

18/11/2015

Chapter 15

BUSINESS INCOME TAXES

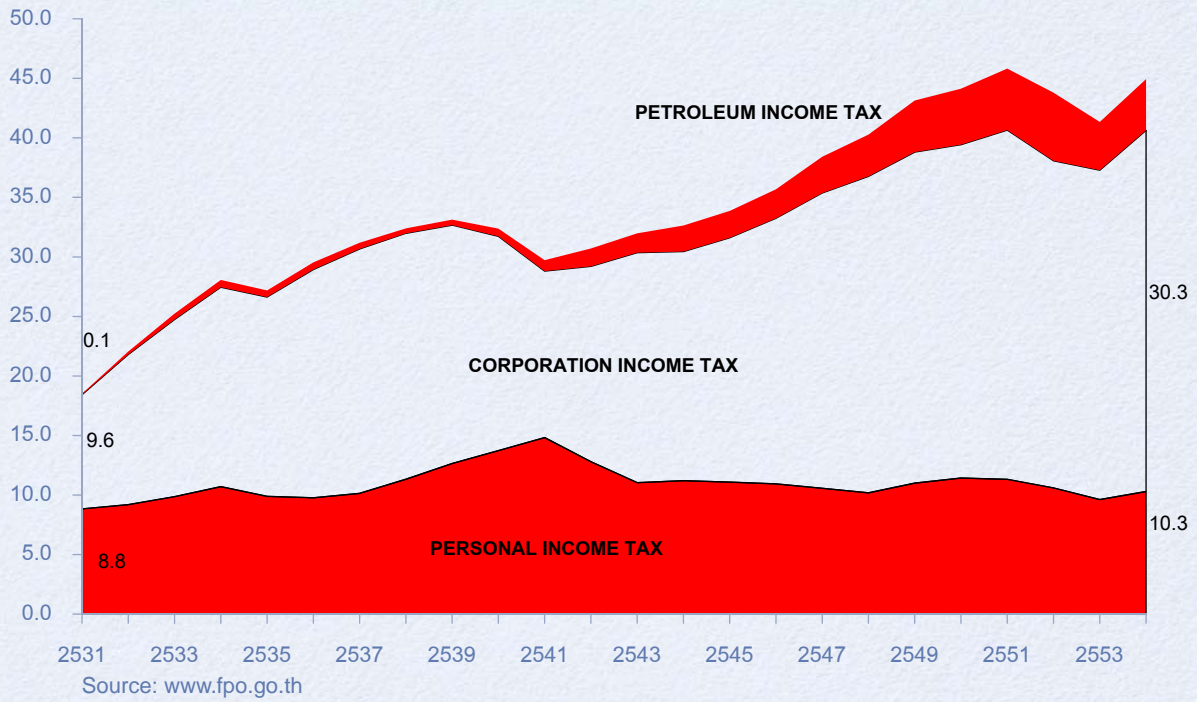
Public Finance, 10th Edition
David N. Hyman
Adapted by Chairat Aemkulwat
for Public Economics 2952331

Outline: Chapter 15 BUSINESS INCOME TAXES

1. The Tax Base: Measuring Business Income
2. Separate Taxation of Corporate Income: Issues and Problems
3. The Tax Rate Structure
4. Corporate Taxation Throughout the World: International Comparisons
5. Short-Run Impact of the Corporate Income Tax
6. Long-Run Impact of the Corporate Income Tax
7. Incidence of the Corporate Income Tax

