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Taxes and Tax Policy

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An ECI Teaching Module on Social and Environmental Issues in Economics

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NOTE – terms denoted in **bold face** are defined in the **KEY TERMS AND CONCEPTS** section at the end of the module.

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1. INTRODUCTION

Albert Einstein reportedly once said: "The hardest thing in the world to understand is income taxes." It is true that taxes can be complicated. For example, the United States federal tax code is nearly 3,000 pages long.[1] Browsing its table of contents offers a glimpse into the vast complexity of federal taxation.[2] Entire sections of the tax code apply specifically to the taxation of vaccines (Sec. 4131–4132), shipowners' mutual protection and indemnity associations (Sec. 526), specially sweetened natural wines (Sec. 5385), and health benefits for certain miners (Sec. 9711–9712).

Fortunately, one need not comprehend the imposing complexity of tax laws to understand the crucial role of taxes in modern societies. Taxation is an important topic for students of economics. Tax policies have important economic consequences, both for a national economy and for particular groups within the economy. Tax policies are often designed with the intention of stimulating economic growth—although economists differ significantly about which tax policies are most effective at achieving this. Taxes can create incentives promoting desirable behavior and disincentives for unwanted behavior. Taxation provides a means to redistribute economic resources toward those with low incomes or special needs. Taxes also provide the revenue needed for important public services such as social security, health care, national defense, and education.

Taxation is as much a political issue as an economic issue. Political leaders have used tax policy to promote their agendas by initiating various tax reforms: decreasing or increasing tax rates, changing the definition of taxable income, creating new taxes on specific products, and so forth. Of course, no one particularly wants to pay taxes. Specific groups, such as corporations, farmers, or retired individuals, exert significant political effort to reduce their share of the tax burden. Tax codes are packed with rules that benefit certain groups of taxpayers while inevitably shifting more of the burden to others.

In this module, we take a look at taxes and tax policy. First, we briefly consider taxes from a theoretical perspective. Second, we summarize the different types of taxes in the United States. Third, we present an overview of tax systems in other countries, including an international comparison of tax data. Finally, we address current tax debates, including the distribution of the tax burden among different groups and the relationship between taxes and economic growth.

2. ECONOMIC THEORY AND TAXES

While this module does not present a detailed theoretical analysis of taxes, we summarize the main conclusions from economic theory. We consider the impacts of a per-unit tax on a product, referred to as an **excise tax**. Specifically:

1. How will the tax affect the price of the product?
2. How will the tax affect the quantity of the product sold?

[1] Matthews, 2017.
[2] https://www.irs.gov/privacy-disclosure/tax-code-regulations-and-official-guidance.

Common sense provides some guidance in answering these questions. It seems reasonable to expect that taxing a product will increase its price. It also seems reasonable that the tax will reduce the quantity of the product sold, given that the demand for the product will decrease if the price rises. Economic theory confirms that these expectations are correct.[3]

Economic theory can provide additional insights into the impacts of an excise tax. Some people might think that, say, a $0.50 cent per gallon excise tax on gasoline will result in an increase in the price of gasoline of exactly $0.50 per gallon. In other words, the tax would be fully "passed on" to the consumer. But realize that the more sellers raise the price of gasoline, the less gasoline consumers will buy.

How much price will ultimately increase as a result of an excise tax depends on how responsive buyers are to changes in prices, referred to as the **price elasticity of demand**. An elastic demand means that quantity demanded by buyers changes significantly relative to the change in price. An inelastic demand means that quantity demanded changes little when price changes.

When demand is relatively elastic, sellers will not be able to pass on most of the excise tax to consumers because they would respond by buying significantly less of the product. In this case, most of the burden of the tax will fall on sellers. On the other hand, when demand is relatively inelastic, sellers will be able to pass on most of the excise tax to consumers because the quantity demanded will not fall significantly when the price rises. Only if demand is perfectly inelastic (quantity demanded does not change as the price increases) would sellers be able to fully pass on the cost of the excise tax to consumers.

How consumers respond to a tax also has implications for government tax revenues. Products are taxed for two basic reasons:

1. to discourage purchases of that product
2. to generate revenue

Any tax creates a disincentive, so consumers will reduce their purchases and seek alternatives. When demand is relatively elastic, consumers will respond to an excise tax by buying significantly less of the product. So, while the tax would be effective at changing behavior, it would generate relatively low government revenues. However, the products that society generally wants to discourage people from buying, such as cigarettes and alcohol, tend to have inelastic demand. A tax on a good with an inelastic demand will only reduce the quantity sold a little bit. So, for a tax to significantly reduce the quantity sold when demand is inelastic, the tax must be substantial. Table 1 summarizes the various impacts of an excise tax depending on the elasticity of demand.[4]

[3] An excise tax results in a leftward shift of the supply curve in a supply-and-demand model. The leftward shift in supply causes an increase in the equilibrium price and a decrease in the equilibrium quantity.
[4] The elasticity of supply also affects the impacts of an excise tax, but in general this effect is less important. Thus, we concentrate here on demand elasticity.

Table 1. *Summary of Excise Tax Impacts for Products with Elastic and Inelastic Demand Curves*

	Inelastic demand	**Elastic demand**
Change in price	Large, nearly equal to the per-unit tax	Small, much less than the per-unit tax
Change in quantity sold	Relatively small	Relatively large
Tax revenues	Relatively large	Relatively small
Tax burden	Primarily borne by consumers	Primarily borne by producers

The burden of an excise tax on both consumers and sellers is partially offset by the benefits a government can generate by spending the tax revenue. For example, the revenue from an excise tax on gasoline could be used to provide health care to those affected by poor air quality, rebates to those who buy electric cars, or whatever spending priority the government has. But a detailed analysis of an excise tax, not presented here, demonstrates that an excise tax results in a **deadweight loss**—a net reduction in social benefits. In other words, the government tax revenue is not sufficient to offset the loss of benefits to consumers and sellers. Based on this conclusion, it may seem that taxing is generally a bad idea. But we need to consider a broader context to determine whether a particular tax is justified. The potentially valid reasons for taxing include:

1. Governments obviously cannot rely on voluntary donations, thus *something* must be taxed in any society.
2. A tax may be justified on the basis that it creates a disincentive for purchasing something. Even though a tax on a product with an inelastic demand, like gasoline or cigarettes, will not dramatically reduce the quantity purchased in the short run, demand tends to be more elastic over longer time periods. With more time, alternatives are likely to become more available and further research might make people more aware of the harmful consequences of such products.
3. The tax revenues may be needed for essential government functions and can be spent wisely such that the resulting increase in social benefits exceeds the deadweight loss.
4. A tax may be justified on the basis of equity, in order to reduce inequality. This is generally not true of excise taxes, but may apply to other taxes, such as income taxes, which at least in principle ought to fall more heavily on higher-income individuals and families.

