“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.

1789

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

1789 Today
Government Revenue as a Percentage of GDP

<table>
<thead>
<tr>
<th>Central Government Tax Revenue as a Percent of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>France 38.8</td>
</tr>
<tr>
<td>Germany 29.4</td>
</tr>
<tr>
<td>United States 19.3</td>
</tr>
<tr>
<td>Russia 17.4</td>
</tr>
<tr>
<td>Pakistan 15.3</td>
</tr>
<tr>
<td>India 10.3</td>
</tr>
</tbody>
</table>

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.

Tax Liability

With respect to paying income taxes, an individual’s tax liability (how much he/she owes) is based on total income.

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.
**Federal Income Tax Rates: 1999**

<table>
<thead>
<tr>
<th>On Taxable Income...</th>
<th>The Tax Rate Is . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to $25,750</td>
<td>15.0 %</td>
</tr>
<tr>
<td>From $25,750 to $62,450</td>
<td>28.0</td>
</tr>
<tr>
<td>From $62,450 to $130,250</td>
<td>31.0</td>
</tr>
<tr>
<td>From $130,250 to $283,150</td>
<td>36.0</td>
</tr>
<tr>
<td>Over $283,150</td>
<td>39.6</td>
</tr>
</tbody>
</table>

**The Federal Government and Taxes**

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

**Receipts of the Federal Government: 1999**

<table>
<thead>
<tr>
<th>Tax</th>
<th>Amount (billions)</th>
<th>Amount (per person)</th>
<th>Percent of Receipts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual income taxes</td>
<td>$869</td>
<td>$3,194</td>
<td>48%</td>
</tr>
<tr>
<td>Social insurance taxes</td>
<td>609</td>
<td>2,239</td>
<td>34</td>
</tr>
<tr>
<td>Corporate income taxes</td>
<td>182</td>
<td>669</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>146</td>
<td>537</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>$1,806</td>
<td>$6,639</td>
<td>100%</td>
</tr>
</tbody>
</table>
Receipts of the Federal Government...

- Individual Income Tax, 48%
- Social Insurance Tax, 34%
- Corporate Tax, 10%
- Excise Tax, 4%
- Other, 4%

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.

Federal Government Spending

Expense Category:
- Social Security
- National Defense
- Net Interest
- Income Security
- Medicare
- Health
- Other
### Federal Government Spending: 1999

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount (billions)</th>
<th>Amount per Person</th>
<th>Percent of Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social security</td>
<td>$ 393</td>
<td>$1,445</td>
<td>23%</td>
</tr>
<tr>
<td>National defense</td>
<td>277</td>
<td>1,018</td>
<td>16%</td>
</tr>
<tr>
<td>Net interest</td>
<td>243</td>
<td>893</td>
<td>14%</td>
</tr>
<tr>
<td>Income security</td>
<td>227</td>
<td>837</td>
<td>13%</td>
</tr>
<tr>
<td>Medicare</td>
<td>205</td>
<td>754</td>
<td>12%</td>
</tr>
<tr>
<td>Health</td>
<td>143</td>
<td>526</td>
<td>8%</td>
</tr>
<tr>
<td>Other</td>
<td>239</td>
<td>879</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,727</strong></td>
<td><strong>$6,350</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### Federal Government Spending: 1999...

- Social Security, 23%
- Defense, 16%
- Net Interest, 13%
- Income security, 14%
- Medicare, 12%
- Health, 8%
- Other, 14%

### 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.
Financial Conditions of the Federal Budget

- 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
- Other
State and Local Government Spending