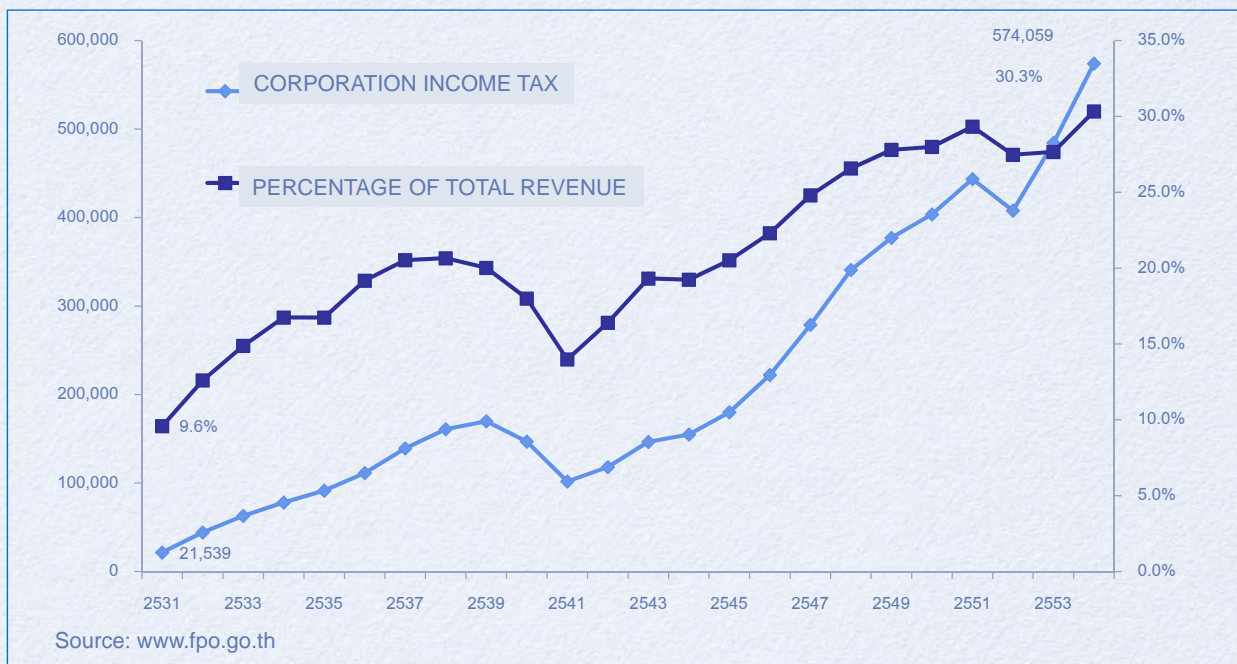
DIRECT TAXES IN THAILAND

1. The Tax Base: Measuring Business Income



CORPORATION INCOME TAX

1. The Tax Base: Measuring Business Income



Corporations

1. The Tax Base: Measuring Business Income

- A *corporation* is a business that is legally established under state laws that grant it an identity separate from that of its owners.
- Law views the corporation as if it were a person:
 - Granted right to engage in litigation, own property in its name, incur debts
 - Also treated as a person from point of view of taxation
- Owners are shareholders, or stockholders.
 - Stockholders have limited liability for debts; their liability limited to amount of funds invested.

Measuring Business Income

1. The Tax Base: Measuring Business Income

- Annual business income measured by subtracting business costs from business receipts over a one-year period
- Business income includes normal profit (opportunity costs of owner-supplied inputs) and economic profit (surplus of revenues over opportunity cost of all inputs)
- Equity of a corporation is difference between value of assets and value of outstanding debt
 - Portion of profit paid out to stockholders called dividends
 - Portion kept by corporation called retained earnings

Tax Calculation

1. The Tax Base: Measuring Business Income

- In the calculation of CIT of a company carrying on business in Thailand, it is calculated from the company's net profit on the accrual basis.
- A company shall take into account all revenue arising from or in consequence of the business carried on in an accounting period and deducting therefrom all expenses in accordance with the condition prescribed by the Revenue Code.

Deductible Expenses

1. The Tax Base: Measuring Business Income

In calculating CIT, deductible expenses are as follows:

1. Ordinary and necessary expenses. However, the deductible amount of the following expenses is allowed at a special rate:
 - 200% deduction of Research and Development expense,
 - 200% deduction of job training expense,
 - 200% deduction of expenditure on the provision of equipment for the disabled;
2. **Interest, except interest on capital reserves or funds of the company;**
3. Taxes, except for Corporate Income Tax and Value Added Tax paid to the Thai government;
4. Net losses carried forward from the last five accounting periods;
5. Bad debts;
6. **Wear and tear;**
7. Donations of up to 2% of net profits;
8. Provident fund contributions;
9. Entertainment expenses up to 0.3% of gross receipt but not exceeding 10 million baht;
10. Further tax deduction for donations made to public education institutions, and also for any expenses used for the maintenance of public parks, public playgrounds, and/or sports grounds;

Deductible Expenses

1. The Tax Base: Measuring Business Income

11. Depreciation: Provided that in no case shall the deduction exceed the following percentage of cost as shown below. However, if a company adopts an accounting method, which the depreciation rates vary from year to year, the company is allowed to do so provided that the number of years over which an asset depreciated shall not be less than 100 divided by the percentage prescribed below.

