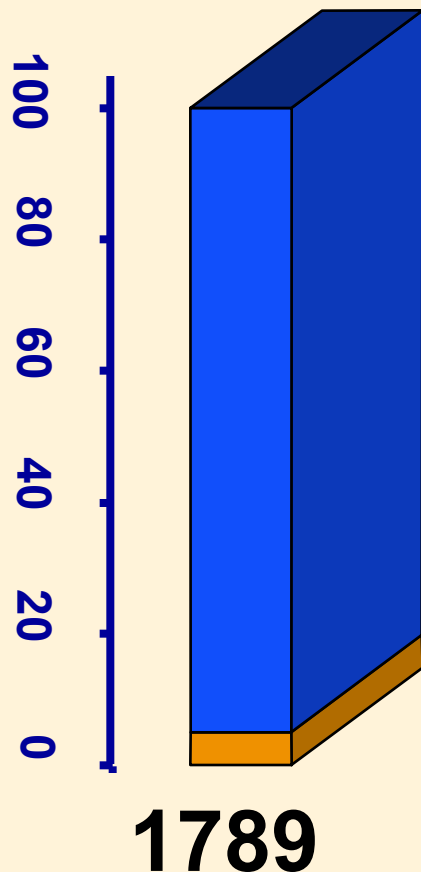


# 12

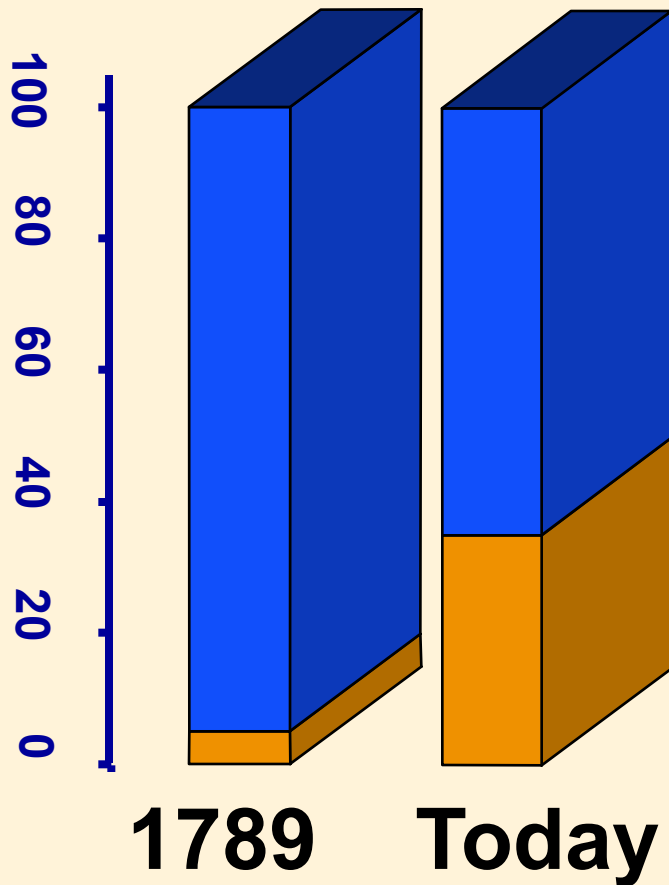
## The Design of the Tax System

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



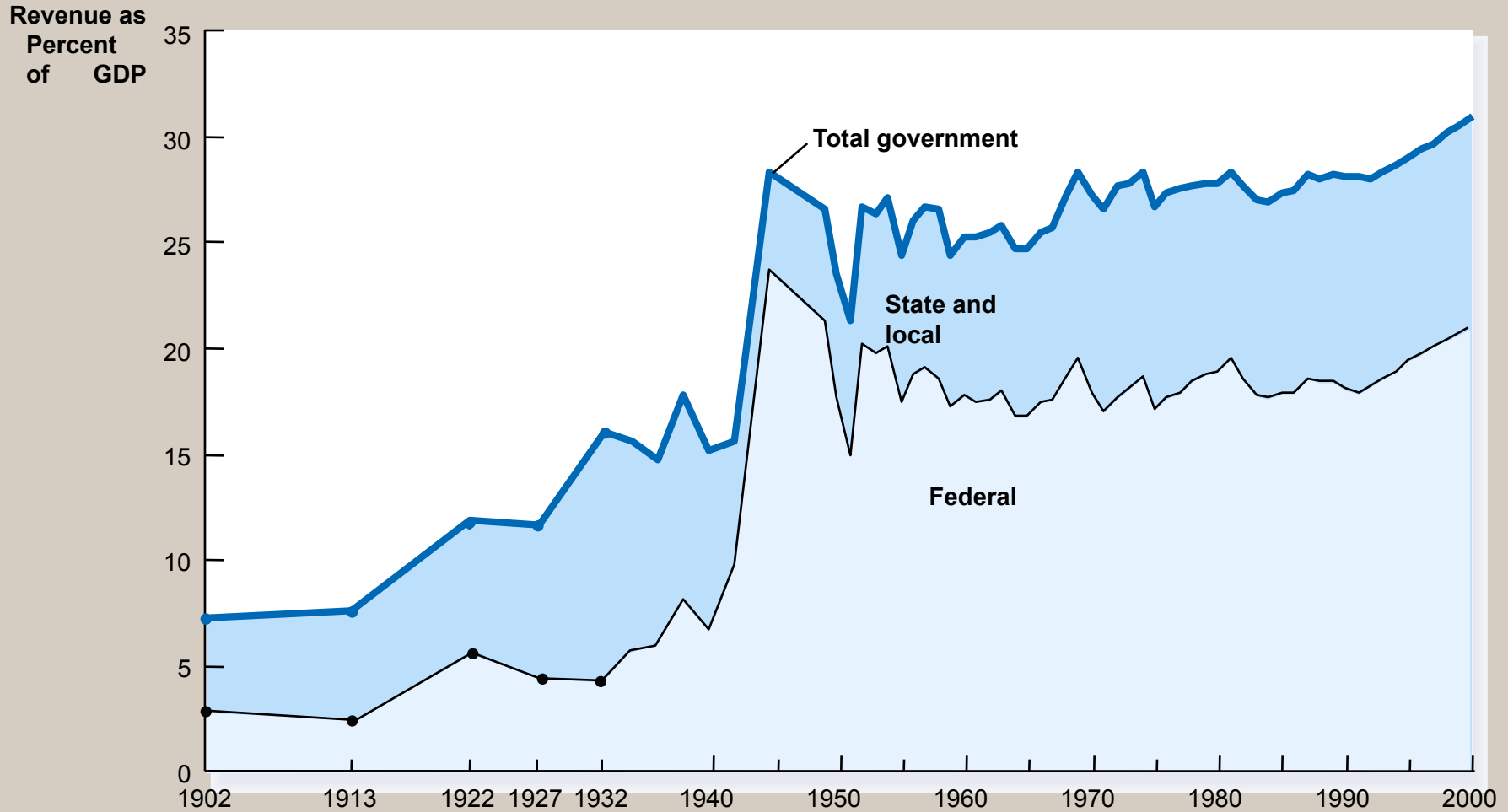
**Taxes paid in Ben Franklin's time accounted for 5 percent of the average American's income.**

*“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		

# 2012

Russia	36.9
United Kingdom	39.0
United States (all levels)	26.9
Sweden	47.9
Denmark	49.0
France	44.6

