Corporate Taxation

131 Undergraduate Public Economics
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Chapter 24

24.1 What Are Corporations and Why Do We Tax Them?

24.2 The Structure of the Corporate Tax

24.3 The Incidence of the Corporate Tax

24.4 The Consequences of the Corporate Tax for Investment

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24.6 Treatment of International Corporate Income

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The Shrinking Corporate Tax Pie • As originally noted in Chapter 1, the share of federal revenue coming from the corporate tax has been greatly decreased over time, from 22.8% of revenues in 1960 to 11.3% of revenues in 2008.
MOTIVATION

To its detractors, the corporate tax is a major drag on the productivity of the corporate sector, and the reduction in the tax burden on corporations has been a boon to the economy that has led firms to increase their investment in productive assets.

To its supporters, the corporate tax is a major safeguard of the overall progressivity of our tax system. By allowing the corporate tax system to erode over time, supporters of corporate taxation argue, we have enriched capitalists at the expense of other taxpayers.
What Are Corporations and Why Do We Tax Them?

**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 have purchased ownership stakes in a 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.
What Are Corporations and Why Do We Tax Them?

Executive Compensation and the Agency Problem

- A number of corporate executives have made the news in recent years for receiving compensation packages that seem wildly out of proportion to the executives’ actual value.

- How can executives receive such high compensation? There are two possible reasons:
  - They may be worth it: after all, these individuals are running some of the most important companies in the world. Nonetheless, this high compensation doesn’t seem to be related to superior performance in many cases.
  - Owners of firms have a hard time keeping track of the actual compensation of the firm’s managers, and the managers exploit this limitation to compensate themselves well. Owners of corporations try to keep control of executive mismanagement through the use of a board of directors.

Continued...
What Are Corporations and Why Do We Tax Them?

**APPLICATION**

Executive Compensation and the Agency Problem

board of directors A set of individuals who meet periodically to review decisions made by a firm’s management and report back to the broader set of owners on management’s performance.

The issue of executive compensation came to a head in 2008–2009 as thousands of traders and bankers on Wall Street were awarded huge bonuses and pay even as their employers were battered by the financial crisis.

Congress and the public expressed outrage at these packages and voted to limit the compensation that could be paid by firms accepting bailout funds, but compensation remains uncapped at the vast majority of financial and other firms in the United States.
24.1

What Are Corporations and Why Do We Tax Them?

Firm Financing

**Sources of Corporate Finance** • If a firm wants to finance an investment, it can either use its own retained earnings, or raise new funds from the capital market in one of two ways. The first is to issue bonds that pay bondholders periodic interest payments (debt finance). The other is to issue ownership (equity) shares that pay shareholders either through dividends or through capital gains earned on increases in the value of the firm (equity finance).
FIRM FINANCING

Firms can finance themselves either through debt or through equity.

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

**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.

Bond holders have priority on shareholders for repayment in case of bankruptcy.
Profits and corporate tax

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

Profits = revenues from goods sold - expenses (labor costs, inputs, capital depreciation, interest payments on debt)

Profits are taxed by corporate tax. 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. 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 avoid taxes by having the corporations never pay out their earnings.

4) **Taxing Pure Profits Taxation**: 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 STRUCTURE OF THE CORPORATE TAX

The taxes of any corporation are:

\[
\text{Taxes} = ([\text{Revenues} - \text{Expenses}] \times \tau) - \text{Investment tax credit}
\]

**Revenues**: These are the revenues the firm earns by selling goods and services to the market.

**Expenses**: include labor costs, intermediate inputs, interest payments to debt holders, and depreciation of capital (wear and tear of capital goods such as machines and buildings)
DEPRECIATION

Depreciation: The rate at which capital investments lose their value over time.

Economic depreciation: The true deterioration in the value of capital in each period of time.

Depreciation allowances: The amount of money that firms can deduct from their taxes to account for capital investment depreciation.

Economic depreciation cannot be measured easily so capital goods are classified in categories: 5 year (e.g. computers), 10 year (some machines), ..., 30 years (buildings), etc.