Types of Assets	Depreciation Rates
1. Building	
1.1 Durable building	5 %
1.2 Temporary building	100 %
2. Cost of acquisition of depleted natural resources	5 %
3. Cost of acquisition of lease rights	
3.1 no written lease agreement	10 %
3.2 written lease agreement containing no renewal clause or containing renewal clause but with a definite duration of renewal periods	100% divided by the original and renewable lease periods
4. Cost of acquisition of the right in a process, formula, goodwill, trademark, business license, patent, copyright or any other rights:	
4.1 unlimited period of use	10 %
4.2 limited period of use	100% divided by number of years used

Deductible Expenses

1. The Tax Base: Measuring Business Income

Types of Assets	Depreciation Rates
5. Other depreciation assets not mentioned in 1.-4. used in SME, which have value altogether not exceeding 500,000 baht, and are acquired before December 31, 2010	100 %
5.1 machinery used in R&D	initial allowance of 40% on the date of acquisition and the residual can be depreciated at the rate in 5
5.2 machinery acquired before December 31, 2010	initial allowance of 40% on the date of acquisition and the residual can be depreciated at the rate in 5
5.3 cash registering machine	initial allowance of 40% on the date of acquisition and the residual can be depreciated at the rate in 5
5.4 passenger car or bus with no more than 10 passengers capacity	depreciated at the rate in 5 but the depreciable value is limited to one million baht
6. Computer and accessories	
6.1 SMEs	initial allowance of 40% on the date of acquisition and the residual can be depreciated over 3 years
6.2 other business	depreciated over 3 years
7. Computer programs	
7.1 SMEs	initial allowance of 40% on the date of acquisition and the residual can be depreciated over 3 years
7.2 other business	depreciated over 3 years
8. Machinery and Other Equipment	depreciated over 5 years

* SMEs refer to any Thai companies with fixed assets less than 200 million baht and number of employee not exceeding 200 people

Economic Depreciation

1. The Tax Base: Measuring Business Income

- Measures the decrease in market value of durable physical capital used by firms in the productive process as that capital is “used up”
 - Capital equipment used up in the sense that it wears out and becomes obsolete over time
- Depreciation sometimes called a “capital consumption allowance”
 - Its inclusion in cost provides means for firm to accumulate a fund so as to recover capital cost and replace assets (machines, buildings) as they wear out, become obsolete

Accelerated Depreciation

1. The Tax Base: Measuring Business Income

- *Accelerated depreciation* allows a firm to deduct more than the actual economic depreciation from its income each year
- *Straight-line depreciation* is deduction of the same fraction of the cost of an asset each year over its useful economic life
- *Expensing a capital asset* is deduction of full purchase price of an asset in the year of its acquisition

Depreciation and Inflation

1. The Tax Base: Measuring Business Income

- Depreciation based on *historic cost*, or acquisition price of the asset
- During inflation,
 - depreciation calculated on basis of historic cost understates replacement cost of capital, overstates profits of firm
 - Inflation also benefits firms by decreasing value of debt outstanding
 - Experience capital gains on outstanding debt balances, real value declines

Depreciation

1. The Tax Base: Measuring Business Income

Economic cost/Economic Depreciation

- How should durable goods be treated in determining taxable income?
- Buying a drill press (that lasts for 5 years) is initially just an exchange of assets, not an economic cost.
- As it is used, it is subject to wear and tear, which decreases its value. This decrease in value, called economic depreciation, is an economic cost to the firm.

Tax life versus Useful life

1. The Tax Base: Measuring Business Income

- Depreciation should be **deductible** from that year's gross income.
- **Difficult to measure** true depreciation, or even the useful life of durable goods. Instead, the tax law specifies a **tax life**.

Depreciable Assets		
Asset	Years	Rate
Building	20	5%
Goodwill, Trademark, Patents	10	10%
Machinery and Equipments	5	20%
Computer and Accessories	3	33.3%

Statutory Depreciation

1. The Tax Base: Measuring Business Income

- 1) straight line depreciation
- 2) double-declining depreciation
 - **Accelerated depreciation** is a scheme to write off assets faster than true economic depreciation.
 - Economic Package on 10 August 1999
- 3) **Expensing** allows a firm to deduct from current taxable income the asset's full cost at the time of acquisition.

