Corporate Taxation

131 Undergraduate Public Economics
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Basic Definitions

**Corporation** is a for-profit business owned by shareholders with limited liability (if business goes bankrupt, share price drops to zero but shareholders not liable for unpaid bills/debt)

**Shareholders**: Individuals who own the stock of the company.

**Ownership vs. control**: owners are shareholders. Managers (CEO and top executives) in general do not own the company but run the corporation on behalf of shareholders

**Agency problem**: A misalignment of the interests of the owners and the managers of a firm

**Corporation objective**: Economic view is that corporations should maximize profits to benefit shareholders. Corporate social responsibility view is that corporations should also care about their workers, customers, and community
FIRM FINANCING

Firms can finance themselves through debt or through equity

**Debt finance**: The raising of funds by borrowing from lenders such as banks, or by selling corporate bonds.

**Corporate bonds**: Promises by a corporation to make periodic interest payments, as well as ultimate repayment of principal, to the bondholders (the lenders)

**Equity finance**: The raising of funds by sale of ownership shares in a firm. Shareholders receive dividends from corporation and capital gain if the share price increases

Bondholders have priority on shareholders for repayment in case of bankruptcy
Profits and corporate tax

Corporations use capital (land, buildings, machines, equipment) and labor (workers) to transform inputs (raw materials) into outputs (goods produced and sold).

\[
\text{Profits} = \text{revenues from goods sold} - \text{expenses (labor costs, inputs, capital depreciation, interest payments on debt)}
\]

Profits are taxed by corporate tax at 21% (since 2018). After-tax profits can be distributed to shareholders (called payouts) as dividends or as a share buyback (share repurchase), or retained in the corporation (retained earnings).

**dividend**: The periodic payment that investors receive from the company, per share owned.

**retained earnings**: Any net profits that are kept by the company rather than paid out to debt or equity holders.

**capital gain**: The increase in the price of a share since its purchase. Retained earnings increase the value of the corporation and hence the share price.
Why Do We Have a Corporate Tax?

Corporations are not people but are ultimately owned by people. In principle, we want to tax people based on their economic resources but:

1) **Tax collection convenience**: Historically, corporations are more convenient to tax than individuals because they are large, visible, and have detailed accounts (for transparency for their shareholders). So taxing corporate income (profits) was attractive.

2) **Taxing foreign owners**: Corporations often have foreign owners. Countries want to tax economic activity on their territory. E.g., consider developing country with foreign owned mineral/oil extraction companies.

3) **Back-up for individual taxes**: If corporations were not taxed on their earnings, then individuals who owned shares in corporations could postpone taxes indefinitely by having the corporations never pay out their earnings.

4) **Taxing Pure Profits**: Some firms have market power (e.g., Microsoft) and hence earn pure profits. Taxing pure profits does not distort behavior because firms maximize profits anyway.
THE INCIDENCE OF THE CORPORATE TAX

Theoretically, incidence depends on whether capital is mobile internationally and within country because corporate tax is based on where capital is used

[in contrast, individual income tax is tax based on where individual owners reside regardless of where their capital is invested]

1) Perfectly internationally mobile capital: returns to capital (after corporate tax rate) in US need to be equal to return abroad $r^* \Rightarrow r^{US}$. 

$(1 - \tau_c) = r^* \Rightarrow$ net-of-tax return on US based capital not affected by $\tau_c \Rightarrow$ Corporate tax is fully borne by labor

2) Capital not mobile internationally but fully mobile within country: net return to corporate capital needs to equal return to non-corporate capital (non-corporate businesses) $\Rightarrow$ All forms of capital affected by $\tau_c$ as assumed by CBO incidence calculations

Small open country more likely to be in situation 1), while big country like US is probably still more like in situation 2).

3) Capital not even perfectly mobile within country: Many firms depend on local amenities [pool of workers, other firms]: Apple or Google could not costlessly move away from Silicon Valley $\Rightarrow$ Such firms bear more of the corporate tax burden
Debt vs. Equity financing

For corporations, financing investment with debt instead of equity is fiscally advantageous because interest on debt can be deducted from corporate tax base [while dividends payout to shareholders are not deductible]

However, financing project with debt is more risky, if investment does not pay off, firm will be unable to pay back debt and will go bankrupt

2018 tax reform: limits for 5 years deductibility of interest and in exchange allows firms to write off the value of investment immediately (instead of depreciating investment assets over the course of asset life)
EVIDENCE ON TAXES AND INVESTMENT

There is a large literature investigating the impact of corporate taxes on corporate investment decisions. Two effects:

Price effect: corporate tax increases the cost of investment

Income effect: corporate tax reduces cash available for investment

In principle, income effect should be zero if the corporation is not credit constrained (= can invest as much as it wants in any profitable project)

