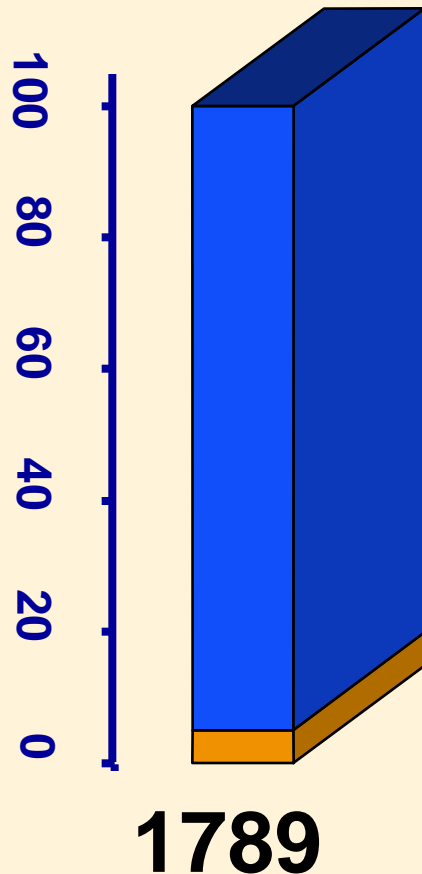




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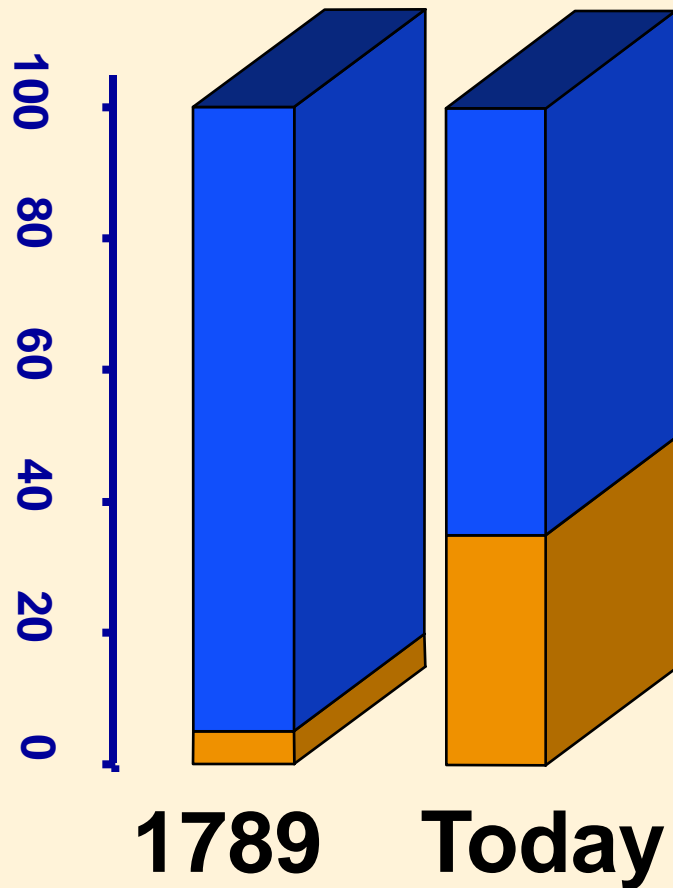
The Design of the Tax System

"In this world nothing is certain but death and taxes."
... **Benjamin Franklin**



Taxes paid in Ben Franklin's time accounted for 5 percent of the average American's income.

"In this world nothing is certain but death and taxes."
... Benjamin Franklin



Today, taxes
account for *up
to a third* of
the average
American's
income.