Straight line depreciation

1. The Tax Base: Measuring Business Income

Cost of Drill Press = 1,000,000 บาท

$i=10$ and $\delta = 20\%$

$$\frac{200,000}{(1+i)} + \frac{200,000}{(1+i)^2} + \frac{200,000}{(1+i)^3} + \frac{200,000}{(1+i)^4} + \frac{200,000}{(1+i)^5} = 758,157$$

$$\begin{aligned} \text{Tax Benefits} &= \text{tax rate} \times \text{PV of depreciation allowances} \\ &= 227,447 \text{ Bt} \quad (758,157 \times 0.3) \end{aligned}$$

Double-declining balance

1. The Tax Base: Measuring Business Income

- double declining balance

$\delta = 20\%$

$\delta^* = 2\delta = 40\%$

	Straight Line		Double-Declining	
t=0		1,000,000		1,000,000
t=1	200,000	800,000	400,000	600,000
t=2	200,000	600,000	240,000	360,000
t=3	200,000	400,000	144,000	216,000
t=4	200,000	200,000	86,400	129,600
t=5	200,000	-0-	129,600	-0-

$$\frac{400,000}{(1+i)} + \frac{240,000}{(1+i)^2} + \frac{144,000}{(1+i)^3} + \frac{86,400}{(1+i)^4} + \frac{129,600}{(1+i)^5} = 809,657$$

$$\text{Tax Benefit} = 809,657 * 0.30 = 242,897$$

Expensing = 300,000 baht Tax Benefits compared

1. The Tax Base: Measuring Business Income

	Expensing	Double Declining	Straight Line
Depreciation rate	100%	40%	20%
PV of Depreciation Allowances	1,000,000	809,657	758,157
Net Tax Benefit (0.3xPV)	300,000	242,897	227,447

Separate Taxation of Corporate Income

2. Separate Taxation of Corporate Income: Issues and Problems

- Argued that separate corporate income tax is necessary to make corporations pay for special privileges obtained from corporate charters
- Under a comprehensive personal income tax, corporate income would be allocated to shareholders on a pro rata basis according to percentage of stock owned
 - Integrating corporate tax with personal income could create problems such as, if realized capital gains taxable, such gains could be double-taxed

Double Taxation of Dividends

2. Separate Taxation of Corporate Income: Issues and Problems

- Current policy of separate taxation of corporate income and portion paid as dividends subjects portion of corporate income to double-taxation
 - Corporate income subject to taxation when earned, dividends subject to taxation under personal income tax for shareholders
- If corporate and personal income taxes are integrated, no double-taxation
 - Corporate profits would be distributed to shareholders on a pro rata basis according to their share of ownership

Tax Credit for dividends

Any taxpayer who domiciles in Thailand and receives dividends from a juristic company or partnership incorporated in Thailand is entitled to a tax credit of $t_c/(1-t_c)$ of the amount of dividends received. In computing assessable income, taxpayer shall gross up his dividends by the amount of the tax credit received. The amount of tax credit is creditable against his tax liability.

Debt Finance

2. Separate Taxation of Corporate Income: Issues and Problems

- There is concern that corporate finance biased toward debt finance because dividends cannot be deducted from income, but interest can
- Leveraged buyouts (LBOs) usually involve heavy borrowing by acquiring company, leaving corporation heavily in debt
- Corporation can always borrow to purchase its own shares on the market
 - No longer has to pay dividends on those shares
 - Exchanges obligation to pay dividends for tax-deductible interest costs

Debt Financing

2. Separate Taxation of Corporate Income: Issues and Problems

TABLE 15.1

Effect of Debt Financing on Returns to Equity Investment

ITEM	ALL-EQUITY CORPORATION	50 PERCENT DEBT-FINANCED CORPORATION
Beginning Balance Sheet:		
Total Assets	\$1,000,000	\$1,000,000
Debt	0	500,000
Shareholders' Equity	1,000,000	500,000
Income Statement:		
Operating Income	150,000	150,000
Interest Expense	0	50,000
Taxable Income	150,000	100,000
Income Tax	51,000	34,000
Income after Corporate Tax	99,000	66,000
Return on Equity ^a	9.9%	13.2%

^aReturn on equity is computed as income after corporate tax divided by beginning shareholders' equity.

2. Separate Taxation of Corporate Income: Issues and Problems

2. A corporation has \$5 million in assets and \$3 million in debt. During the year it takes in \$750,000 in net revenue after deduction of all costs except for interest and incurs interest expenses of \$300,000. The corporation pays an ATR of 33 percent on its profit.

