12 The Design of the Tax System

PRINCIPLES OF
ECONOMICS
FOURTH EDITION

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PowerPoint® Slides
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In this chapter, look for the answers to these questions:

- What are the largest sources of tax revenue in the U.S.?
- What are the efficiency costs of taxes?
- How can we evaluate the equity of a tax system?

Introduction

- One of the Ten Principles from Chapter 1:
  A government can sometimes improve market outcomes.
  - providing public goods
  - regulating use of common resources
  - remedying the effects of externalities
- To perform its many functions, the govt raises revenue through taxation.

Introduction

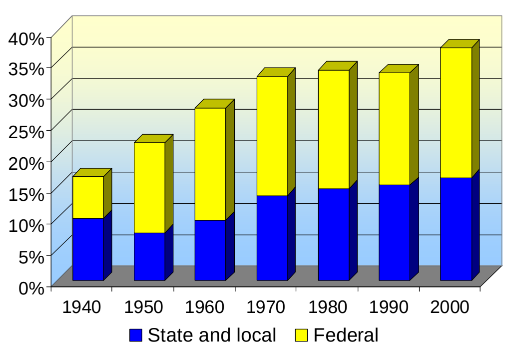
- Lessons about taxes from earlier chapters:
  - A tax on a good reduces the market quantity of that good.
  - The burden of a tax is shared between buyers and sellers depending on the price elasticities of demand and supply.
  - A tax causes a deadweight loss.

A Look at Taxation in the U.S.

First, we consider:

- how tax revenue as a share of national income has changed over time
- how the U.S. compares to other countries with respect to taxation
- the most important revenue sources for federal, state & local govt

U.S. Tax Revenue (% of GDP)



Central Govt Revenue (% of GDP)

France	39%
United Kingdom	34
Germany	29
Brazil	20
United States	19
Canada	18
Russia	17
Pakistan	15
Indonesia	15
Mexico	13
India	10

Receipts of the U.S. Federal Govt, 2004

Tax	Amount (billions)	Amount per person	Percent of Receipts
Individual income taxes	$ 809	$2,753	43%
Social insurance taxes	733	2,494	39
Corporate income taxes	189	643	10
Other	149	507	8
Total	**$1,880**	**$6,397**	**100%**

Receipts of State & Local Govts, 2002

Tax	Amount (billions)	Amount per person	Percent of Receipts
Sales taxes	$ 324	$1,102	19%
Property taxes	279	949	17
Individual income taxes	203	690	12
Corporate income taxes	28	95	2
From federal govt	361	1,228	21
Other	490	1,667	29
Total	**$1,685**	**$5,733**	**100%**

Taxes and Efficiency

§ One tax system is more efficient than another if it

§ The costs to taxpayers include:

- the tax payment itself
-
-

Deadweight Losses

§ One of the Ten Principles:
People respond to incentives.

§ Recall from Chapter 8:
Taxes distort incentives, cause people to allocate resources according to tax incentives rather than true costs and benefits.

§ The result: a deadweight loss.
The fall in taxpayers' well-being exceeds the revenue the govt collects.

Income vs. Consumption Tax

§ The income tax reduces the incentive to save:

- If income tax rate = 25%,
  8% interest rate =
- The lost income compounds over time.

§ Some economists advocate taxing consumption instead of income.

-
- better for individuals' retirement income security and long-run economic growth

Income vs. Consumption Tax

- Consumption tax-like provisions in the U.S. tax code include
  - People can put a limited amount of saving into such accounts.
  - The funds are not taxed until withdrawn at retirement.
- Europe's Value-Added Tax (VAT) is like a consumption tax.

Administrative Burden

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  - *e.g.*, hiring accountants to exploit "loopholes" to reduce one's tax burden
-
- could be reduced if the tax code were simplified but would require removing loopholes, politically difficult

Marginal vs. Average Tax Rates

- **average tax rate**
- **marginal tax rate**

Lump-Sum Taxes

- A **lump-sum tax** is the same for every person
- Example: lump-sum tax = $4000/person

income	average tax rate	marginal tax rate
$20,000		
$40,000		

Lump-Sum Taxes

- *causes no deadweight loss*
  does not distort incentives, as a person's decisions have no tax consequences
-
  no need to hire accountants, keep track of receipts, etc.