An excise tax is just one type of tax. Countries impose many other taxes, including income taxes, corporate taxes, property taxes, and social insurance taxes. How much a country relies on each type of tax is important because it affects how much different people ultimately pay in taxes. Excise taxes on gasoline tend to be regressive—meaning they disproportionally impact lower-income households. Technically, a **regressive tax** is one in which the proportion of income paid in taxes tends to decrease as one's income increases. Income and corporate taxes tend to be **progressive taxes**—meaning the proportion of income paid in taxes tends to increase as one's income increases. Note that tax progressivity considers how much someone pays in taxes *relative to their income*. Even if a high-income person buys more gas than a low-income person, and thus pays more in actual dollars, she likely pays less in gas taxes as a percent of

her income. We'll discuss the distributional impact of different taxes in more detail later in the module. Next, we turn to a summary of the tax system of the United States.

3. TAXATION IN THE UNITED STATES

As in most other countries, the tax system in the United States includes several different types of taxes. Taxes are imposed by the federal government, by states, and by municipalities. Over time, the structure of taxation in the U.S. has changed dramatically. We first present a brief history of taxation in the U.S. Then, we discuss various types of U.S. federal taxes and conclude the section with a brief discussion of state and local taxes.

3.1 The History of Taxation in the United States

Taxation of the American Colonies by a distant and corrupt England was a driving force behind the American Revolution.[5] Consequently, the U.S. Constitution prohibited direct taxation and delegated most public revenue collection to localities, rather than the federal government. During peacetime the federal government was able to meet its expenses through relatively modest excise taxes and **tariffs** (taxes on imports). During times of war, such as the War of 1812, federal taxes were temporarily raised to finance the war or pay down the ensuing debts. Once the need passed, taxes were reduced in response to public opposition to high tax rates. A federal income tax was enacted for the first time during the Civil War, as government revenue collections increased by a factor of seven between 1863 and 1866. Concerns about the legality of the tax, considering the Constitution's prohibition of direct taxation, were muted during the national emergency but it ultimately expired in 1872.

Various attempts to institute a federal income tax were made during the Populist movement of the late 1800s and early 1900s. Populists saw an income tax as necessary to counteract excessive monopoly profits and the concentration of wealth and power. Eventually, in 1913 the 16th Amendment was ratified creating the legal basis for the federal income tax. The tax was initially targeted only towards the wealthy—in the first few years only about 2 percent of households paid any income tax and the tax rates were only 1 to 7 percent of income. That changed as the nation required a dramatic increase in revenues to finance its entry into World War I. Desiring both to raise additional revenue and to enforce social justice, the Woodrow Wilson administration increased the top income tax rate dramatically from 7 percent in 1915 to 67 percent in 1917.[6] Taxes on corporate profits and large estates also became new sources of federal revenues during this period.

Unlike previous wars, much of the tax system laid down during World War I remained in place after the war. From 1910 to 1925 tariffs fell from about half of government receipts to less than 15 percent. Meanwhile the new corporate and individual income taxes made up nearly half of government receipts in the mid-1920s. The level of excise tax collections dropped significantly, especially during the years of Prohibition when alcohol excise taxes virtually disappeared.

As a key element of the New Deal, the Social Security Act was passed in 1935 mainly to address high rates of poverty among older Americans. World War II created yet another emergency situation requiring additional revenues. President Franklin Roosevelt sought to raise revenues primarily from higher taxes on corporations and high-income households. Roosevelt went so far as to state that:

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[5] The history of U.S. taxation is mostly drawn from Brownlee, 1996.
[6] IRS, 2002.

> In this time of grave national danger, when all excess income should go to win the war, no American citizen ought to have a net income, after he has paid his taxes, of more than $25,000.[7]

Roosevelt was unable to obtain enough Congressional support to enact his most progressive proposals. The ensuing compromise did produce a more progressive federal income tax, with the top marginal income tax rate reaching a record 94 percent in 1944. But the income tax also became levied on more households—by the 1940s it reached well into the middle class. The number of taxpayers paying some federal income tax rose from about 4 million in 1939 to 43 million in 1945.

As in the period after World War I, much of the new tax structure instituted during World War II remained in place after the war. Both major political parties expressed support for a progressive but broad income tax. Changes to the tax system between the end of World War II and the early 1980s were generally minor. The Social Security tax occasionally increased as more people were receiving benefits. The Medicare and Medicaid programs were established in the 1960s. Tax cuts in 1964 reduced marginal rates for both low- and high-income households (the top marginal rate fell from 91 percent in 1963 to 70 percent in 1965).

Ronald Reagan was elected president in 1980 on a platform of smaller government and lower taxes. The Reagan administration passed several major tax reforms during the 1980s. The justification for these reforms, commonly called **supply-side economics**, is that tax cuts primarily targeted toward high-income households and capital would motivate increased investment and economic activity. We will discuss the evidence on supply-side economics later in the module. During the Reagan administration, the top marginal federal income tax rate fell from 70 percent to 28 percent, and the top corporate tax rate was lowered from 46 percent to 34 percent.

One consequence of the tax changes during the 1980s is that the annual **budget deficits** (the excess of government's total expenditures over its tax revenues) of the federal government tripled. Partly to raise additional revenue to try to reduce deficits, the first President Bush reneged on his campaign promise of "no new taxes" and agreed to a compromise tax proposal in 1990 that raised the top marginal tax bracket to 31 percent. President Bill Clinton reinstated additional progressivity in 1993 by creating the 36 percent and 39.6 percent individual tax brackets. Since then, tax cuts under presidents George W. Bush and Donald Trump lowered tax rates, with most of the benefits accruing to higher-income households, while President Barack Obama temporarily reinstated the 39.6 percent top marginal rate. We will discuss historical tax data later in this section, but we now outline the current structure of U.S. taxation.