- Calculate the percentage return on equity after taxes for the corporation.
- Calculate the percentage return on equity for the corporation if it had the same net revenue but no debt and therefore no interest expense for the year.

ANSWER:

a. The equity of the corporation is \$2 million. Net profit after deduction of interest paid is \$450,000, and the tax liability is \$148,500. The net profit after taxes is \$301,500, which is 15 percent of equity.

b. With no debt, the tax liability would be \$250,000 and equity would be \$5 million. Net profit after taxes would be \$500,000, which would be only 10 percent of equity.

6. PROBLEM: Raising funds through the creation of new shares of stock (equity financing) is a more expensive way to raise new capital than the issuance of new corporate bonds (debt financing). Explain how tax laws make equity financing more expensive than debt financing.

ANSWER: Because the interest on debt can be deducted by firms prior to assessing taxes, the

cost of debt becomes $\text{interest} \times (1 - \text{tax rate})$.

The “tax break” makes the debt even less expensive than the stated rate of interest.

The cash flow generated by equity in the form of dividends is paid from earnings after taxes are assessed at the firm level and consequently not subject to a tax break like debt.

Tax Rate Structure

3. The Tax Rate Structure

As of 2009, progressive with three brackets:

TABLE 15.2

Federal Corporate Income Tax Rate Structure, 2009

TAXABLE INCOME	ATR AT BEGINNING OF BRACKET	MTR
Less Than \$50,000	0%	15% ^a
More Than \$50,000 but Less Than \$75,000	15	25 ^a
More Than \$75,000 but Less Than \$10 Million	18	34
More Than \$10 Million ^b	34	35

^aNot available for corporations with annual incomes greater than \$335,000.

^bCorporations with taxable income greater than \$15 million annually are subject to an additional 3 percent tax on the excess greater than \$15 million up to a maximum additional tax of \$100,000.

Tax Rates (Thailand)

3. The Tax Rate Structure

- Before 2012, the corporate income tax rate is 30%!!
- The corporate income tax rate in Thailand is 23 % on net profit (accounting period 2012, accounting periods 2013-2014 will be 20%) . However, the rates vary depending on types of taxpayers

Tax Rates (Thailand)

3. The Tax Rate Structure

Taxpayer	Tax Base	Rate (%)
1. Small company ¹	- Net profit not exceeding 1 million baht	15%
	- Net profit over 1 million baht	23% (accounting period from 2012) 20% (accounting periods from 2013-2014)
2. Companies listed in Stock Exchange of Thailand (SET)	- Net profit for first 300 million baht	25% ²
	- Net profit for the amount exceeding 300 million baht	30%
3. Companies newly listed in Stock Exchange of Thailand (SET)	Net Profit	25% ³
4. Company newly listed in Market for Alternative Investment (MAI)	- Net Profit for the amount not exceeding 50 millions baht	25%*

Notes:

* The reduced rate applies for currently listed companies for 3 accounting periods from 2008-2010.

1. A small company refers to any company with paid-up capital less than 5 million baht at the end of each accounting period.

2. The reduced rate applies for currently listed companies for 3 accounting periods from 2008-2010.

3. The reduced rate applies for newly listed companies for 3 accounting periods from 2008-2010

Tax Rates (Thailand)

3. The Tax Rate Structure

Taxpayer	Tax Base	Rate (%)
5. Bank deriving profits from International Banking Facilities (IBF)	Net Profit	10%
6. Foreign company engaging in international transportation	Gross receipts	3%
7. Foreign company not carrying on business in Thailand receiving dividends from Thailand	Gross receipts	10%
8. Foreign company not carrying on business in Thailand receiving other types of income apart from dividend from Thailand	Gross receipts	15%
9. Foreign company disposing profit out of Thailand.	Amount disposed.	10%
10. Profitable association and foundation.	Gross receipts	2% or 10%

Effective Tax Rates

3. The Tax Rate Structure

- Measure of effective corporate tax rate shows tax rate paid by corporations on economic profits
- Effect of inflation must be accounted for in calculating effective tax rates
- Effective tax rate lowered by tax preferences in corporate income tax code allowing investment subsidies, accelerated depreciation, and expensing of capital assets

State Corporate Income Tax

3. The Tax Rate Structure

- Corporate income taxes averaged 6.5% of total state revenue in 2008.
- All but three states had some sort of corporate income tax as of 2008.
 - Excluding Nevada, Texas, Washington, and Wyoming
- Most states tax corporate income at flat rate.
 - MTRs applied to corporate income by states must be added to federal tax rates when analyzing impact of corporate income taxes.
 - As with personal income tax, many states tie corporate tax to federal tax base.