- Education
- Public Welfare
- Highways
- Other

Receipts of State and Local Governments: 1996

<table>
<thead>
<tr>
<th>Tax</th>
<th>Amount (billions)</th>
<th>Amount per person</th>
<th>Percent of Receipts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales taxes</td>
<td>$249</td>
<td>$940</td>
<td>20%</td>
</tr>
<tr>
<td>Property taxes</td>
<td>209</td>
<td>789</td>
<td>17%</td>
</tr>
<tr>
<td>Individual income taxes</td>
<td>147</td>
<td>554</td>
<td>12%</td>
</tr>
<tr>
<td>Corporate income taxes</td>
<td>32</td>
<td>121</td>
<td>3%</td>
</tr>
<tr>
<td>From federal government</td>
<td>235</td>
<td>887</td>
<td>19%</td>
</tr>
<tr>
<td>Other</td>
<td>351</td>
<td>1,324</td>
<td>29%</td>
</tr>
<tr>
<td>Total</td>
<td>$1,223</td>
<td>$4,615</td>
<td>100%</td>
</tr>
</tbody>
</table>

Spending of State and Local Governments: 1996

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount (billions)</th>
<th>Amount per Person</th>
<th>Percent of Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>$ 399</td>
<td>$1,506</td>
<td>33%</td>
</tr>
<tr>
<td>Public welfare</td>
<td>197</td>
<td>743</td>
<td>17%</td>
</tr>
<tr>
<td>Highways</td>
<td>79</td>
<td>298</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>518</td>
<td>1,955</td>
<td>43%</td>
</tr>
<tr>
<td>Total</td>
<td>$1,193</td>
<td>$4,502</td>
<td>100%</td>
</tr>
</tbody>
</table>
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 the smallest deadweight losses and administrative burdens possible.

The Cost of Taxes to Taxpayers

- The tax payment itself
- Deadweight losses
- Administrative burdens
Deadweight Losses of Taxation

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?

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

Vertical Equity

✔ 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.
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.

Three Tax Systems

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$50,000</td>
<td>$12,500</td>
<td>25%</td>
<td>$15,000</td>
<td>30%</td>
<td>$10,000</td>
<td>20%</td>
</tr>
<tr>
<td>$100,000</td>
<td>25,000</td>
<td>25%</td>
<td>25,000</td>
<td>25%</td>
<td>25,000</td>
<td>25%</td>
</tr>
<tr>
<td>$200,000</td>
<td>50,000</td>
<td>25%</td>
<td>40,000</td>
<td>20%</td>
<td>60,000</td>
<td>30%</td>
</tr>
</tbody>
</table>

The Burden of Federal Taxes

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Average Income</th>
<th>Taxes as a Percent of Income</th>
<th>Percent of All Income</th>
<th>Percent of All Taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>$9,880</td>
<td>8.0%</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>Second</td>
<td>26,100</td>
<td>15.6</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>Middle</td>
<td>44,200</td>
<td>20.3</td>
<td>16%</td>
<td>13%</td>
</tr>
<tr>
<td>Fourth</td>
<td>68,200</td>
<td>23.1</td>
<td>20%</td>
<td>19%</td>
</tr>
<tr>
<td>Highest</td>
<td>174,000</td>
<td>29.1</td>
<td>49%</td>
<td>59%</td>
</tr>
</tbody>
</table>
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.

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**.
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.

The Flat Tax

- First proposed by economist Robert Hall in the 1980s.
- Proposed as an alternative to the current tax system.
- A single, low tax rate would apply to all income in the economy.

Proposed Benefits of the Flat Tax

- The flat tax would eliminate many of the deductions allowed under the current income tax thereby broadening the tax base and reducing marginal tax rates for most people.
- Because the flat tax is simple, the administrative burden of taxation would be greatly reduced.
Proposed Benefits of the Flat Tax

- Because all taxpayers would be faced with the same marginal tax rate, the tax could be collected at the source of income.
- The flat tax would replace both the personal and corporate income taxes and would eliminate the current double taxation of corporate profits.
- The flat tax could increase the incentive to save.

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.

Graphical Review
“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.

1789

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

1789

Government Revenue as a Percentage of GDP

[Graph showing government revenue as a percentage of GDP from 1801 to 1998]
Receipts of the Federal Government...

- Individual Income Tax, 48%
- Social Insurance Tax, 34%
- Corporate Tax, 10%
- Excise Tax, 4%
- Other, 4%

Federal Government Spending: 1999...

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