the corporate sector. The profit component measures the aggregate return to those resources. When combined, the profit to asset ratio summarizes how

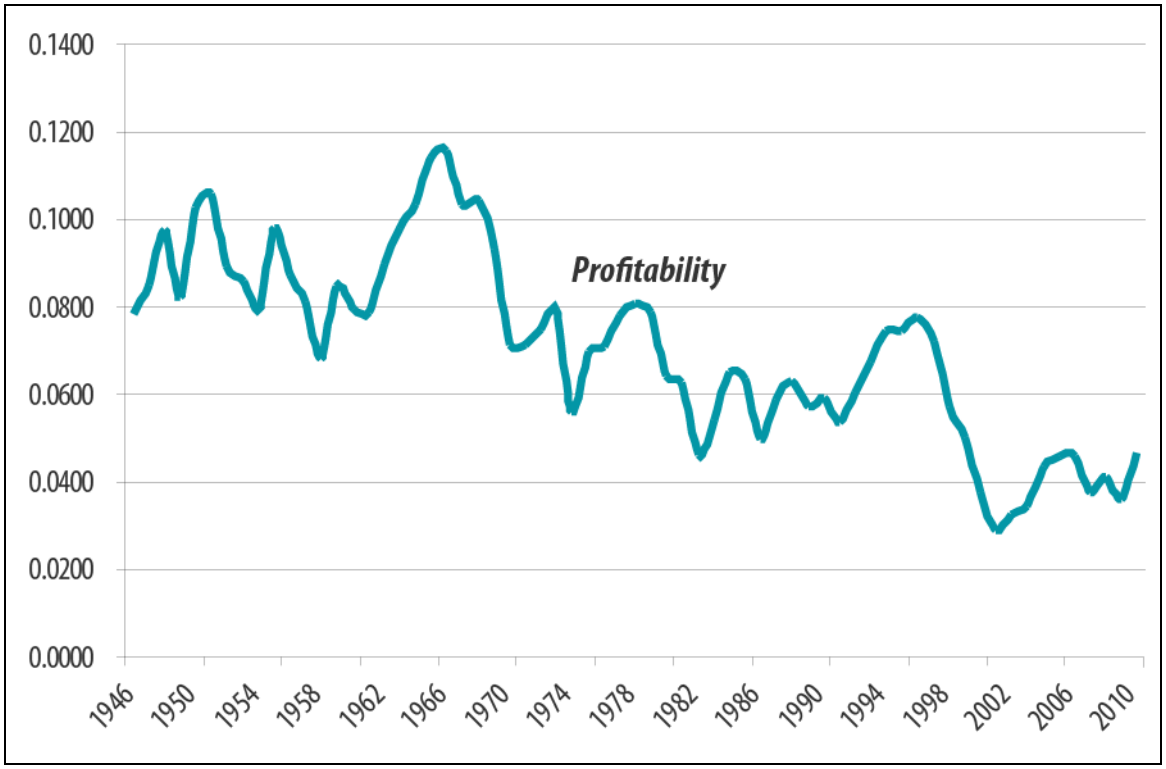
[11] The Small Business Job Protection Act of 1996 (SBJPA; P.L. 104-188) raised the S corporation shareholder limit from 35 to 75. The American Jobs Creation Act of 2004 (P.L. 108-357) raised the limit to 100.

[12] The other major form of business, the sole proprietorship, has remained a relatively constant fraction of businesses at roughly 70%. Sole proprietorships are not a viable alternative to C corporations, and thus are excluded from the discussion.

well the corporate sector is using its available resources to generate profits, adjusting for the amount of resources available.

Since peaking in 1966, corporate profitability has fallen over two and a half times as shown in **Figure 5**. Economists Alan Auerbach and James Poterba, using the same general measure of profitability used here, determined that falling profitability has been "substantially more important than changes in the average tax rate in accounting for the reduction in corporate taxes."[13] This naturally leads to the question: Why has nonfinancial corporate profitability fallen over time?

Figure 5. Corporate Profitability, 1946-2010



Source: Profits, National Income and Product Accounts, Bureau of Economic Analysis. Assets, Flow of Funds, Federal Reserve Board of Governors

There are several potential explanations for the decline in profits. First, it is possible that there has been a shift within the corporate sector from less volatile industries to more volatile industries. This could increase the fraction of corporations experiencing losses, which would lower overall profits. Second, there may have been a shift in the age of corporations from older to younger. Younger firms are generally less profitable than older firms in the initial years, which would drive down overall profits relative to assets.

Third, American corporations could be shifting profits out of the United States and into lower-tax countries, which would lower profits reported domestically. An increasing collection of research

[13] Alan J. Auerbach and James M. Poterba, "Why Have Corporate Tax Revenues Declined?" *Tax Policy and the Economy*, vol. 1 (1987), pp. 7.

has documented evidence of profit-shifting among multinational corporations, and that such behavior is significant.[14] And fourth, the profit measure used here is based on income reported for tax purposes (as opposed to for financial accounting purposes). Firms have an incentive to reduce their income for tax purposes, so as to lower their tax liability. Economists have, in fact, documented growing differences in what corporations report to the IRS as income, and what they report to shareholders.[15]

Conclusion and Implications for Tax Reform

Corporate tax revenues have been declining for the last six decades. The analysis in this report points to three primary factors responsible for the decline. First, the average effective corporate tax rate has decreased over time, mostly due to reductions in the statutory rate and changes affecting the tax treatment of investment and capital recovery (depreciation). Second, an increasing fraction of business activity is being carried out by partnerships and S corporations rather than C corporations. These pass-though business structures are not subject to the corporate income tax. This has led to an erosion of the corporate tax base. And third, corporate sector profitability has fallen over time, leading to a further erosion of the corporate tax base.