3. The Tax Rate Structure

1. A corporation has \$7 million in equity. During the tax year it takes in \$4 million in receipts and earns \$2 million in capital gains from sale of a subsidiary. It incurs labor costs of \$1 million, interest costs of \$250,000, material costs of \$500,000, and pays rent for structures of \$250,000.

- 1 Calculate the corporation's total accounting profit and, assuming that the profit is fully taxable, calculate its tax liability using the tax rates in
- 2 Table 15.2. Calculate the ATR of the corporation as a percentage of its
- 3 economic profit, assuming that the opportunity cost of capital is 8 percent.

Ans.

- 1 Total corporate profits are \$4 million for the year.
- 2 Because corporate income is over \$4 million, the corporation pays a flat-tax rate of 34 percent, which gives it a tax liability of \$1.36 million for the year.
- 3 Assuming an 8-percent opportunity cost of capital, the normal profit is \$560,000. This corporation has therefore incurred economic profit of \$3.46 million, and its tax liability as a percent of its economic profit is 39 percent.

International Comparisons

4. Corporate Taxation Throughout the World: International Comparisons

- U.S. has second highest tax rate on corporations, after Japan.
- Trend toward lowering corporate taxation in some countries to provide incentives for increasing investment by U.S. multinational corporations
 - Boom in foreign investment in Ireland may be due to low corporate tax rates
 - Nations with relatively high tax rates can lose investment to foreign nations with lower tax rates.

Corporate Tax Rates

4. Corporate Taxation Throughout the World: International Comparisons

TABLE 15.3 Corporate Income Tax Rates in OECD Nations, 2009

COUNTRY	CORPORATE INCOME TAX RATE
Australia	30.00
Austria	25.00
Belgium	33.99
Canada	31.32
Czech Republic	20.00
Denmark	25.00
Finland	26.00
France	34.43
Germany	30.18
Greece	25.00
Hungary	20.00
Iceland	15.00
Ireland	12.50
Italy	27.50
Japan	39.54
Korea	24.20
Luxembourg	28.59
Mexico	28.00
Netherlands	25.50
New Zealand	30.00
Norway	28.00
Poland	19.00
Portugal	26.50
Slovak Republic	19.00
Spain	30.00
Sweden	26.30
Switzerland	21.17
Turkey	20.00
United Kingdom	28.00
United States	39.10
Average	26.90

Source: www.oecd.org

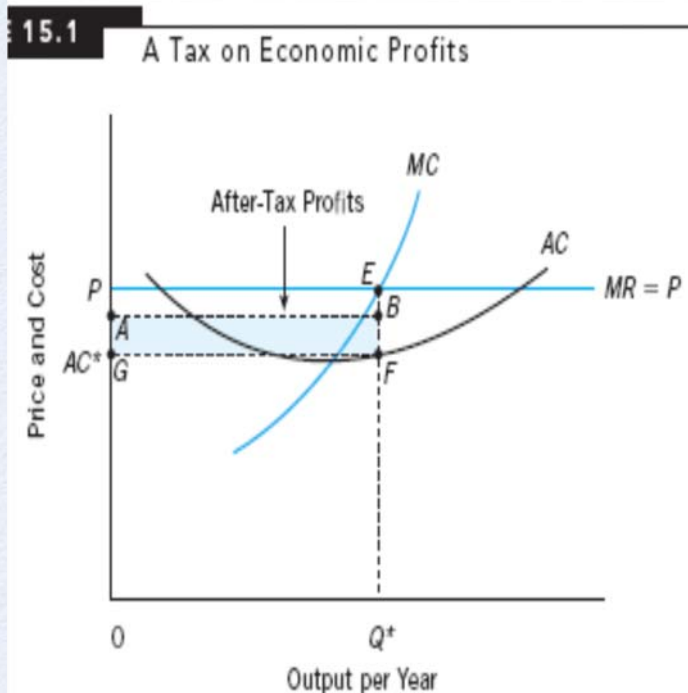
Short-Run Impact

5. Short-Run Impact of the Corporate Income Tax

- Corporate income tax can be seen as discriminatory tax on income of one particular form of business organization.
- Therefore expected to reduce net return to investment in corporate business in short run unless corporations can adjust to shift the tax
 - Adjust output in response to tax, as to raise prices
- Short-run impact on stockholder income influences corporate long-run adjustments