Figure 1 Government Revenue as a Percentage of GDP

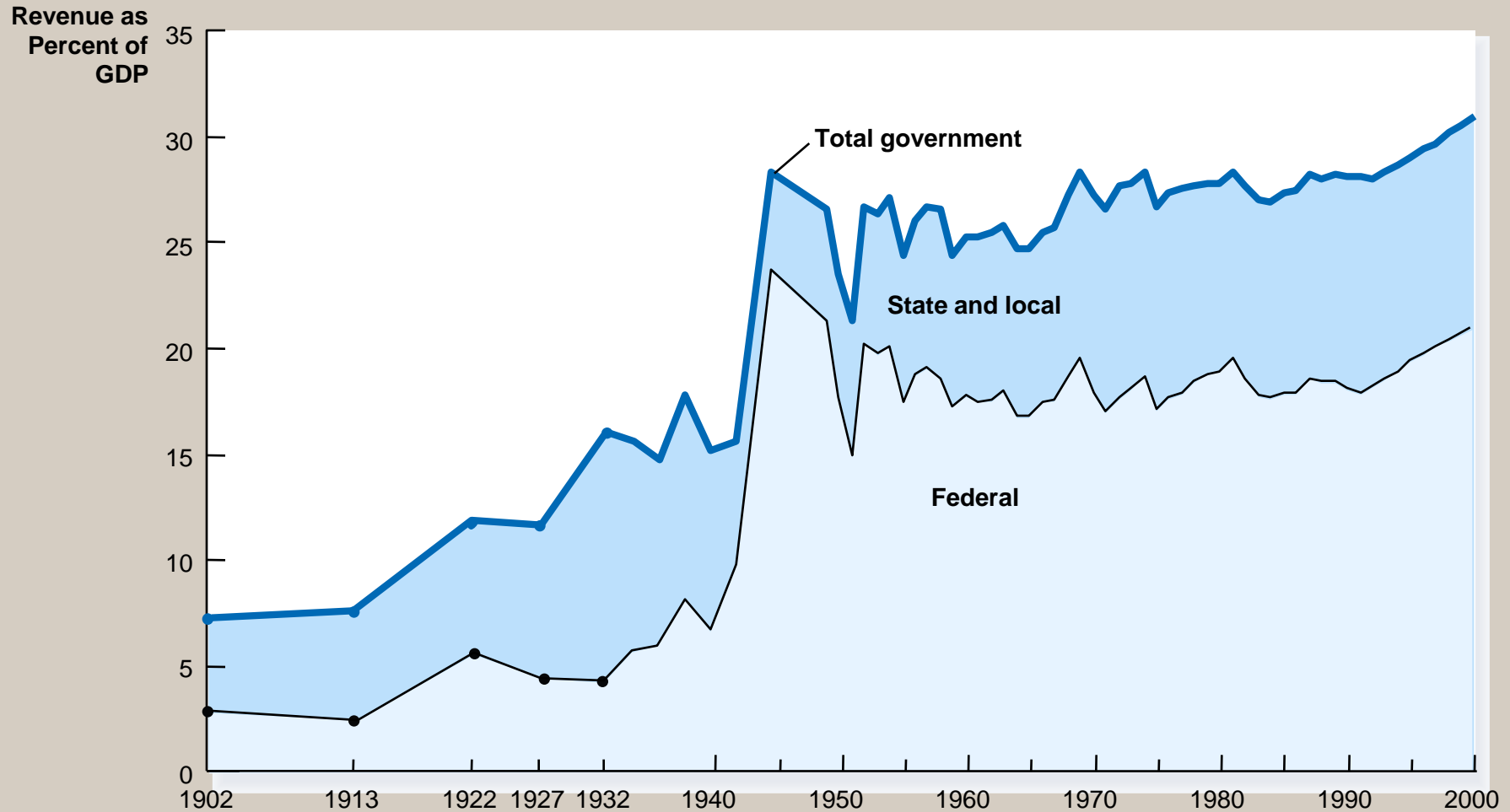


Table 1 Central Government Tax Revenue as a Percent of GDP

Source: *World Development Report 1998/99.*

France	38.8%	Russia	17.4
United Kingdom	33.7	Pakistan	15.3
Germany	29.4	Indonesia	14.7
Brazil	19.7	Mexico	12.8
United States	19.3	India	10.3
Canada	18.5		

The Federal Government

- The U.S. federal government collects about two-thirds of the taxes in our economy.