Yet, not used because

- in dollar terms, the poor pay
- relative to income, the poor pay

Taxes and Equity

- Another goal of tax policy: equity – distributing the burden of taxes "fairly."
- Agreeing on what is "fair" is much harder than agreeing on what is "efficient."
- Yet, there are several principles people apply to evaluate the equity of a tax system.

The Benefits Principle

- **Benefits principle**:

- Tries to make public goods

- Example: Gasoline taxes
  - the more you drive on public roads,
    the more gas you buy,
    so the more gas tax you pay

The Ability-To-Pay Principle

- **Ability-to-pay principle**:

- suggests that all taxpayers should make an

- recognizes that the magnitude of the sacrifice depends not just on the tax payment, but on the person's income and other circumstances
  - a $10,000 tax bill is a bigger sacrifice for a poor person than a rich person

Vertical Equity

- **Vertical equity**:

Three Tax Systems

- **Proportional tax**:
- **Regressive tax**: high-income taxpayers pay
- **Progressive tax**: high-income taxpayers pay

Examples of the Three Tax Systems

	regressive		proportional		progressive	
income	tax	% of income	tax	% of income	tax	% of income
$50,000	$15,000	30%	$12,500	25%	$10,000	20%
100,000	25,000	25	25,000	25	25,000	25
200,000	40,000	20	50,000	25	60,000	30

U.S. Federal Income Tax Rates: 2005

The U.S. has a progressive income tax.

On taxable income…	the tax rate is…
0 – $7,300	10%
7,300 – 29,700	15%
29,700 – 71,950	25%
71,950 – 150,150	28%
150,150 – 326,450	33%
Over $326,450	35%

Horizontal Equity

- **Horizontal equity**:

- Problem: Difficult to agree on what factors, besides income, determine ability to pay.

ACTIVE LEARNING 1A: Taxes and Marriage

The income tax rate is 25%. The first $20,000 of income is excluded from taxation. Tax law treats a married couple as a single taxpayer.

Sam and Diane each earn $50,000.

i. If Sam and Diane are living together unmarried, what is their combined tax bill?

ii. If Sam and Diane are married, what is their tax bill?

ACTIVE LEARNING 1A: Answers

ACTIVE LEARNING 1B:
Taxes and Marriage

The income tax rate is 25%. For singles, the first $20,000 of income is excluded from taxation. For married couples, the exclusion is $40,000.

Harry earns $0. Sally earns $100,000.

i. If Harry and Sally are living together unmarried, what is their combined tax bill?

ii. If Harry and Sally are married, what is their tax bill?

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ACTIVE LEARNING 1B:
Answers

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Marriage Taxes and Subsidies

- In current U.S. tax code,
- Many have advocated reforming the tax system to be neutral with respect to marital status…

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Marriage Taxes and Subsidies

Ideally, a tax system would have these properties:

However, designing a tax system with all four of these properties is

Tax Incidence and Tax Equity

- Recall: The person who bears the burden is not always the person who gets the tax bill.
- Example: A tax on fur coats
  -
  - But furs are a luxury, with very elastic demand
  - The tax shifts demand away from furs,
- Lesson: When evaluating tax equity, must take tax incidence into account.

Who Pays the Corporate Income Tax?

- When the govt levies a tax on a corporation,
- The burden of the tax ultimately falls on people.
- Suppose govt levies a tax on car companies

Flat Taxes

Flat tax:

- Typically, income above a certain threshold is
- The higher the threshold,
- Radically reduces administrative burden
- Not popular with
- Used in some central/eastern European countries

CONCLUSION: The Trade-Off Between Efficiency and Equity

- The goals of efficiency and equity often conflict:
  - *E.g.*,
- Political leaders differ in their views on this tradeoff.
- Economics
  - can help us better understand the tradeoff
  - can help us avoid policies that sacrifice efficiency without any increase in equity