Recent studies show significant income effects (cash flow matters), some evidence of price effects (but mostly shifting around temporary investment tax credits) [see Zwick and Mahon AER’17].
Dividend Tax Effects: Empirical Analysis

Chetty and Saez QJE’05 use large dividend tax cut (for the individual income tax) from 35% to 15% in 2003. Key results:

1) $50 billion increase in dividend payments per year among large publicly traded firms

2) Increase came primarily from firms where “key players” had a strong change in tax incentives (firms with large executive share ownership)

3) No impact on aggregate investment levels [Yagan ’15 compares corporations affected by tax cut to pass-through businesses (S-corporations) not affected by tax cut]

These results are not consistent with the traditional model

Point instead toward an “agency model” where executives do what is in their interest, not necessarily what is in the interest of shareholders
Figure 1

Total Regular and Special Dividends (Updated to 2006Q2)

Source: Chetty and Saez (2005), using data through 2006Q2.
Figure 3

Dividend Payers in Top 3807 Firms

Source: Chetty and Saez (2005)
Figure 4

Effect of Tax Cut on Initiations: Breakdown by Executive Ownership

Source: Chetty and Saez (2005)
FIGURE 2
Effects of the 2003 Dividend Tax Cut


Notes: These figures plot the time series of annual mean outcomes for C-corporations and S-corporations in the main analysis sample net of a rich set of controls. Investment equals the cost of all newly purchased tangible capital assets. Net investment equals the annual dollar change in tangible capital assets. Employee compensation equals the sum of all non-officer wages, salaries, benefits, and pension contributions. Total payouts to shareholders equals dividends plus share buybacks (non-negative annual changes in treasury stock). Each graph is constructed by scaling each observation by either the firm’s tangible capital assets or revenue averaged over the two preceding lags; winsorizing (top-coding) observations at the 95th percentile; regressing this scaled outcome variable within every year on a C-corporation indicator, two-digit NAICS industry fixed effects, and quartics in age, lagged revenue, lagged profit margin, and revenue growth; and requiring that the vertical distance between the two lines equals the regression coefficient on the C-corporation indicator and that the weighted average of the lines equals the sample average in that year. The regressions are dollar-weighted (each observation is weighted by its lagged revenue) and flexibly control for any time-varying industry or firm-size shocks by non-parametrically reweighting the S-corporation sample within every year to match the distribution of C-corporations across 190 industry-firm-size bins as detailed in Section III.E. The payouts graph is included as a test for an immediate behavioral response in financial outcomes and differs from the other graphs in two ways that account for income-tax-induced differences in baseline payout levels and for slightly differential pre-trends as detailed in Section V.A.
CORPORATE TAX INTEGRATION

Profits from corporations are taxed twice:

1) Corporate income tax on corporate profits

2) Individual income tax on corporate payout to shareholders: dividends and realized capital gains

US reduced tax on dividends in 2003 to alleviate double tax

Problem: not all corporations pay tax on corporate profits because of tax avoidance

Better way to alleviate double taxation is called corporate tax integration

Corporate tax becomes like a withholding pre-paid tax that is refunded when dividends are paid out to individuals (Europe used to have such a system)
Multinational companies and taxation

**Multinational firms**: Firms that operate in multiple countries. Foreign arms of the firm are called subsidiaries.

**Territorial tax system**: Corporations earning income abroad pay tax only to the government of the country in which the income is earned (most countries use this system).

**Global tax system**: Corporations are taxed by their home countries on their income regardless of where it is earned (with tax credit for foreign corporate taxes paid).

US had global tax system before 2018 (but foreign profits were taxed only when “repatriated”)

US system is now hybrid: territorial system but with a minimum tax of 10.5% on foreign profits (with foreign tax credit).
Repatriation Holidays (before 2018)

Owners eventually wanted the income repatriated from abroad and paid out to them as dividends

Corporations paid normal (old) corporate tax 35% tax on foreign profits once repatriated

Massive amount of profits accumulated abroad (about $2.5 Tr by 2018) ⇒ Temptation for politicians to offer repatriation tax holiday

American Jobs Creation Act of 2004: Reduced tax rate on repatriated profits from 35% to 5.25% for 2005 only: surge in repatriations in 2005 (by $250bn) followed by reductions in repatriations in subsequent years

⇒ Net tax loser and no surge in investment

2018 Trump tax reform forces repatriations over 2018-2025 with 15.5% tax on cash and 8% on other assets and imposes min tax of 10.5% on foreign profits with foreign tax credit
Exhibit 5: Earnings repatriated by all US firms as of 2Q 2016