Corporations can deduct $1/N$ of cost of capital asset each year for $N$ years if asset has a life of $N$ years according to classification.
The Structure of the Corporate Tax

Corporate Tax Rate

**FIGURE 24-3**

The Corporate Tax Rate Schedule • The corporate tax rate rises with a firm's taxable income, but for most large firms the rate is a flat 35%.
The Structure of the Corporate Tax

Investment tax credit (ITC): A credit that allows firms to deduct a percentage of their annual qualified investment expenditures from the taxes they owe.

Often used as temporary measures to stimulate investment during recessions.

This is equivalent to accelerated depreciation.

An alternative to depreciation is **expensing investments** which allows to immediately subtract full cost of new investment in the year (most favorable for the corporation). This expensing investment is sometimes discussed as a reform option.
THE INCIDENCE OF THE CORPORATE TAX

Theoretically, incidence depends on whether capital is internationally mobile 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 mobile capital: returns to capital (after corporate tax rate) in US need to be equal to return abroad $r^* \Rightarrow (1 - \tau_c)f'(k) = r^* \Rightarrow$ US return not affected by $\tau_c \Rightarrow$ Corporate tax is fully borne by labor

2) Capital is not mobile: 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 calculations

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

Unfortunately, we have little convincing empirical evidence on the incidence of corporate taxation
The Consequences of the Corporate Tax for Investment

Theoretical Analysis of Corporate Tax and Investment Decisions

**FIGURE 24-4**

**Investment Decisions with No Corporate Tax**

With no corporate tax, the firm chooses its investment level by equating the marginal benefit of an additional dollar of investment with its marginal cost. The marginal benefit \( MB_1 \) is equal to the actual return per dollar of investment, the marginal product of capital \( MP_K \). The marginal cost is equal to the required return per dollar of investment, the sum of depreciation \( \delta \) and financing costs \( \rho \). This equality initially occurs at point \( A \), with investment level \( K_1 \).
The Consequences of the Corporate Tax for Investment

Theoretical Analysis of Corporate Tax and Investment Decisions

The Effects of a Corporate Tax on Corporate Investment

**FIGURE 24-5**

- **Effect of taxes**
- **Investment Decision with a Tax on Corporate Income**
  - Taxing corporate profits lowers the benefits of investment to $MP_k \times (1 - \tau)$, so that the marginal benefit curve shifts to $MB_2$. The firm lowers its investment, moving to point $B$, and a lower level of investment, $K_2$. 

$MC_1 = \delta + \rho$ (required return) 

$MB_1 = MP_k$ (actual return) 

Cost and return per dollar of investment per period, in dollars
The Consequences of the Corporate Tax for Investment

APPLICATION

The Impact of the 1981 and 1986 Tax Reforms on Investment Incentives

Two of the most important pieces of government legislation of the 1980s were the major tax reform acts of 1981 and 1986:

- The 1981 tax act introduced a series of new incentives to spur investment by corporate America. Depreciation schedules were made much more rapid and an investment tax credit was introduced.

- Contributing to the low effective tax rates in the early 1980s were active tax avoidance and/or evasion strategies by corporations.

The Tax Reform Act of 1986 made three significant changes to the corporate tax code:

- It lowered the top tax rate on corporate income from 46% to 34%.
- It significantly slowed depreciation schedules and ended the ITC.
- It significantly strengthened the corporate version of the Alternative Minimum Tax (AMT).

Corporate use of legal loopholes in the tax codes seems to have rebounded in the late 1990s and continues to the present day.
EVIDENCE ON TAXES AND INVESTMENT

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

The conclusion of recent studies is that the investment decision is fairly sensitive to tax incentives, with an elasticity of investment with respect to the effective tax rate on the order of $-0.5$: as taxes lower the cost of investment by 10%, there is 5% more investment.