# 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

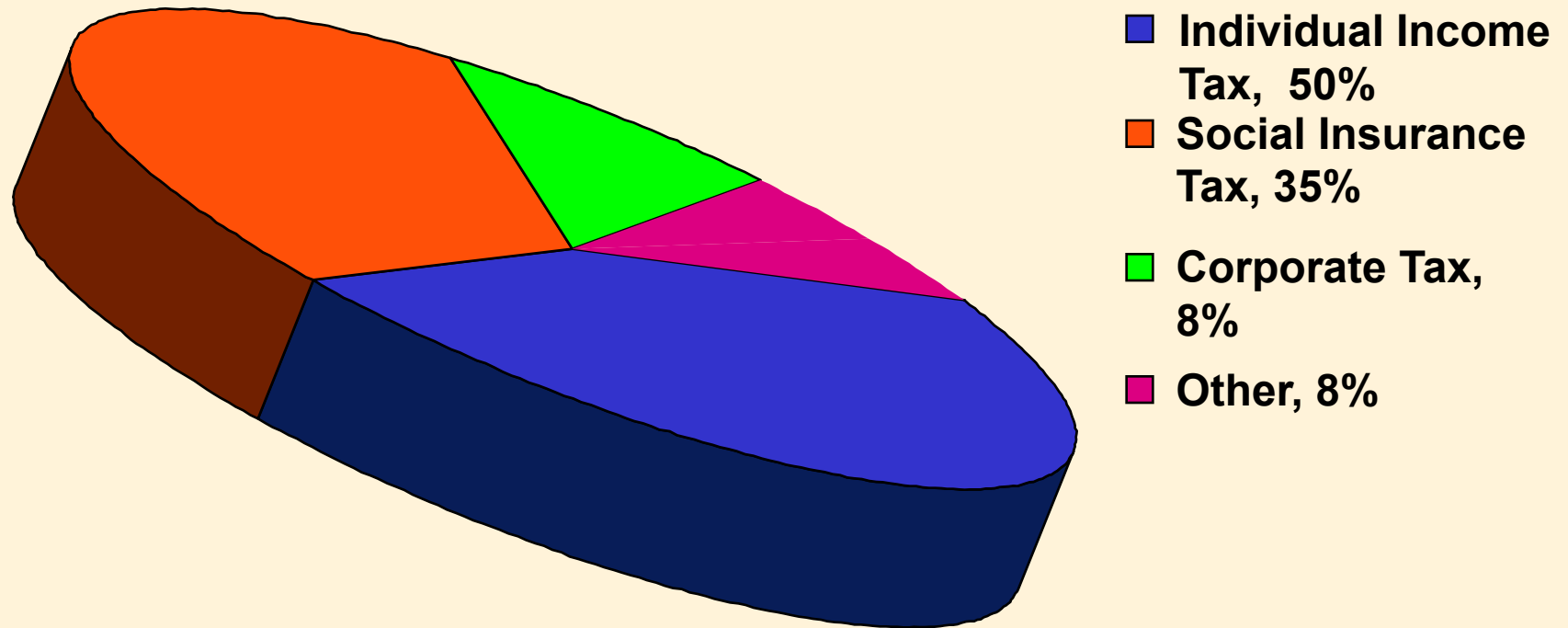
- The Federal Government and Taxes
  - Payroll Taxes: tax on the wages that a firm pays its workers.
    - Social Insurance Taxes: taxes on wages that is earmarked to pay for Social Security and Medicare.
  - Excise Taxes: taxes on specific goods like gasoline, cigarettes, and alcoholic beverages.

# Table 2 Receipts of the Federal Government: 2001

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

<b>Tax</b>	<b>Amount (billions)</b>	<b>Amount per Person</b>	<b>Percent of Receipts</b>
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.