3.2 The Federal Tax System of the United States

Federal Income Taxes

The federal income tax is the most visible, complicated, and debated tax in the United States. As mentioned above, it was established with the ratification of the Sixteenth Amendment to the U.S. Constitution in 1913. It is levied on wages and salaries as well as income from many other sources, including interest, dividends, capital gains, self-employment income, alimony,

[7] Brownlee, 1996, p. 91.

and prizes. Fortunately, to understand the basic workings of federal income taxes you need to comprehend only two major issues:

1. Not all income is taxable—there are important differences between "total income" and "taxable income."
2. There is also an important difference between the "effective tax rate" and the "marginal tax rate."

Total income is simply the sum of income that an individual or couple receives from all sources. For most people, the largest portion of total income comes from wages or salaries. Many people also receive investment income from interest, capital gains, and dividends. Self-employment income is also included in total income, along with other types of income such as alimony and winnings from gambling.

The amount of federal taxes that a person owes is not calculated based on total income. Instead, after total income is calculated, tax filers are allowed to subtract some portion of their income as non-taxable. For example, in 2023 a single filer with no children was allowed to deduct the first $13,850 of income as non-taxable.[8] Additionally, some expenses can be deducted, including retirement contributions, student loan interest, and certain tuition expenses.

Taxable income is the income that is subject to taxation, after all deductions. However, the amount of tax owed is not simply a multiple of taxable income and a single tax rate. The federal income tax system in the United States uses increasing **marginal tax rates** (the tax rate applicable to an additional dollar of income). This means that different tax rates apply to different portions of a person's income. The marginal tax rates in effect for 2023 are listed in Table 2. For a single filer, the first $11,000 of taxable income is taxed at a rate of 10 percent. Taxable income above $11,000 but less than $44,725 is taxed at a rate of 12 percent, and so on up to a maximum marginal tax rate of 37 percent. The income levels that are taxed at each rate are higher for married couples who file jointly.

Table 2. *U.S. Federal Marginal Tax Rates, 2023*

Marginal tax rate	Income range for single filers	Income range for married couples
10%	Up to $11,000	Up to $22,000
12%	$11,001 to $44,725	$22,001 to $89,450
22%	$44,726 to $95,375	$89,451 to $190,750
24%	$95,376 to $182,100	$190,751 to $364,200
32%	$182,101 to $231,250	$364,201 to $462,500
35%	$231,251 to $578,125	$462,501 to $693,750
37%	Above $578,125	Above $693,750

[8] The standard deduction for married couples in 2023 was $27,700. Filers also have the option of "itemizing" their deductions rather than taking the "standard" deduction, depending on which deduction is larger.

The way that one's income tax bill is determined is best illustrated with an example. Suppose that we want to calculate the taxes owed by a single person (let's call her Valeria) with no children and a total income of $64,000. As mentioned above, in 2023 she would be allowed to claim the first $13,850 of income as non-taxable. Assume that Valeria contributed $2,000 to an IRA, so this contribution can also be deducted from her total income. Thus, her taxable income would be $48,150, as shown in Table 3. On the first $11,000 of taxable income, she owes 10 percent in taxes, or $1,100.00. The tax rate on her taxable income above $11,000 but below $44,725 is 12 percent, for a tax of (($44,725 − $11,000) × 0.12), or $4,047.00. Finally, her tax rate is 22 percent for her taxable income above $44,725, for a tax of (($48,150 − $44,725) × 0.22), or $753.50. So, we see in Table 3 that her total federal income tax bill is $5,900.50.

Table 3. *Valeria's Federal Income Tax Calculations*

Variable	Amount	Taxes owed
Total income	$64,000	
Non-taxable deduction	-$13,850	
Retirement contribution	-$2,000	
Taxable income	$48,150	
Income taxed at 10% rate	$11,000	$1,100.00
Income taxed at 12% rate	$33,725	$4,047.00
Income taxed at 22% rate	$3,425	$753.50
Total income tax owed		$5,900.50

Note that Valeria paid a top marginal tax rate of 22 percent but *only* on her last $3,425 of income. Someone's **effective tax rate** is their total taxes divided by total income, expressed as a percentage. Thus, Valeria's effective tax rate is:

$$\frac{\$5{,}900.50}{\$64{,}000} = 0.0922 \times 100 = 9.22 \ \ percent$$

Which tax rate is most relevant—marginal or effective— depends on the policy situation. But the distinction can help us dispel one common myth about federal income taxes. Many people mistakenly worry that if they move into a higher tax bracket, their "take-home" income after taxes will decline. But if one moves, for example, from the 12 percent tax bracket to the 22 percent tax bracket, it is only the *additional* income that is taxed at 22 percent, not total income. The only way, therefore, that one's total after-tax income could decline with an increase in income would be if the marginal tax rate exceeded 100 percent.[9]

[9] Low-income workers in the United States are eligible for the Earned Income Tax Credit (EITC), which provides a tax rebate as an incentive to work, but the EITC is phased out as income increases. At some income levels, increases in income can be fully offset by a reduction in the EITC rebate. In such cases, marginal income tax rates for these workers approach and could even exceed 100 percent.

Federal Social Insurance Taxes

Taxes for federal social insurance programs, including Social Security, Medicaid, and Medicare, are collected in addition to federal income taxes. **Social insurance taxes** are levied on salaries and wages, as well as income from self-employment. For those employed by others, these taxes are generally withheld directly from their pay—that is, deducted from their pay before they receive it. These deductions commonly appear as FICA taxes—a reference to the Federal Insurance Contributions Act.

Federal social insurance taxes are actually two separate taxes. The first is a tax of 12.4 percent of income, which is used primarily to fund Social Security. Half this tax (6.2 percent) is deducted from an employee's pay, while the employer is responsible for matching this contribution to make up the other half. The other is a tax of 2.9 percent for Medicare and Medicaid, for which the employee and employer again each pay half. Thus, social insurance taxes normally amount to a 7.65 percent deduction from an employee's pay (6.2 percent + 1.45 percent). Self-employed individuals are responsible for paying the entire share, 15.3 percent, themselves.