Tax on Economic Profits

5. Short-Run Impact of the Corporate Income Tax

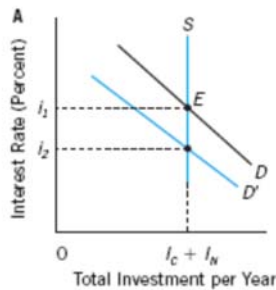


- A tax on economic profits affects neither marginal revenue nor marginal cost—it merely takes a percentage of profits. A profit-maximizing firm has no incentive to change output.
- The output that maximizes total profits is the same output that maximizes profits after taxes.
- Because output does not change as a result of the tax, quantity supplied, and therefore price, is unaffected.
- The tax cannot be shifted. It is borne by owners of the firm in the short run.

Long-Run Impact

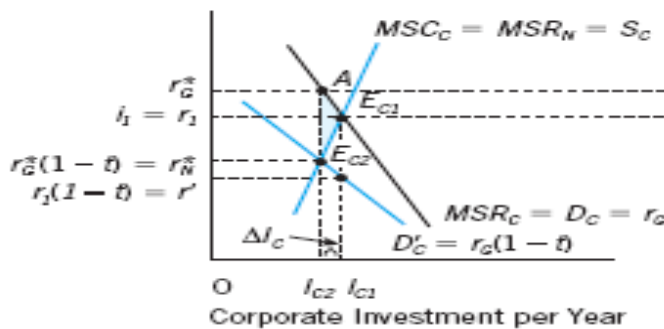
6. Long-Run Impact of the Corporate Income Tax

15.2 Long-Run Impact of the Corporate Income Tax

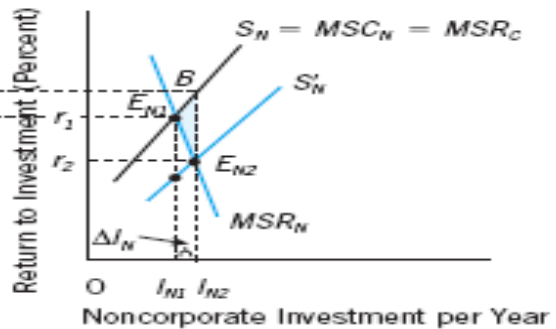


- The corporate income tax causes a reduction in investment in the corporate sector, shown in B.
- Assuming a perfectly inelastic supply of savings, as shown in A, this implies an increase in the supply of investable funds in the noncorporate sector, as illustrated in C.
- This lowers the return to these investments. In the long-run equilibrium, the net return in the corporate sector is $r'_N = r_2$, the return to noncorporate investment.
- The tax reduces the return to all investment.

B



C



Long-Run Impact

6. Long-Run Impact of the Corporate Income Tax

TABLE 15.4

Long-Run Impact of the Corporate Income Tax

	NET RETURN TO CORPORATE INVESTMENT	RETURN TO NONCORPORATE INVESTMENT
Pretax Equilibrium	r_1	r_1
Short-Run Impact of a Tax ^a	r'	r_1
Long-Run Posttax Equilibrium ^b	$r'_N = r'_G(1 - t) = r_2$	r_2

^a $r' < r_1$

^b $r_2 < r_1$

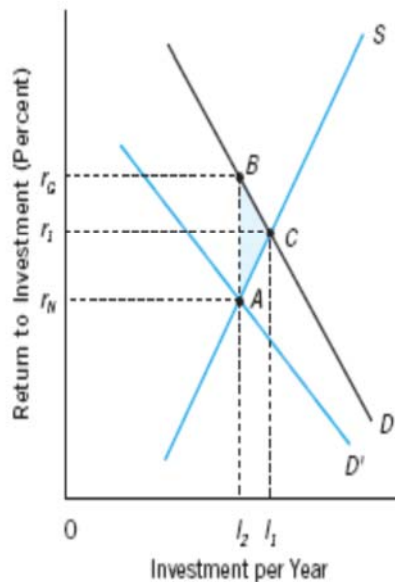


Excess Burden of Corporate Income Tax

7. Incidence of the Corporate Income Tax

15.3

Impact of the Corporate Income Tax When the Supply of Savings Is Not Perfectly Inelastic



- When the supply of savings is not perfectly inelastic, the corporate income tax results in a decline in annual investment from I_1 to I_2 .
- The gross return to investment increases, whereas the after-tax return declines. The excess burden of the tax is the area ABC when income effects are negligible.