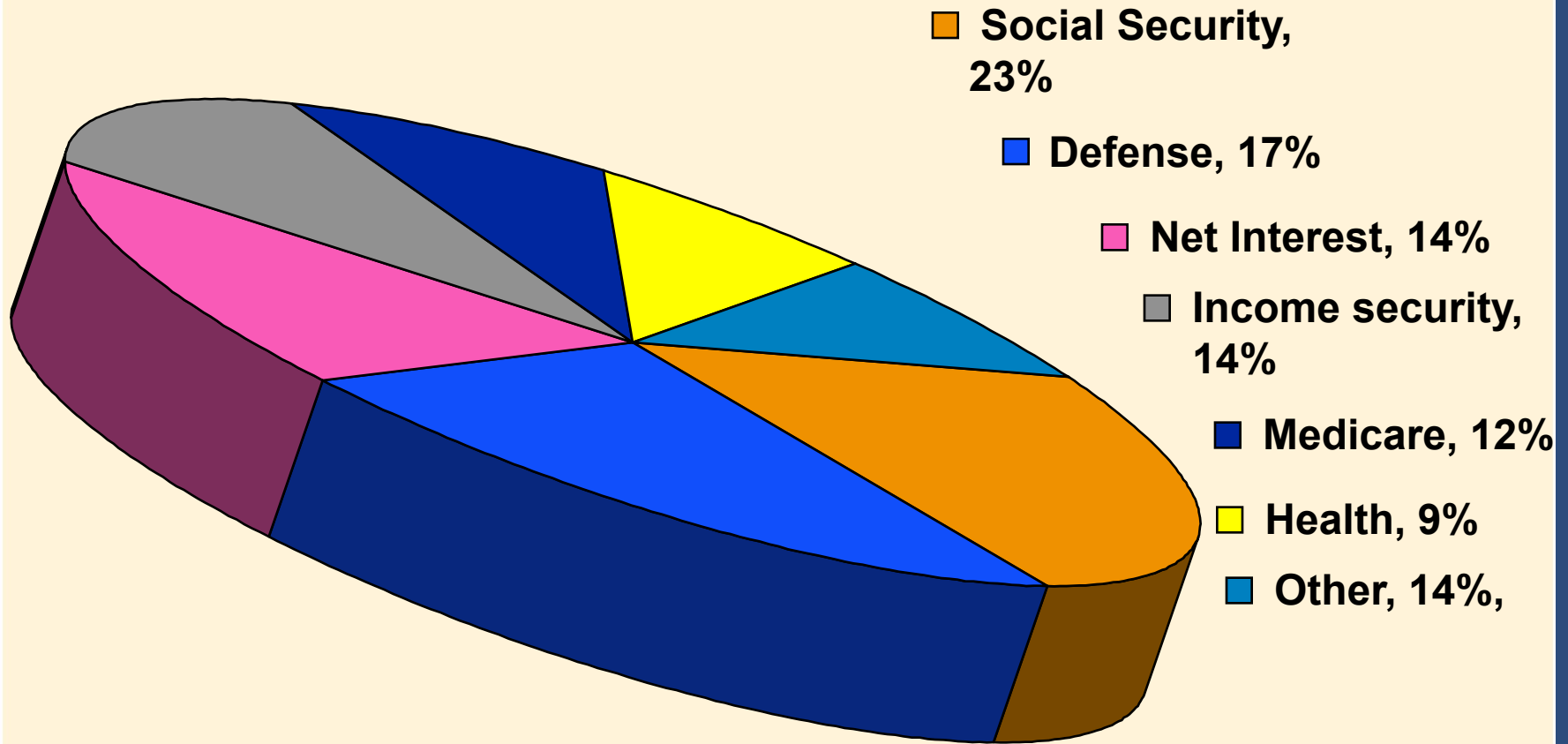
# Table 4 Spending of the Federal Government: 2001

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

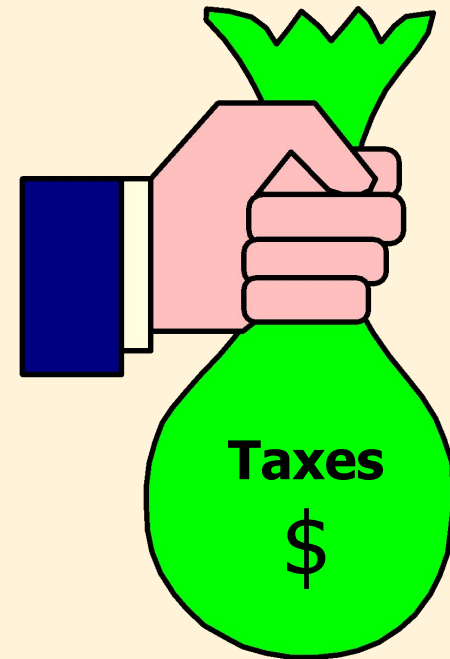
- Financial Conditions of the Federal Budget
  - A budget deficit occurs when there is an excess of government spending over government receipts.
    - Government finances the deficit by borrowing from the public.
  - A budget surplus occurs when government receipts are greater than government spending.
    - 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