Repatriated foreign earnings by US firms (rolling 4-quarter sum)

- 2005: $300 bil
- 2Q 2016: $100 bil

Source: Bureau of Economic Analysis, Goldman Sachs Global Investment Research
Inversions

Other way for U.S. corporations to dodge U.S. corporate tax: change country of incorporation to a tax haven

Cannot just say “I’m an Irish corporation now.” Must merge with an Irish corporation first, called “corporate inversion”

Ex. Medtronic (maker of heart pacemakers) merged with Irish Covidien in 2014 → Declared legal headquarters in Ireland → Avoided U.S. tax on $14bn held overseas

Potential rationale for low U.S. corporate tax rate: Corporations will move headquarters/jobs overseas

No evidence though that many actual jobs move (e.g. Medtronic kept operational headquarters in Minnesota)
Tax Avoidance of Multinationals (Zucman ’14)

Share of profits made abroad by US corporations is about 1/3 today (was less than 5% in the 1930s)

50% of foreign profits of **multinationals** are reported in tax havens (such as Ireland)

Multinational companies are particularly savvy to avoid corporate income tax by reporting most of their profits in low tax countries using **transfer pricing**: one subsidiary buys/sells to another at manipulated prices to transfer profits

⇒ 20% of profits of US corporations is retained in tax havens

⇒ Effective corporate tax rate is lower than nominal US Federal tax rate
Google US had an incentive to charge less than the then-current market value of its technologies, but we do not know if it was able to do so or if the arm’s length rules were strictly enforced—the purchase price is not public information. In any case, since Google’s market value increased enormously after its 2003 initial public offering, it is apparent that Google US was able—whether intentionally or not—to “sell” its intangibles to its offshore subsidiary for what, in retrospect, was a low price.

The Irish/Bermuda hybrid then created another Irish subsidiary, “Ireland Limited,” and granted it a license to use Google’s technologies. In turn, this subsidiary puts Google’s intangible capital to use by licensing it to all Google affiliates in Europe, the Middle East, and Africa. (A similar strategy, with Singapore in lieu of Ireland, is used for Asia.) Google France, for instance, pays royalties to “Ireland Limited” in order to have the right to use the firm’s technologies. At this stage, the bulk of Google’s non-US profits end up being taxable in Ireland only, where the corporate tax rate is 12.5 percent.

The next step involves stripping the profits out of Ireland and making them appear to have occurred in Bermuda, where the corporate tax rate is zero percent. This is done by having “Ireland Limited” make a royalty payment to “Google Holdings.” There are two potential obstacles here. Ireland, first, withholds a tax on royalty payments to Bermuda; to avoid this tax, a detour by the Netherlands is necessary.

**Figure 1**

The Share of Profits Made Abroad in US Corporate Profits

Source: Author’s computations using National Income and Product Accounts data.

Notes: The figure reports decennial averages (that is, 1970–79 is the average for years 1970, 1971, through 1979). Foreign profits include dividends on foreign portfolio equities and income on US direct investment abroad (distributed and retained). Profits are net of interest payments, gross of US but net of foreign corporate income taxes.

Source: Zucman JEP 2014
drawing on national accounts and balance of payments statistics. One advantage of these data is that they do not suffer from the double-counting issues pervasive in US multinational firm operations data (as discussed in Bureau of Economic Analysis 2013; Hines 2010a). In the balance of payments data, profits that pass through chains of entities in Bermuda, Ireland, and the Netherlands—like in the “double Irish Dutch sandwich” arrangement—are consolidated and counted only once, in such a way that $1 of foreign profit recorded in the balance of payments directly contributes to US national income.

Consider then the basic macroeconomic aggregates of the US economy in 2013. National income (that is, GDP minus capital depreciation plus net income received from abroad) is equal to $14.5 trillion. Of this, US corporate profits (net of capital depreciation and interest payments) account for 14.5 percent, or $2.1 trillion. “US corporate profits” should be understood as the profits of US-owned firms: they include $1.7 trillion of domestic profits, plus $650 billion of profits made by foreign firms owned by US residents, minus $250 billion made by domestic firms owned by foreigners. So 31 percent (650/2,100) of US corporate profits were made abroad in 2013. Where do the $650 billion of foreign profits come from? The balance of payments provides a country-by-country decomposition of this total, indicating that 55 percent are made in six tax havens: the Netherlands, Bermuda, Luxembourg, Ireland, Singapore, and Switzerland (Figure 2). The use of tax havens has steadily increased since the 1980s and continues to rise. Moreover, the trend toward more

**Figure 2**
The Share of Tax Havens in US Corporate Profits Made Abroad

Source: Author’s computations using balance of payments data. See online Appendix.