This sizeable elasticity suggests that corporate tax policy can be a powerful tool in determining investment and that the corporate tax is very far from a pure profits tax.
The Consequences of the Corporate Tax for Financing

The Impact of Taxes on Financing

**FIGURE 24-7**

- **Taxation as Earnings Pass Through Firm**
  - Firm earns $1
  - Firm pays tax on income and distributes after-tax income to stockholders: $1(1 - \( \tau_c \))

- **Taxation as Earnings Are Distributed to Individual Investors**
  - Bondholders pay income tax on interest received: $1(1 - \( \tau_{int} \))
  - Stockholders pay income tax on dividends: $1(1 - \( \tau_c \))(1 - \( \tau_{div} \))
  - Stockholders pay income tax on capital gains after they sell stock: $1(1 - \( \tau_c \))(1 - \( \tau_{cg} \))

**The Firm’s Financing Decision**

When the firm wants to finance investment, it can do so either by issuing equity (stocks) or taking on debt (issuing bonds). If the firm takes on debt, then when it earns $1, it pays that $1 to bondholders, but it also subtracts the dollar from its taxable income, so that bondholders get the full $1, on which they pay interest taxes. If the firm issues equity, then when it earns $1, it pays that $1 to equity holders in the form of either dividends or capital gains. In either case, the firm has to pay corporate taxes on the dollar, and individuals then pay either dividend or capital gains taxes when they receive the dollar.
24.5

The Consequences of the Corporate Tax for Financing

Why Not All Debt?

<table>
<thead>
<tr>
<th>TABLE 24-1</th>
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<table>
<thead>
<tr>
<th>The Debt vs. Equity Conflict</th>
<th>Share of financing</th>
<th>Possible gain from investment</th>
<th>Possible loss from investment</th>
<th>Expected return from investment</th>
<th>Should the firm take the risk?</th>
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<tr>
<td>Equity holders</td>
<td>$1 million</td>
<td>$3 million</td>
<td>$2 million</td>
<td>$0.5 million</td>
<td>Yes</td>
</tr>
<tr>
<td>Debt holders</td>
<td>$5 million</td>
<td>0</td>
<td>$10 million</td>
<td>$-5 million</td>
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<tr>
<td>Equit[y holders</td>
<td>$5 million</td>
<td>$3 million</td>
<td>$10 million</td>
<td>$-3.5 million</td>
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<tr>
<td>Debt holders</td>
<td>$1 million</td>
<td>0</td>
<td>$2 million</td>
<td>$-1 million</td>
<td>No</td>
</tr>
</tbody>
</table>

In the top panel, equity holders control only $1 million of the firm's finances and debt holders control $5 million. The investment under consideration has, from the equity holders' perspective, a potential gain of $3 million and a potential loss of only $2 million, so that the expected return is positive and the investment will be made; but this is a mistake from the debt holders' perspective, since they have no gain and an expected $5 million loss. When equity holders control $5 million of the firm's assets, however, as in the bottom panel, the equity holders will not want to undertake the risky investment.
The Consequences of the Corporate Tax for Financing

The Dividend Paradox

Empirical evidence supports two different views about why firms pay dividends, as reviewed by Gordon and Dietz (2006):

1. An agency theory: investors are willing to live with the tax inefficiency of dividends to get the money out of the hands of managers who suffer from the agency problem.

2. A signaling theory: investors have imperfect information about how well a company is doing, so the managers of the firm pay dividends to signal to investors that the company is doing well.

How Should Dividends Be Taxed?

An important ongoing debate in tax policy concerns the appropriate tax treatment of dividend income.
The Consequences of the Corporate Tax for Financing

24.5 APPLICATION

The 2003 Dividend Tax Cut

One of the measures President Bush signed into law on May 28, 2003, under the Jobs and Growth Tax Relief Reconciliation Act, was a reduction in the rate at which dividends are taxed:

- The 2003 law reduced both the dividend and capital gains rates to 15%, making dividends significantly more attractive for investors.

Proponents of the dividend tax cut believed it would both stimulate the economy and end what they perceived as the unfair practice of taxing corporate income and then taxing it again when that income was paid out in the form of dividends.

Opponents of the dividend tax cut argued, however, that dividends are primarily received by higher income households and that such a tax cut would both worsen the country’s fiscal balance and make the tax burden less progressive.