One very important difference between these two is that the Medicare tax is paid on all wages and salaries, while the Social Security tax is due *only* on the first $160,200 of income (as of 2023). In other words, *no* additional Social Security tax is paid on income above $160,200. Since many people earn far in excess of this figure, it would be accurate to say that the social security tax is a regressive tax.

Consider, for example, the impact of social insurance taxes on two individuals, Valeria with her $64,000 annual salary and Leah, who makes $300,000. Valeria would pay a social insurance tax of 7.65 percent on all her income, or $4,896, assuming her employer matches this amount. Leah would pay the maximum Social Security contribution of $9,932 on her first $160,200 of income, plus $4,350 for Medicare/Medicaid (1.45 percent of $300,000) for a total social insurance tax bill of $14,282. This works out to an effective tax rate of 4.8 percent—much less than the tax rate paid by Valeria. Note that someone with a much higher income than Leah would pay an even lower effective social insurance tax rate.

Federal Corporate Taxes

Corporations must file federal tax forms that are in many ways similar to the forms that individuals complete. Corporate taxable income is defined as total revenue minus the cost of goods sold, wages and salaries, depreciation, repairs, interest paid, and other deductions. Thus corporations, like individuals, can take advantage of many deductions to reduce their taxable income. In fact, a corporation may have so many deductions that it actually ends up paying no tax at all or even receives a rebate check from the federal government.

Prior to 2018, corporate tax rates increased with higher profits, similar to personal income tax rates, with tax rates ranging from 15 percent to 39 percent. But with the passage of the 2017 Tax Cuts and Jobs Act under the Trump Administration, the federal corporate tax became a "flat" 21 percent on all taxable profits.

Other Federal Taxes

The U.S. federal government collects excise taxes on numerous commodities and services, including tires, telephone services, air travel, transportation fuels, alcohol, tobacco, and firearms. The federal excise tax on gasoline is, for example, about 18 cents per gallon.

Consumers may be unaware that they are paying federal excise taxes, as the tax amounts are normally incorporated into the prices of products.

Finally, the federal **estate tax** is applied to transfers of large estates to beneficiaries. Like the federal income tax, the estate tax has an exemption amount that is not taxed—in 2023 it was $25.84 million for a married couple. Only estates valued above the exemption amount are subject to the estate tax, and the tax applies only to the value of the estate above the exemption. The marginal tax rate on estates in 2023 ranged from 18 to 40 percent. The estate tax is paid exclusively by those with considerable assets. Only 0.1 percent of estates are subject to any estate tax at all.[10] The federal **gift tax** is imposed on large gifts (above $17,000 per year), designed to prevent someone from simply giving away their assets tax-free to their beneficiaries while they are still alive.

3.3 State and Local Taxes

Like the federal government, state and local governments rely on several different tax mechanisms, including income taxes, excise taxes, and corporate taxes. Thus, much of the above discussion applies to the tax structures in place in most states. However, some important differences deserve mention.

First, nearly all states (45 as of 2023) have instituted some type of general sales tax. State sales tax rates range from 2.9 percent (Colorado) to 7.25 percent (California).[11] A few states reduce or eliminate sales taxes on certain goods considered necessities, such as food and prescription drugs. Sales taxes tend to be regressive as they impact lower-income households the most, since on average they spend a larger share of their income on taxable items than do high-income households.

Forty-one states levy an income tax.[12] Most of these states have increasing marginal tax brackets, like the federal income tax. However, nine states have only one income tax rate regardless of income level.

Another important distinction between the federal tax system and the taxes levied at state and local levels is the use of property taxes. Property taxes tend to be the largest revenue source for state and local governments. The primary property tax levied in the United States is a tax on real estate, including land, private residences, and commercial properties. Generally, the tax is calculated as a proportion of the value of the property, although the formulas used by localities differ significantly.

Property taxes tend to be regressive, although less regressive than excise and sales taxes. The reason is that high-income households tend to have a lower proportion of their assets subjected to property taxes. Although renters do not pay property taxes directly, economic analysis indicates that the costs of property taxes are largely passed on to renters as part of their rent, as we discuss later in the module.

[10] Tax Policy Center, 2020.
[11] Fritts, 2023.
[12] Two additional states, Tennessee and New Hampshire, levy no state income tax but do tax dividends and interest.

3.4 Tax Trends in the United States

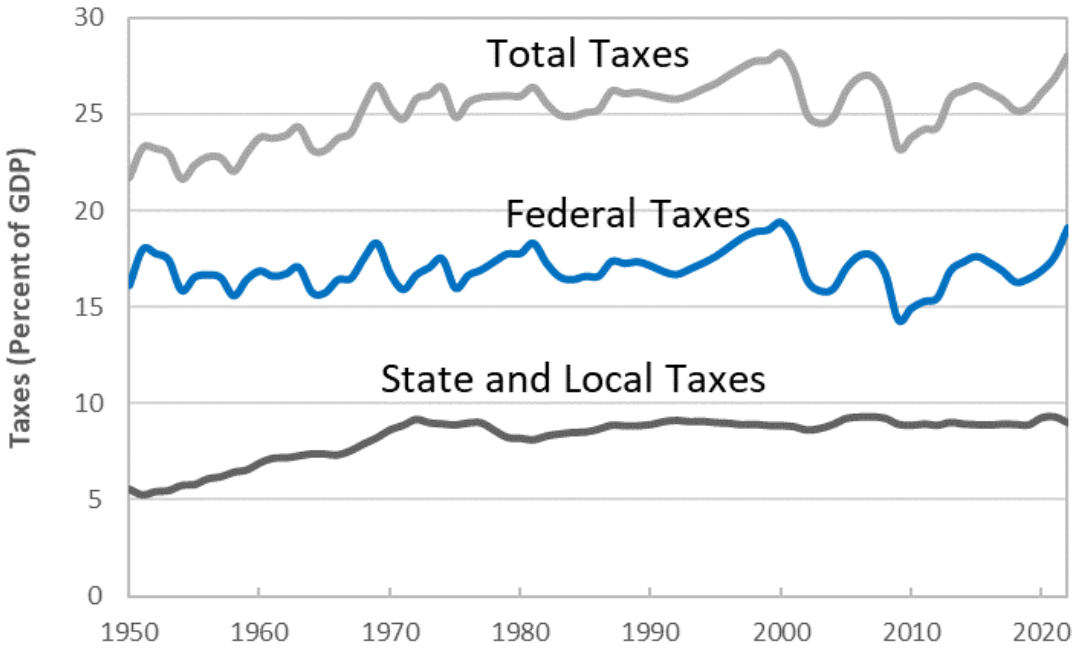
To make tax data comparable across years and societies, economists normally estimate taxes as a percent of GDP. Figure 1 presents data on overall U.S. tax receipts, as a percentage of GDP, from 1950 to 2020. We see that the overall level of taxation tended to rise from 1950 to 1970, primarily due to an increase in state and local taxation. Tax collections peaked in 2000 at over 28 percent of GDP, with the increase being a result of economic growth during the 1990s. As incomes rise, people tend to move into higher marginal tax brackets, and thus their effective tax rate increases. In addition, corporate profits rose during this period. Since 2000 tax revenues have fluctuated between about 23 and 28 percent of GDP.