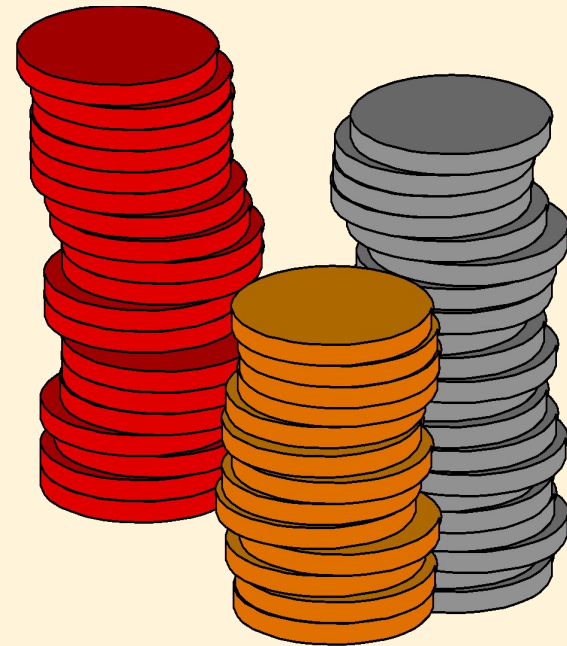
# Table 5 Receipts of State and Local Governments: 1999

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

<b>Tax</b>	<b>Amount (billions)</b>	<b>Amount per Person</b>	<b>Percent of Receipts</b>
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
<b>Total</b>	<b>\$1,434</b>	<b>\$5,271</b>	<b>100%</b>

# State and Local Government

- Spending
  - Education
  - Public Welfare
  - Highways
  - Other



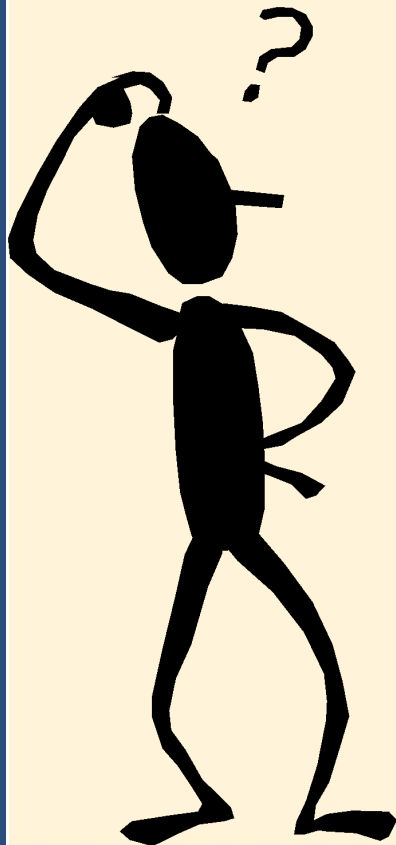
# Table 6 Spending of State and Local Governments: 1999

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...