The Federal Government

- The largest source of revenue for the federal government is the individual income tax.

The Federal Government

- Individual Income Taxes
 - The *marginal tax rate* is the tax rate applied to each additional dollar of income.
 - Higher-income families pay a larger percentage of their income in taxes.

The Federal Government

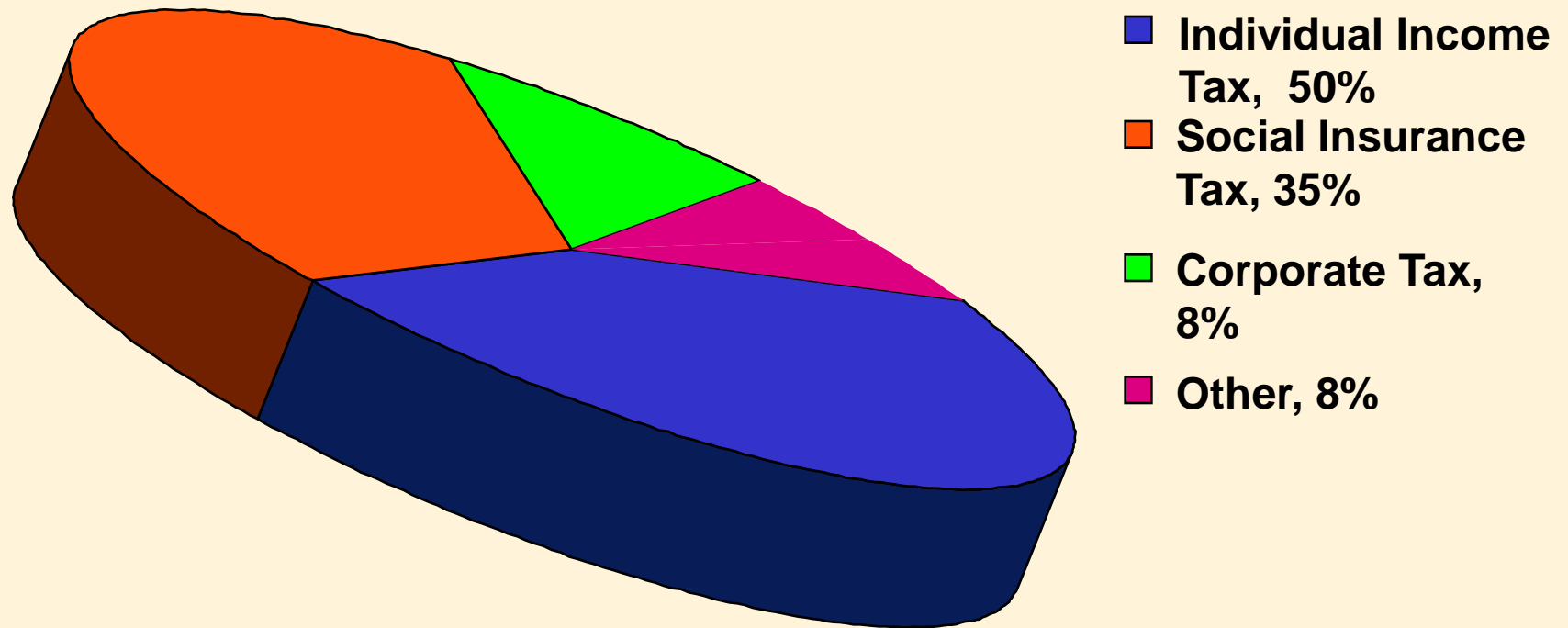
- The Federal Government and Taxes
 - Payroll Taxes: tax on the wages that a firm pays its workers.
 - Social Insurance Taxes: taxes on wages that is earmarked to pay for Social Security and Medicare.
 - Excise Taxes: taxes on specific goods like gasoline, cigarettes, and alcoholic beverages.

Table 2 Receipts of the Federal Government: 2001

Source: *Economic Report of the President*, 2002, table B-81, p. 416.