Note that the fluctuations in total tax receipts closely follow the fluctuations in federal tax receipts. The reason for this is that state and local tax revenues remain relatively constant whether the economy is expanding or in a recession. However, federal taxes decline during recessions, as corporate profits and personal incomes fall.

As we discuss later, some of the variations in tax receipts are related to tax policy changes. But there are two important lessons we can draw from Figure 1, which are not necessarily consistent with discussions of tax issues in the media:

1. The primary reason that tax receipts have fluctuated in the past couple of decades is due not to major changes in tax policy but to macroeconomic fluctuations.
2. Federal tax receipts have not increased significantly since 1950. In fact, federal taxes over the past 70 years have fallen within a remarkably narrow range, between 15 and 19 percent of GDP. Given that state and local taxes are even more consistent, total tax receipts have only ranged between 23 and 28 percent of GDP since 1970.

Figure 1. *Tax Receipts in the United States, as a Percentage of GDP, 1950–2022*



Source: U.S. Bureau of Economic Analysis, National Income and Product Accounts.

4. INTERNATIONAL TAX SYSTEMS

4.1 Additional Types of Taxes

The tax systems of most other countries include the main tax types we discussed above for the United States: social insurance taxes along with taxes on personal income and corporate profits. About two dozen countries do not tax personal income, and several do not tax corporate profits either. Some countries that do not tax personal income, such as Qatar, the United Arab Emirates, and Kuwait, fund their governments primarily from oil and gas revenues. Some small island nations, such as the Bahamas, the Cayman Islands, and Nauru, generate most of their public revenues from offering financial services with tax advantages to wealthy individuals and businesses, often referred to as "tax haven" countries (see Box 1).[13]

BOX 1: TAX HAVENS

You may have heard that certain "tax haven" nations, particularly the Cayman Islands, offer tax incentives for corporations and high-income individuals. Typically, a foreign business establishes a "shell" company in a tax haven country. A shell company is a legal entity that exists only on paper, without any employees or physical office in the tax haven country. The parent company then directs taxable assets and profits to the shell company, where the tax rates are significantly lower (even zero) than the tax rates where the parent company is located. As disclosure laws in tax haven countries typically prevent authorities in other countries from identifying the owner of shell companies, they are often used to hide illegal money from drug traffickers, thieves, and corrupt politicians. Even if a tax haven country does not tax assets and profits, it can generate significant revenues from charging fees to establish shell companies. Also, the financial service sector is a major employer in many tax haven countries.

According to the Tax Justice Network, the top three tax havens in 2021 were the British Virgin Islands, the Cayman Islands, and Bermuda.[14] The amount of wealth hidden in tax haven countries is estimated to be equivalent to 10 percent of annual global economic output.[15] As this wealth is omitted from official statistics, it suggests that global wealth inequality is even greater than generally recognized. The International Monetary Fund estimates that tax havens deprive countries of $500 to $600 billion in corporate tax revenues annually. As a share of GDP, developing countries lose the most tax revenues from tax havens. The $200 billion in annual tax losses in low-income countries exceeds their annual receipts of international aid (about $150 billion).[16]

In 2021, 136 countries provisionally agreed to establish a global minimum corporate tax rate of 15 percent to reduce the amount of tax revenues lost from tax havens. The agreement would also make it more difficult for companies to shield their profits in tax haven countries. While the agreement would not eliminate tax havens, the OECD estimates it would allow countries to collect an additional $150 billion in taxes from corporations annually.[17]

[13] Gordon, 2021.
[14] Tax Justice Network, Corporate Tax Haven Index 2021 Results, https://cthi.taxjustice.net/en/.
[15] Alstadsæter *et al*., 2018.
[16] Shaxson, 2019.
[17] Thomas, 2021.

The tax systems of some countries include taxes that do not exist in the United States, including wealth and value-added taxes. Other countries generate significantly more revenue, as a share of GDP, from taxes that play an insignificant role in the U.S., such as taxes on international trade and environmental taxes.

Value-added Taxes

Most countries levy some form of **value-added tax** (VAT). A VAT is levied at each stage in the production process, collected from manufacturers according to the value added at each stage. Thus the tax is not added to the retail price, like sales taxes in the U.S., but it is incorporated into the price of the product, similar to the way excise taxes become embedded in the price of products. The advantage of VATs over a national sales tax (no country currently has a national sales tax) is that evasion is more difficult as taxes are collected at each stage in the production process. Every OECD country relies on VATs except the United States, although various proposals have been made for a VAT in the U.S.[18] On average, OECD countries collect about 20 percent of all taxes through the VAT.[19]

VAT rates are as high as 50 percent, in Bhutan, with the highest rates among high-income countries at 25 percent in Denmark, Norway, and Sweden.[20] An increasing number of countries are adopting value-added taxes. In 1980 only 27 countries had a VAT, by 2000 127 countries had one, and now around 170 countries do.[21] While a VAT offers administrative simplicity compared to income and corporate taxes, the single rate of most VATs tends to make them regressive, as we'll see later in the module.