Notes: This figure charts the share of income on US direct investment abroad made in the main tax havens. In 2013, total income on US direct investment abroad was about $500 billion. Seventeen percent came from the Netherlands, 8 percent from Luxembourg, etc.

Source: Zucman JEP 2014
As tax havens rose as a share of foreign profits (to 55% today) and foreign profits rose as a share of total US corporate profits (to about one-third), the share of tax havens in total US corporate profits reached 18% (that is, 55% of one-third) in 2013. That is a tenfold increase since the 1980s, as shown by Figure 3. The high level of tax-haven profits is all the more remarkable given that many US-owned companies have no overseas activity at all. (The rapid increase during the financial crisis is due to the relative strength of offshore profits at a time when domestic profits collapsed.)

Considerable care is needed when interpreting balance of payments statistics. These data do not reveal the real source of profits, but mainly the location of the holding companies involved in tax planning. Imagine that a US firm has an affiliate in France but this affiliate is owned through an Irish holding. In the US balance of payments, a lot of the income generated in France will get counted to Ireland, particularly if the French affiliate is a disregarded entity for US tax purposes under the “check the box” rules. One potential reason for having an Irish intermediary is that it can make it easier to avoid French taxes and facilitate deferral of US taxes. But the balance of payments statistics do not

Figure 3

The Share of Tax Havens in US Corporate Profits

Source: Author’s computations using National Income and Product Accounts and balance of payments data. See online Appendix.

Note: This figure charts the ratio of profits made in the main tax havens (Netherlands, Ireland, Switzerland, Singapore, Luxembourg, Bermuda, and other Caribbean havens) to total US corporate profits (domestic plus foreign).

Source: Zucman JEP 2014
From 2001 to 2004 and again from 2008 to 2013, “bonus depreciation” was in force, altering the timing of depreciation deductions, although not their amount (Zwick and Mahon 2014). Some loopholes, on the other hand, have been plugged, such as tax cuts for profits derived from exports, which were found to contradict World Trade Organization rules.

Second, part of the large 2007–2010 decline in the effective tax rate owes to a drop in corporations’ realizations of capital gains and a rise in bad debt expenses, in both cases reducing taxable profits but not profits as measured in the national accounts. In recent years, revenues have also been affected by tax loss carryforwards from the 2008–2009 crisis. The net effect of the Great Recession, however, should not be overstated: in 2013, four years after the end of the recession, and despite a surge in profitability, the effective rate (20 percent) is still almost as low as in the 2009 trough (18.4 percent).5

Third, the profits made by S-corporations are included in national accounts profits, although they are not subject to corporate taxes, so for these firms, the effective corporate tax rate is zero percent. S-corporations are firms with less than

This is not apparent in Figure 5 because this figure displays decade averages. Yearly estimates of the effective corporate tax rate are available online in the Excel Data Appendix to this article. Yearly data can be volatile, in particular because of year-to-year swings in capital gains realizations; to analyze long-run trends it is preferable to focus on decade averages as in Figure 5.

Figure 5
Nominal and Effective Corporate Tax Rates on US Corporate Profits

Source: Author’s computations using National Income and Product Accounts data. See online Appendix. Notes: The figure reports decennial averages (for example, 1970–79 is the average for years 1970, 1971 through 1979.) In 2013, over $100 of corporate profits earned by US residents, on average $16 is paid in corporate taxes to the US government (federal and states) and $4 to foreign governments. Source: Zucman JEP 2014
Issues with new US Corporate Tax System

US now has a very low corporate tax rate of 21%

⇒ Strong incentives for successful business owners to incorporate and keep profits inside the corporation and pay only 21% (instead of higher top individual tax rate)

⇒ This can undermine the progressive individual income tax

If business is a multinational: profits abroad are taxed at an even lower 10.5% tax rate (with foreign tax credit)

⇒ Multinationals still have strong incentives to shift profits abroad in tax havens

Declining corporate tax rates across the world due to harmful tax competition (re-inforces inequities created by globalization)
The race to the bottom is accelerating.

Global corporate tax rates (%)

- United States
- Africa
- World
- EU
- Latin America
- OECD
- Asia

Years: 2003 to 2018
1) **Global tax system** (as in the US pre-2018):

Problem: Companies (Apple, Google) never want to repatriate profits and can postpone paying US corporate taxes indefinitely [or wait for tax holidays]

Could force companies to pay tax immediately but will generate strong incentives for inversions (US companies become foreign companies)

2) **Apportionment system**:

Worldwide accounting for the multinational and profits shared across countries based on fraction of payroll, capital, or sales in each country

US states use this method to tax multi-state companies
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