- Efficiency
- Equity



# 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

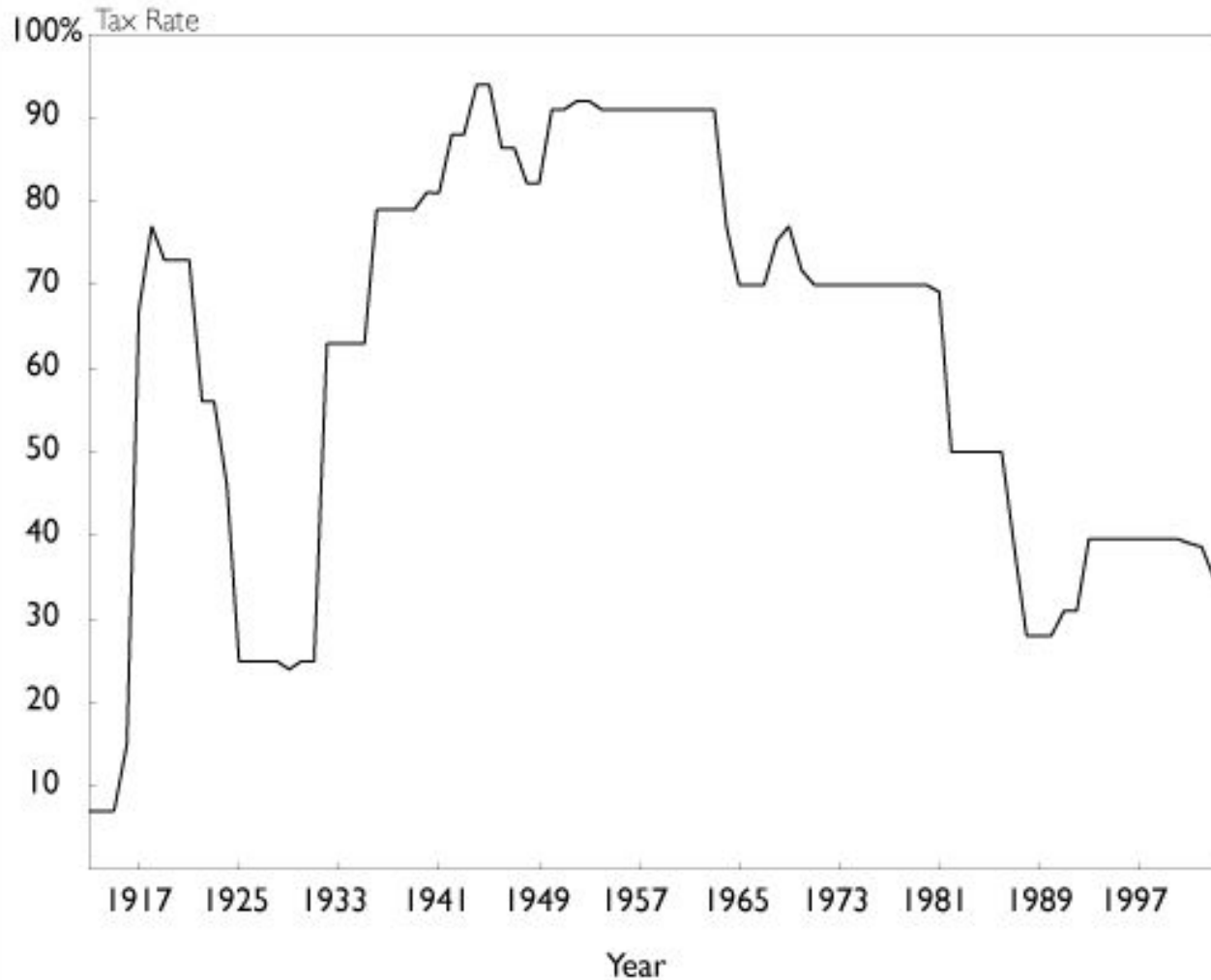
- A lump-sum tax is a tax that is the same amount for every person, regardless of earnings or any actions that the person might take.
- (аккордный налог)

# TAXES AND EQUITY

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

## The Top Marginal Personal Income Tax Rate, 1913-2003

(When applicable, top rate on earned and/or unearned income)

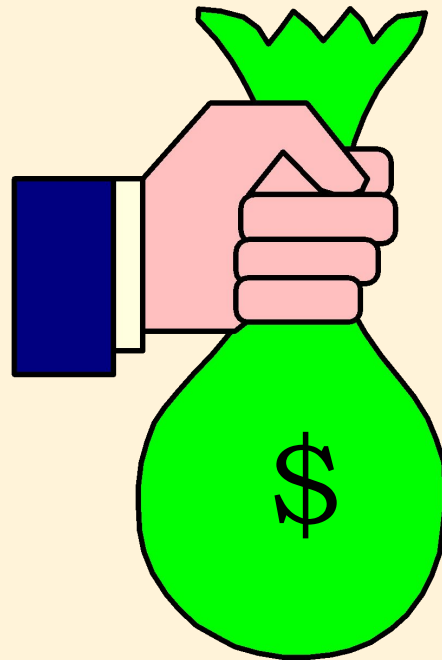


Source: Internal Revenue Service.