Tax	Amount (billions)	Amount per Person	Percent of Receipts
Individual income taxes	\$ 994	\$3,488	50%
Social insurance taxes	694	2,435	35
Corporate income taxes	151	530	8
Other	152	533	8
Total	\$1,991	\$6,986	100%

Receipts of the Federal Government...



The Federal Government

- Federal Government Spending
 - Government spending includes transfer payments and the purchase of public goods and services.
 - Transfer payments are government payments not made in exchange for a good or a service.
 - Transfer payments are the largest of the government's expenditures.

The Federal Government

- Federal Government Spending
 - Expense Category:
 - Social Security
 - National Defense
 - Income Security
 - Net Interest
 - Medicare
 - Health
 - Other



The Federal Government

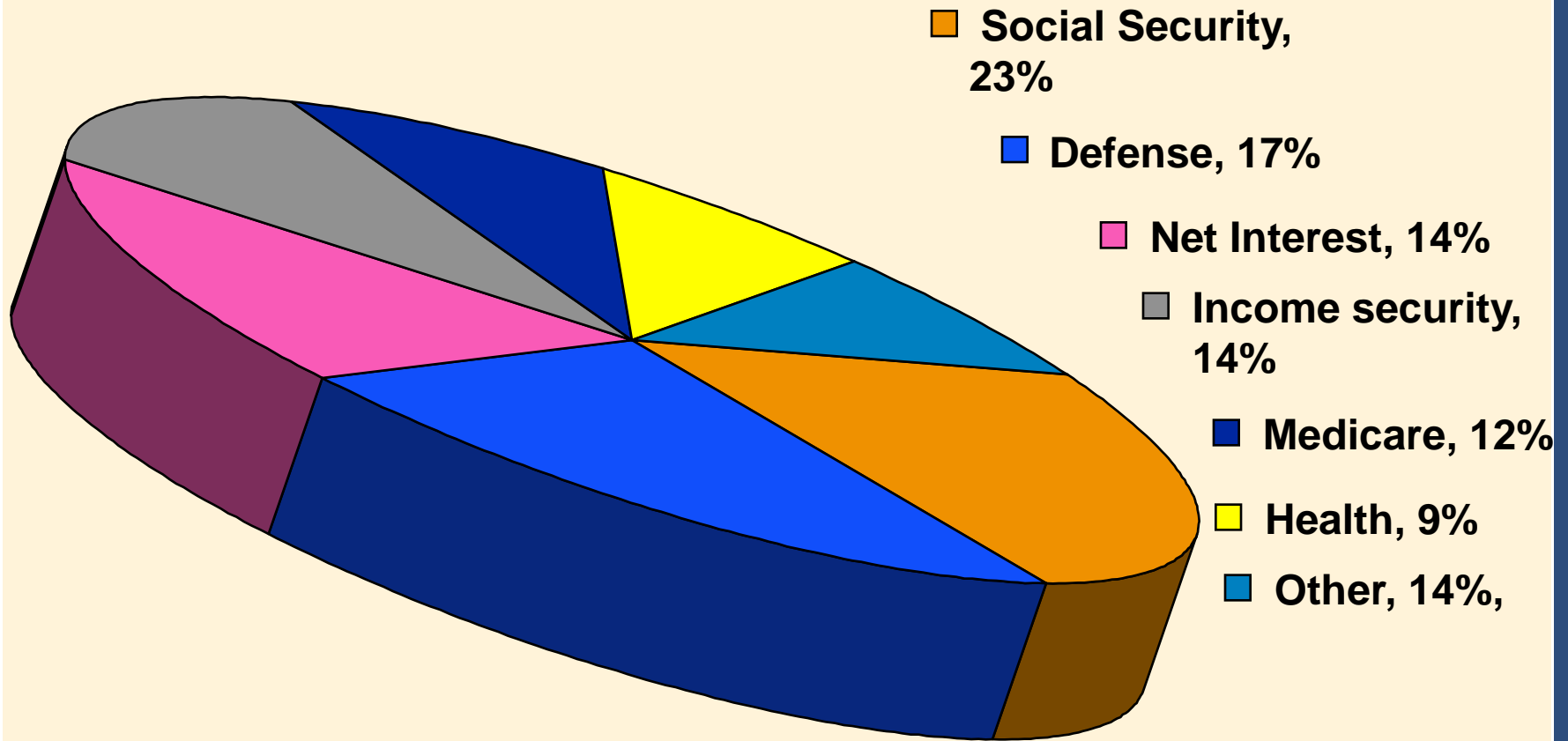
- Budget Surplus
 - A *budget surplus* is an excess of government receipts over government spending.
- Budget Deficit
 - A *budget deficit* is an excess of government spending over government receipts.