Understanding why corporate tax revenues have fallen could be relevant as the tax reform debate continues. Generally, the corporate reform discussion has focused on reducing statutory rates and achieving revenue neutrality through broadening the tax base by eliminating various deductions, exemptions, and credits, among other things, such as shifting to a territorial tax system. The fact that the effective tax rate is usually below the statutory tax rate (see **Figure 2**) suggests that a revenue-neutral reduction of the top statutory corporate tax rate may be possible. How much rates could be reduced in a revenue-neutral manner, however, depends on how much room there is to broaden the base.

Existing research indicates reducing the top corporate rate from 35% to 25% would require repeal of all corporate tax expenditures, changes to tax preferences available to noncorporate businesses, and other reforms to business taxation.[16] As the corporate rate is reduced, and tax reforms to the noncorporate sector are enacted, some business activity may return to the corporate sector, naturally broadening the base. Other business tax reforms may include changes to the taxation of American multinationals operating overseas. To the degree that these reforms reduced profit shifting to low-tax countries, the domestic corporate tax base may expand.

[14] See CRS Report R40623, *Tax Havens: International Tax Avoidance and Evasion*, by (name redacted); Kimberly A. Clausing, "The Revenue Effects of Multinational Firm Income Shifting," Tax Notes, March 28, 2011, pp. 1580-1586; Kimberly A. Clausing, "Multinational Firm Tax Avoidance and Tax Policy," National Tax Journal , vol. 62 (December 2009), pp. 703-725; Martin A. Sullivan, "U.S. Multinationals Shifting Profits Out of the United States," Tax Notes, March 10, 2008, p. 1078-1082; and Martin A. Sullivan, "Shifting of Profits Offshore Costs U.S. Treasury $10 Billion or More," Tax Notes, September 27, 2004, p. 1477-1481.

[15] Mihir A Desai, "The Divergence between Book Income and Tax Income," *Tax Policy and the Economy*, vol. 17 (2003), pp. 169-206; Gil B. Manzon, Jr. and George A. Plesko, "The Relation Between Financial and Tax Reporting Measures of Income," *Tax Law Review*, vol. 55, no. 2 (April 2001), pp. 175-213; and Lillian F. Mills, Kaye J. Newberry, and William B. Trautman, "Trends in Book-Tax Income and Balance Sheet Differences," *Social Science Research Network,* Working Paper Series (2002).

[16] See CRS Report R41743, *International Corporate Tax Rate Comparisons and Policy Implications*, by (name re dacted).

Appendix. Calculation of Average Effective Tax Rates

This section provides a brief overview of the mathematics behind the calculation of the average effective tax rates. **Table A-1** presents the source of the data for each variable used in the calculation as well as a brief description. Superscripts used in the equation identify the level of government, *F* for federal and *SL* for state and local, and the subscript *t* is an index for the year.

Table A-1. Equation Variables and Definitions

Variable	Meaning
AECTR	Author calculated average effective corporate tax rate.
TR^F	Total federal corporate tax receipts. *Source*: Bureau of Economic Analysis (BEA)
TR^{SL}	Total state and local corporate tax receipts. *Source*: Bureau of Economic Analysis (BEA)
FRP	Federal reserve payments to the US Treasury. *Source*: BEA.
$NFR^{SL,F}$	Nonfinancial state, local, and federal corporate tax receipts. *Source*: the Federal Reserve Board of Governors, Flow of Funds report.
NFR^{SL}	Nonfinancial state and local corporate tax receipts.
$NF\pi$	Nonfinancial corporate profits with inventory valuation and capital consumption adjustment. *Source*: BEA.
CPI	Consumer price index. *Source*: Bureau of Labor Statistics (BLS).
L	Net financial liabilities of domestic nonfinancial corporations. *Source*: the Federal Reserve Board of Governors, Flow of Funds report.
λ	Fraction of income accruing to C corporations. *Source*: Internal Revenue Service, Integrated Business Database and author's estimate for years prior to 1980.
t	Index for year, t=1946, ... ,2010

The equation for the average effective tax corporate tax rate calculation (AECTR) may be written as follows:

$$AECTR_t^F = \frac{\frac{TR_t^F - FRP_t}{TR_t^{SL} + TR_t^F - FRP_t} \times NFR_t^{SL,F}}{\lambda_t NF_{\Pi_t} + CPI_t \times L_t - NFR_t^{SL}}$$

where,

$$NFR_t^{SL} = (1 - \frac{TR_t^F - FRP_t}{TR_t^{SL} + TR_t^F - FRP_t^F}) \times NFR_t^{SL,F}$$

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