Wealth Taxes

Although the United States' tax system includes local property taxes and estate taxes, it does not have a tax on holdings of other assets such as corporate stocks, bonds, and personal property. Only four countries have annual wealth taxes (Colombia, Norway, Spain, and Switzerland). Each country exempts a certain amount of wealth from taxation, such that the vast majority of people pay nothing in wealth taxes. For example, Spain exempts up to €2 million of assets for a married couple. Spain then imposes marginal taxes on wealth above the exemption amount ranging from 0.2 to 3.75 percent (which is the highest wealth tax rate in the world).

Wealth taxes are difficult to administer as the government must estimate the value of different types of assets, such as real estate and artwork. The main advantage of wealth taxes is that they can be used to address wealth inequality, as they only impact wealthy households and can be used to fund services that benefit society more broadly. Of course, it should not surprise us that for this very reason they are fiercely resisted by the wealthy, with the above four countries serving as exceptions to the general rule that wealth taxation is off limits.

Taxes on International Trade

A tariff is a tax on imported goods. Most countries charge tariffs, with several also charging taxes on exported goods including Afghanistan, Argentina, and Russia. For most high-income

[18] For example, Marotta, 2013.
[19] OECD, 2021.
[20] https://mr-eurodisco.com/finance/top-6-highest-vat-rates-world/.
[21] Ortiz-Ospina and Roser. 2016.

nations, taxes on international trade comprise a small share of total tax revenues—about 2 percent in the United States and less than 1 percent in most European countries. But taxes related to international trade can be a significant share of total taxation in some lower-income countries. For example, in 2020 trade taxes provided 33 percent of government revenues in Botswana and 26 percent of revenues in Sri Lanka.[22] Collecting data on personal income and corporate profits is sometimes difficult in low-income countries, especially when much economic activity occurs through informal markets. Determining and taxing the value of exports and imports may thus be more administratively feasible for some countries.

Environmental Taxes

Environmental taxes may be levied as a percent charge on specific products that cause negative environmental impacts. For example, gasoline taxes in European countries generally amount to the equivalent of $2 to $3 per gallon. The other main type of environmental tax is one that is assessed based on the underlying environmental damage caused by a product. One example is a carbon tax, which taxes products based on the carbon emissions attributable to their production or consumption.

The economic rationale for environmental taxation is that the price of products should reflect their negative externalities. Environmental taxes also encourage the use and development of goods and services with reduced environmental impacts. Like other taxes on goods and services, environmental taxes tend to impact low-income households the most, suggesting that environmental taxes should be combined with rebates for low-income households. Among developed countries, the United States collects the smallest share of tax revenues from environmental taxes, both as a share of GDP (0.7 percent) and as a share of total tax revenues (2.6 percent). The countries that collect the most in environmental taxes, as a share of all taxes, include India (18 percent of all taxes), Uganda (15 percent), South Korea (11 Percent), Costa Rica (10 percent), and the Netherlands (9 percent).[23]

4.2 International Data on Taxes

We now compare the tax systems of different countries based on their structure and overall tax rates. First, we can see how the composition of tax systems varies across countries in Figure 2. The figure shows the share of total government revenues obtained from various sources, such as social insurance taxes, value-added and excise taxes, and taxes on international trade. The "Other Revenues" category in Figure 2 represents revenues from either government ownership of productive assets (such as oil and gas) or from international aid.

The United States relies largely on social insurance, income, and corporate taxes; these categories provide 90 percent of total government revenues. All other countries in the figure collect a substantial share of government revenues from value-added taxes, especially India at over 40 percent. Ethiopia receives the largest share of government revenues from taxes on international trade, and it also receives revenues from international aid. China and the United Kingdom each obtain about 90 percent of government revenues from social insurance, value-added, income, and corporate taxes. Finally, the United Arab Emirates largely funds its government from oil and gas revenues.

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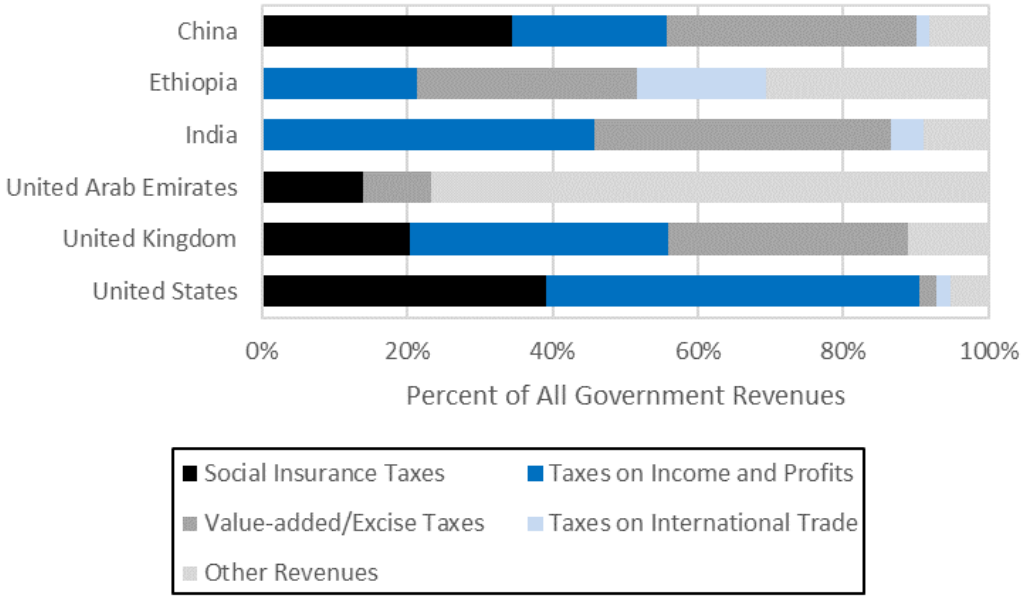
22 Data from the World Bank, World Development Indicators database.