Table 4 Spending of the Federal Government: 2001

Source: *Economic Report of the President*, 2002, table B-81, p. 416.

Category	Amount (billions)	Amount per Person	Percent of Spending
Social Security	\$ 433	\$1,519	23%
National defense	309	1,084	17
Income security	270	947	14
Net interest	206	723	11
Medicare	217	761	12
Health	173	607	9
Other	256	898	14
Total	\$1,864	\$6,540	100%

Federal Government Spending: 2001



The Federal Government

- Financial Conditions of the Federal Budget
 - A budget deficit occurs when there is an excess of government spending over government receipts.
 - Government finances the deficit by borrowing from the public.
 - A budget surplus occurs when government receipts are greater than government spending.
 - A budget surplus may be used to reduce the government's outstanding debts.

State and Local Governments

- State and local governments collect about 40 percent of taxes paid.

State and Local Government

- Receipts
 - Sales Taxes
 - Property Taxes
 - Individual Income Taxes
 - Corporate Income Taxes
 - Federal government
 - Other

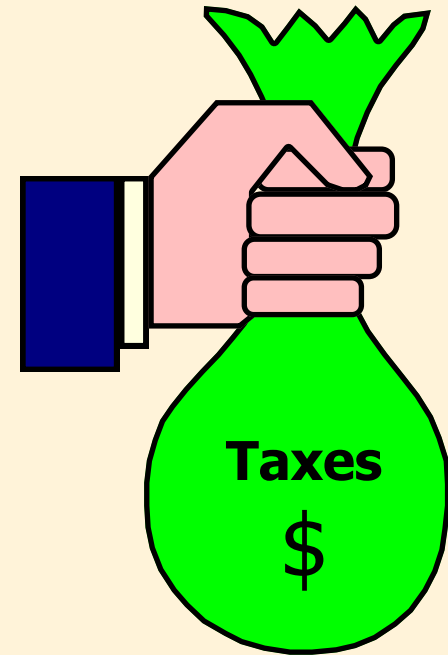


Table 5 Receipts of State and Local Governments: 1999

Source: *Economic Report of the President*, 2002, table B-86, p. 421.

Tax	Amount (billions)	Amount per Person	Percent of Receipts
Sales taxes	\$ 291	\$1,070	20%
Property taxes	240	882	17
Individual income taxes	189	695	13
Corporate income taxes	34	125	2
From federal government	271	996	19
Other	409	1,504	29
Total	\$1,434	\$5,271	100%