Several recent papers have studied the impacts of the 2003 tax reduction and there has been a clear rise in dividend payouts. The key question of whether this tax cut actually raised investment, however, remains unanswered.
Dividend Tax Effects: Empirical Analysis

Chetty and Saez QJE’05 Use large dividend tax cut enacted in the U.S.: 

Tax rates on dividends cut from 35% to 15% in 2003. Key results:

1) $50 bil increase in dividend payments per year

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

3) No impact on aggregate investment levels
   
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 2

Regular Dividend Initiation in Top 3807 (Constant Sample Size) Firms
Figure 3

Dividend Payers in Top 3807 Firms

Percent of Top 3807 Firms

Quarter

Dividend Payers in Top 3807 Firms

Figure 3
Figure 4

Effect of Tax Cut on Initiations: Breakdown by Executive Ownership

Percentage of Outstanding Shares Held by Top Executives

- <0.21%
- 0.21-0.73%
- 0.73-2.4%
- 2.4-9.3%
- >9.3%

Percent of Firms Initiating per Year

Pre-reform

Post-reform
Figure 6

Effect of Tax Cut on Initiations: Breakdown by Institutional Ownership

- <10%
- 10-26%
- 26-47%
- 47-70%
- >70%

Percent of Firms Initiating per Year

Pre-reform
Post-reform

Percentage of Outstanding Shares Held by Institutional Investors

- <10%
- 10-26%
- 26-47%
- 47-70%
- >70%
Investment per Dollar of Capital Stock (Yagan 2012)

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<th>Year</th>
<th>Control Group</th>
<th>Treatment Group</th>
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<tr>
<td>1998</td>
<td>$.15</td>
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<td>$.10</td>
<td>$.10</td>
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<tr>
<td>2008</td>
<td>$.05</td>
<td>$.05</td>
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</table>

$DD = $.000

$DD = ($.008)$
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

Other 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.

**Subsidiaries**: The production arms of a corporation that are located in other nations.

**Territorial tax system**: A tax system in which 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**: A tax system in which corporations are taxed by their home countries on their income regardless of where it is earned (US system).

**Foreign tax credit**: U.S.-based multinational corporations may claim a credit against their U.S. taxes for any tax payments made to foreign governments when funds are repatriated to the parent.

**Repatriation**: The return of income from a foreign country to a corporation’s home country.
A Tax Holiday for Foreign Profits

The proper taxation of foreign profits was the focus of the debate around the passage of the American Jobs Creation Act of 2004:

- The bill was intended to rejuvenate the economy and create jobs.
- One of its most important provisions was a one-year reduction of the tax rate on repatriated profits from 35% to 5.25%.

Critics of the bill voiced a number of concerns:

- One was the difficulty in controlling how companies would spend the repatriated money.
- Others were skeptical of the bill’s ostensible intention of stimulating the economy.

By summer of 2008, U.S. companies had repatriated roughly $312 billion. However, it was clear that the expected surge in hiring and job creation did not materialize. A 2009 report by the nonpartisan Congressional Research Service looked at 12 participating companies and found that at least eight had cut jobs by 2006.
Tax Avoidance of Multinational Companies

Multinational companies are particularly savvy to avoid corporate income tax by reporting most of their profits in low tax countries: 40% of total profits of multinationals is reported in tax havens (such as Ireland)

They can do this through transfer pricing: one subsidiary buys/sells to another at manipulated prices to transfer profits

Two solutions:

1) Global tax system (as in the US) but companies (Apple, Google) never want to repatriate profits

2) Apportionment system: single accounting for the multinational and profits shared across countries based on fraction of workers or capital in each country (US states use this method to tax multi-state companies)
CONCLUSION

Despite the declining importance of the corporate tax as a source of revenue in the United States, it remains an important determinant of the behavior of corporations in the United States.

The complicated incentives and disincentives that the corporate tax creates for investment appear to be significant determinants of a firm’s investment decisions.

Both corporate and personal capital taxation, although not completely, drive a firm’s decisions about how to finance its investments.

The United States faces a difficult set of decisions about how to reform its corporate tax system.

Despite repeated calls for ending “abusive corporate tax shelters,” there has been little movement to end the types of corporate tax loopholes that cause such activity.

This lack of interest should not be surprising: corporate tax breaks have highly concentrated and powerful supporters, with only the diffuse taxpaying public to oppose them.