23 OECD, Environmental Taxation.

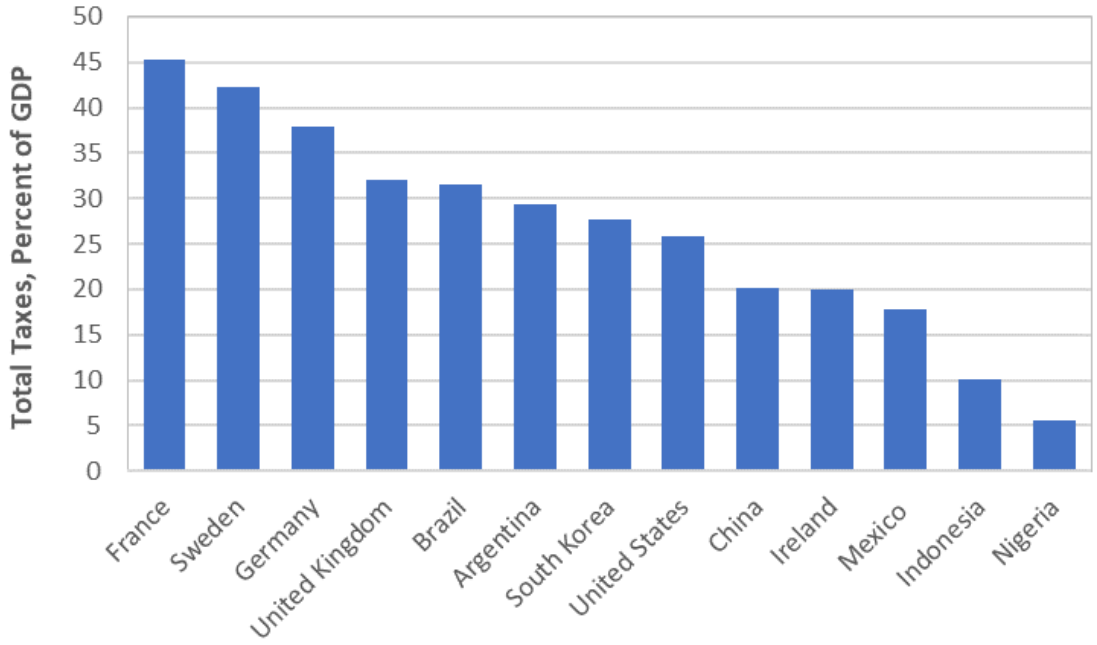
Figure 2. *Composition of Government Revenues in Select Countries, 2020*



Source: World Bank, World Development Indicators database.
Note: Data for India are from 2018.

Another way to compare the tax systems of various countries is to consider total tax revenues as a share of GDP, as shown in Figure 3. The overall rate of taxation is highest (above 40 percent of GDP) in several European countries, particularly France, Denmark, and Sweden. The overall tax rate in the United States is 26 percent, lower than the OECD average of 34 percent. Among high-income countries, only Ireland has a lower tax rate than the U.S., at 20 percent.

Figure 3. *International Comparison of Overall Tax Revenues, Select Countries, 2020*



Source: OECD, OECD.Stat, Global Revenue Statistics Database.

Compared to OECD countries, tax revenues tend to be lower in middle- and low-income countries. The average overall tax rate in Latin American countries is 22 percent of GDP, with Brazil having a relatively high rate of 32 percent. Among Asian countries taxes average 19 percent of GDP, including China at 20 percent and Indonesia at 10 percent. Tax rates tend to be lowest in developing countries, averaging 16 percent of GDP in Africa. One reason is that much economic activity in developing countries occurs in informal markets that operate outside of government regulation. Another issue is that the government institutions that collect taxes tend to be relatively weak in poor countries. In countries with ruling elites, there may be little incentive to raise taxes for public spending that might primarily benefit the poor. In addition, tax evasion and corruption may reduce tax receipts.[24]

5. TAX POLICY ISSUES

5.1 Tax Progressivity

Tax policy debates ultimately center around who pays how much. Should a country impose higher tax rates on wealthy households? Or should all people pay about the same percent of their income in taxes? As we mentioned earlier, some taxes, such as excise taxes, are considered regressive taxes because they disproportionally impact lower-income households, measured as a percent of income. The federal income tax in the United States is an example of a progressive tax—not only do those with higher incomes pay more in total income taxes, but they also pay a higher *rate* of taxes. For example, a person making $100,000 a year might pay 25 percent of their income in income taxes ($25,000 in taxes), while someone with an income of $30,000 might pay an income tax rate of only 10 percent ($3,000 in taxes). The higher-income person pays a higher tax rate, and thus this tax is progressive. Taxes can also be **proportional taxes**—meaning that everyone pays the same tax rate regardless of income. Consider our example of Social Security taxes in the United States from Section 3.2. For taxpayers with incomes of less than $160,200 per year, the Social Security tax rate is the same, at 6.2 percent of all income. But then all income above $160,200 per year is exempt from Social Security taxation. As noted previously, the U.S. Social Security tax is thus regressive overall.

Most countries' overall tax system includes a mix of progressive and regressive taxes, as different taxes are designed with different purposes. But the overall tax system of most countries is progressive. The reasons for making tax systems progressive include:

1. A progressive tax embodies the concept that those with high incomes should pay more of their income in taxes because of their greater ability to pay without harmful sacrifices. By paying a tax, any household must forgo an equivalent amount of spending on goods, services, or investments. For a high-income household, these forgone opportunities might include a second home, an expensive vehicle, or a purchase of corporate stock. A low-income household, by comparison, might have to forgo basic medical care, postsecondary education, or vehicle safety repairs.
2. A progressive tax system can be used to address economic inequality in a society. If the benefits of programs funded by taxation primarily go to low-income households while high-income households pay the majority of taxes, then a tax system effectively operates as a means to reduce inequality.
3. There is also an economic argument for a progressive tax system—it can yield a given level of public revenue with the least macroeconomic impact. To see why, consider

[24] Besley and Persson, 2014.