# 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

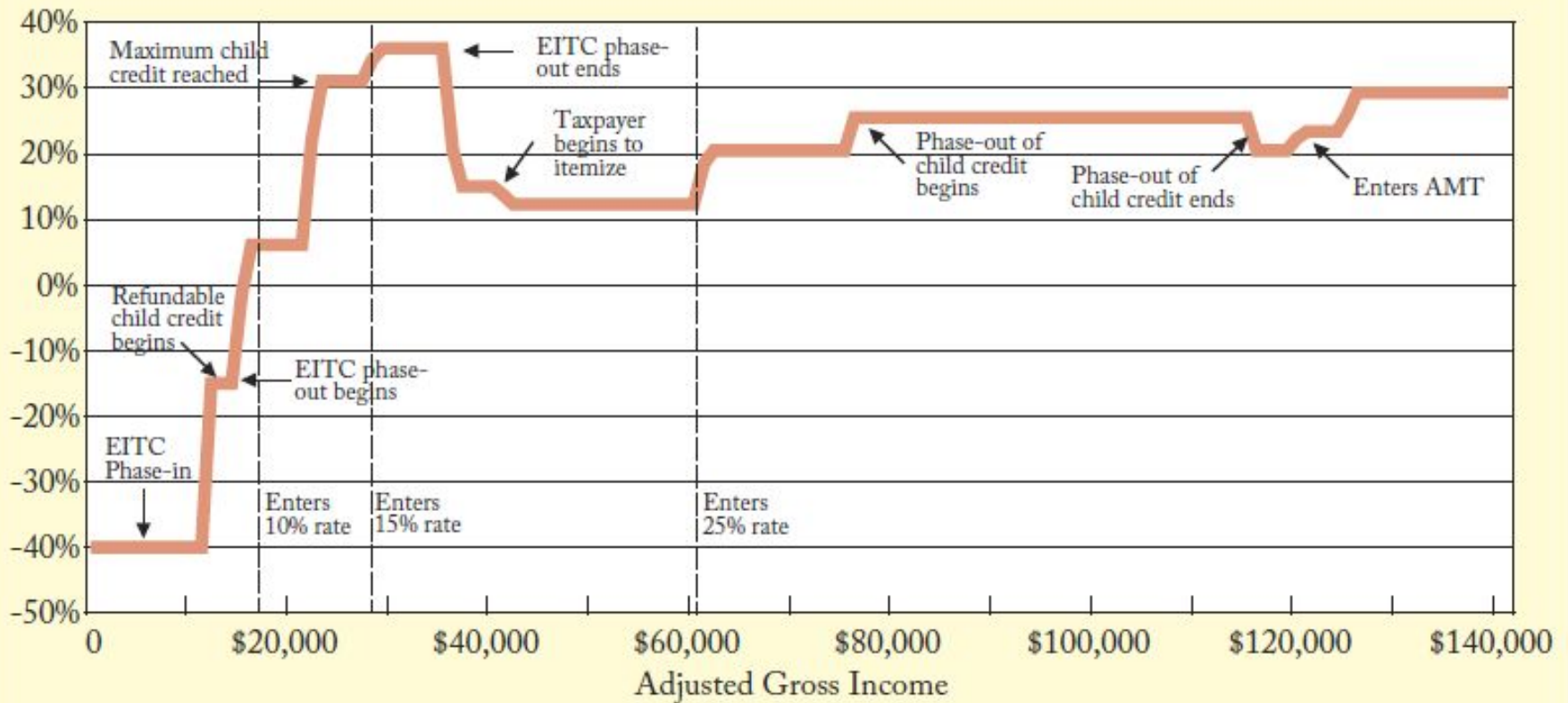
Income	Proportional Tax		Regressive Tax		Progressive Tax	
	Amount of Tax	Percent of Income	Amount of Tax	Percent of Income	Amount of Tax	Percent of Income
\$ 50,000	\$12,500	25%	\$15,000	30%	\$10,000	20%
100,000	25,000	25	25,000	25	25,000	25
200,000	50,000	25	40,000	20	60,000	30

## Table 8 The Burden of Federal Taxes

<b>Quintile</b>	<b>Average Income</b>	<b>Taxes as a Percent of Income</b>	<b>Percent of All Income</b>	<b>Percent of All Taxes</b>
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



## Figure 1.2. Marginal Effective Federal Income Tax Rates for Hypothetical Head of Household with Two Children in 2005



## Федеральные налоги и сборы:

Налог на добавленную стоимость 18

Акцизы

Налог на доходы физических лиц 13

*Соц. страховые взносы 22+2.9+5.1*

Налог на прибыль организаций 20

Налог на добычу полезных ископаемых

Водный налог

Сборы за пользование объектами животного мира и за  
пользование объектами водных биологических ресурсов

Государственная пошлина

## Региональные налоги:

Налог на имущество организаций

Налог на игорный бизнес

Транспортный налог

## Местные налоги:

Земельный налог

Налог на имущество физических лиц

## Специальные налоговые режимы:

Единый сельскохозяйственный налог — ЕСХН

Упрощенная система налогообложения

Единый налог на вменённый доход

Система налогообложения при выполнении соглашений о разделе продукции

## 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.
  - (this is wrong, of course)

# Summary

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- 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

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- 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

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- 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

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- 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.