Incidence of Corporate Income Tax

7. Incidence of the Corporate Income Tax

- Impact on output
 - Over time, output by corporate sector falls relative to that produced in noncorporate sector because of reduction in corporate investment
 - Changes in supply of goods could result in increase in price of goods from corporate sector, decrease in price of goods from noncorporate sector
 - Households spending large part of budgets on corporate goods experience reduction in real income relative to other households

Incidence of Corporate Income Tax

7. Incidence of the Corporate Income Tax

- Impact on wages, income
 - If labor and capital used in fixed proportions in corporate sector, reduction in investment reduces capital input in long run, and a corresponding reduction in labor results
 - General level of wages may fall as result of tax
 - If corporate sector more labor-intensive than noncorporate, wages would fall to induce noncorporate sector to absorb labor from corporate
 - Corporate income tax can also affect real income of those who own noncapital inputs

Incidence of Corporate Income Tax

7. Incidence of the Corporate Income Tax

- Impact on income distribution
 - Harberger states that corporate income tax is borne according to ownership of capital
 - Individuals benefit as much by **price** decreases of noncorporate goods caused by tax as they suffer increases of corporate goods
 - Burden of tax distributed in progressive way with respect to income because distribution of ownership of capital in U.S. is unequal
 - Portion of burden of tax could be shifted to workers in form of lower wages

4. Suppose the corporate income tax were eliminated and corporate income allocated to shareholders on a pro rata basis according to their proportion of outstanding stock. How would such a change in tax policy affect the excess burden and incidence of the tax, assuming that all forms of investment income are included in a comprehensive income tax base?

4. There would no longer be double taxation of dividends.

This would reduce the differential between corporate and noncorporate income taxation and would improve the allocation of resources between the two sectors.

The tax rate on capital income would also fall, and this would reduce the excess burden of the tax. The reduction in the tax rate would also reduce the effective tax burden on upper income groups who own most of the capital.

5. Suppose the corporate income tax were eliminated and the revenue lost was made up by increasing the payroll tax rate on labor earnings. What would be the impact on labor and capital markets of such a shift in tax policy? What is the likely differential incidence of substituting a payroll tax for an equal-yield corporate income tax?

ANSWER: Assuming that it is not shifted forward to consumers at the outset, the corporate income tax is a tax on capital income. The payroll tax is a tax on labor income.

If an equal-yield payroll tax replaces the corporate income, then the tax rate on capital income falls, while the tax rate on labor income rises. The excess burden in the capital markets declines, but there is an increase in the excess burden of taxation in the labor market.

The differential incidence is likely to be regressive because the capital ownership tends to be concentrated in the hands of upper-income groups. The tax burden on capital falls, while that on labor income increases.

7. PROBLEM: Is there a special circumstance where an increased corporate profits tax can cause a corporation to hire a greater number of workers?

Explain what choices a corporation might make, for greater taxes on profits, to lead to a greater number of workers hired.

ANSWER: Assuming no tax, the number of workers is set where the marginal cost (wage) equals the marginal benefit (supply upward sloping and demand is downward sloping).

A tax on profits (or a greater tax on profits) decreases the cost of workers because the workers' wages becomes $wage^*(1 - \text{tax rate})$. At this lower wage level, assuming no or lesser effects on the marginal benefit (demand), more workers will be demanded at a level in excess of the efficient quantity.

This is similar to what is displayed in Figure 9.3 in regard to healthcare costs being set below the efficient price level leading to demand and supply beyond the efficient quantity.

RECAP: Chapter 15 BUSINESS INCOME TAXES

4. Corporate Taxation Throughout the World: International Comparisons

1. The Tax Base: Measuring Business Income
2. Separate Taxation of Corporate Income: Issues and Problems
3. The Tax Rate Structure
4. Corporate Taxation Throughout the World: International Comparisons
5. Short-Run Impact of the Corporate Income Tax
6. Long-Run Impact of the Corporate Income Tax
7. Incidence of the Corporate Income Tax