State and Local Government

- Spending
 - Education
 - Public Welfare
 - Highways
 - Other



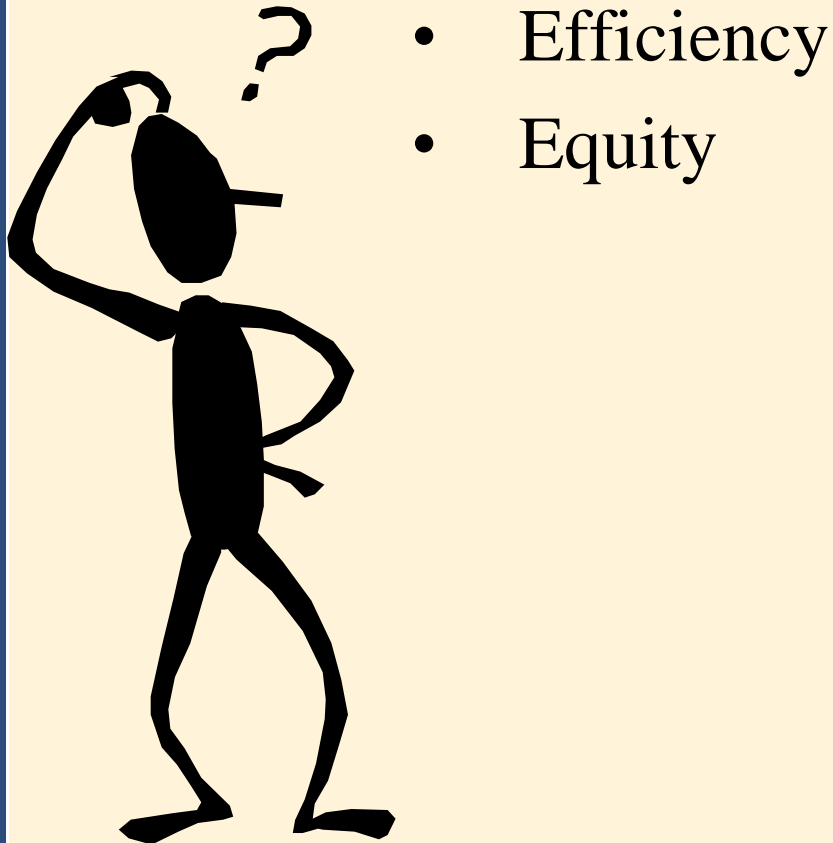
Table 6 Spending of State and Local Governments: 1999

Source: *Economic Report of the President*, 2002, table B-86, p. 421.

Category	Amount (billions)	Amount per Person	Percent of Spending
Education	\$ 483	\$1,776	34%
Public welfare	219	805	16
Highways	93	341	7
Other	607	2,232	43
Total	\$1,402	\$5,154	100%

TAXES AND EFFICIENCY

- Policymakers have two objectives in designing a tax system...



TAXES AND EFFICIENCY

- One tax system is more *efficient* than another if it raises the same amount of revenue at a smaller cost to taxpayers.
- An *efficient* tax system is one that imposes small deadweight losses and small administrative burdens.

TAXES AND EFFICIENCY

- The Cost of Taxes to Taxpayers
 - The tax payment itself
 - Deadweight losses
 - Administrative burdens



Deadweight Losses

- Because taxes distort incentives, they entail deadweight losses.
 - The deadweight loss of a tax is the reduction of the economic well-being of taxpayers in excess of the amount of revenue raised by the government.

Administrative Burdens

- Complying with tax laws creates additional deadweight losses.
 - Taxpayers lose additional time and money documenting, computing, and avoiding taxes over and above the actual taxes they pay.
 - The administrative burden of any tax system is part of the inefficiency it creates.

Marginal Tax Rates versus Average Tax Rates

- The *average tax rate* is total taxes paid divided by total income.
- The *marginal tax rate* is the extra taxes paid on an additional dollar of income.

Lump-Sum Taxes

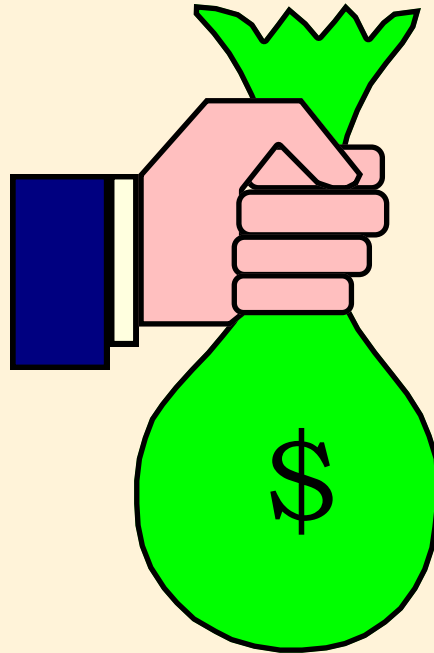
- A lump-sum tax is a tax that is the same amount for every person, regardless of earnings or any actions that the person might take.

TAXES AND EQUITY

- How should the burden of taxes be divided among the population?
- How do we evaluate whether a tax system is fair?

TAXES AND EQUITY

- Principles of Taxation
 - Benefits principle
 - Ability-to-pay principle



Benefits Principle

- The *benefits principle* is the idea that people should pay taxes based on the benefits they receive from government services.
- An example is a gasoline tax:
 - Tax revenues from a gasoline tax are used to finance our highway system.
 - People who drive the most also pay the most toward maintaining roads.

Ability-to-Pay Principle

- The *ability-to-pay principle* is the idea that taxes should be levied on a person according to how well that person can shoulder the burden.
- The ability-to-pay principle leads to two corollary notions of equity.
 - Vertical equity
 - Horizontal equity

Ability-to-Pay Principle

- *Vertical equity* is the idea that taxpayers with a greater ability to pay taxes should pay larger amounts.
 - For example, people with higher incomes should pay more than people with lower incomes.

Ability-to-Pay Principle

- Vertical Equity and Alternative Tax Systems
 - A *proportional tax* is one for which high-income and low-income taxpayers pay the same fraction of income.
 - A *regressive tax* is one for which high-income taxpayers pay a smaller fraction of their income than do low-income taxpayers.
 - A *progressive tax* is one for which high-income taxpayers pay a larger fraction of their income than do low-income taxpayers.

Ability-to-Pay Principle

- Horizontal Equity
 - *Horizontal equity* is the idea that taxpayers with similar abilities to pay taxes should pay the same amounts.
 - For example, two families with the same number of dependents and the same income living in different parts of the country should pay the same federal taxes.

Table 7 Three Tax Systems

Income	Proportional Tax		Regressive Tax		Progressive Tax	
	Amount of Tax	Percent of Income	Amount of Tax	Percent of Income	Amount of Tax	Percent of Income
\$ 50,000	\$12,500	25%	\$15,000	30%	\$10,000	20%
100,000	25,000	25	25,000	25	25,000	25
200,000	50,000	25	40,000	20	60,000	30

Table 8 The Burden of Federal Taxes

Quintile	Average Income	Taxes as a Percent of Income	Percent of All Income	Percent of All Taxes
Lowest	\$11,400	5.3%	4.0%	0.9%
Second	28,600	12.8	9.0	5.2
Middle	45,100	16.7	13.9	10.4
Fourth	65,600	20.0	20.2	18.1
Highest	167,500	27.4	53.2	65.4
Top 1%	1,016,900	32.7	15.8	23.1

CASE STUDY: Horizontal Equity and the Marriage Tax

- Marriage affects the tax liability of a couple in that tax law treats a married couple as a single taxpayer.
- When a couple gets married, they stop paying taxes as individuals and start paying taxes as a family.
- If each has a similar income, their total tax liability rises when they get married.

Tax Incidence and Tax Equity

- The difficulty in formulating tax policy is balancing the often conflicting goals of *efficiency* and *equity*.
- The study of who bears the burden of taxes is central to evaluating tax equity.
- This study is called *tax incidence*.

Tax Incidence and Tax Equity

- Flypaper Theory of Tax Incidence
 - According to the *flypaper theory*, the burden of a tax, like a fly on flypaper, sticks wherever it first lands.

Summary

- The U.S. government raises revenue using various taxes.
- Income taxes and payroll taxes raise the most revenue for the federal government.
- Sales taxes and property taxes raise the most revenue for the state and local governments.

Summary

- Equity and efficiency are the two most important goals of the tax system.
- The efficiency of a tax system refers to the costs it imposes on the taxpayers.
- The equity of a tax system concerns whether the tax burden is distributed fairly among the population.

Summary

- According to the benefits principle, it is fair for people to pay taxes based on the benefits they receive from the government.
- According to the ability-to-pay principle, it is fair for people to pay taxes on their capability to handle the financial burden.

Summary

- The distribution of tax burdens is not the same as the distribution of tax bills.
- Much of the debate over tax policy arises because people give different weights to the two goals of efficiency and equity.