> how households with different levels of income might respond to a $1,000 tax cut. A low-income household will tend to spend the entire amount on needed goods and services—injecting $1,000 of increased demand into the economy. By comparison, a high-income household might only spend a fraction of the tax cut on goods and services, choosing to save or invest a portion of the money. The money that a high-income household saves or invests does not add to the overall level of effective demand in an economy.[25] In economic terms, we say that the **marginal propensity to consume** (the tendency to spend, rather than save, an additional dollar of income) tends to decrease as income increases. Collecting proportionately more taxes from high-income households thus has less effect on total effective demand in the economy.

Despite these arguments for a progressive tax, it is possible for a tax system to become too progressive. Extremely high tax rates on income create a disincentive for individuals to expend economically productive effort. Very high taxes might limit the risks taken by entrepreneurs, stifling innovation and technological advance. An extremely progressive tax system might promote "tax flight," where wealthy individuals relocate in order to avoid high tax rates, although research suggests that few wealthy people move for tax reasons.[26]

In order to measure tax progressivity (or regressivity), we need to determine tax rates by income levels. For example, as a percent of income how much do households in the top 20 percent pay in income taxes? For some types of taxes, such as income taxes, this may be relatively easy to determine. But for some types of taxes there may be a difference between who actually pays a tax and who feels the burden of the tax. Let's take social insurance taxes in the United States as an example. On paper, both an employee and an employer pay half the tax, as we discussed previously. But are employers able to essentially pass on the burden of their share of the tax to employees by offering them lower wages? Another example is property taxes paid by landlords. Do landlords bear the burden of these taxes or are they able to pass them on to renters by charging higher rents than they would otherwise?

Economists rely upon **tax incidence analysis** to determine who bears the ultimate economic burden of a tax. More generally, tax incidence analysis is:

> the positive analysis of the impact of taxes on the distribution of welfare within a society. It begins with the very basic insight that the person who has the legal obligation to make a tax payment may not be the person whose welfare is reduced by the existence of the tax.[27]

Tax incidence analysis has produced some generally accepted conclusions regarding the burden of different taxes.

- Social insurance taxes are borne almost entirely by employees regardless of the share that employers pay. The reason is that an employer will pay a worker only the value of his or her marginal contribution to profits. As an employer's share of social insurance

[25] Money saved or invested can, however, provide the financial capital necessary to increase the productive capacity of the economy. "Supply-side" economists stress the importance of investment by the wealthy as a key to macroeconomic growth.
[26] See Young, 2017.
[27] Metcalf and Fullerton, 2002, p. 1.

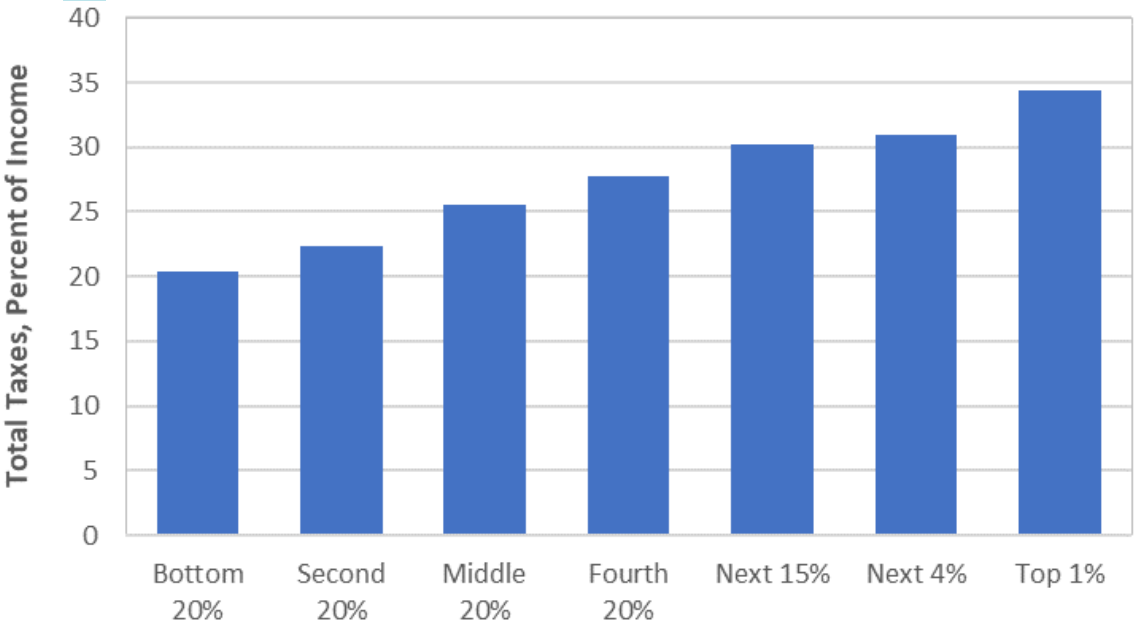
taxes reduces their profits, employers will accordingly reduce the amount of pay offered to employees.

- The burden of corporate taxes ultimately falls on real people. The general consensus is that the burden of corporate taxes falls primarily on owners of capital investments such as stocks and mutual funds.
- Excise taxes, though paid by manufacturers and retailers, are actually mostly paid by consumers based on their consumption patterns. In other words, businesses are generally able to pass on excise taxes to consumers. The reason is that most excise taxes are placed on goods with relatively inelastic demand curves.
- Property taxes paid by landlords are passed on to renters.

Income, corporate, and estate taxes tend to be progressive, while sales, excise, and value-added taxes tend to be regressive. The relative amount of each type of tax collected will therefore determine whether a country's overall tax system is progressive or regressive.

It is also important to include all tax types when assessing the progressivity of a country's tax system. For example, an often-quoted fact is that about half of Americans do not pay any federal income taxes, typically presented to argue that taxes should not be increased on high-income earners.[28] But the statement provides an incomplete picture of who pays taxes. As outlined in Section 3, the federal income tax is just one of the many taxes paid by Americans. In order to analyze the distribution of the tax burden accurately, we need to consider *all* taxes.

Figure 4. *The Distribution of Taxes in the United States, 2020*



Source: Wamhoff and Gardner, 2020.

Figure 4 presents data on tax progressivity in the United States. We see that the overall U.S. tax system is progressive, meaning that tax rates tend to increase with increases in income. But, far from paying nothing in taxes, even those in the lowest income group pay over 20 percent

[28] See, for example, Watson, 2021.

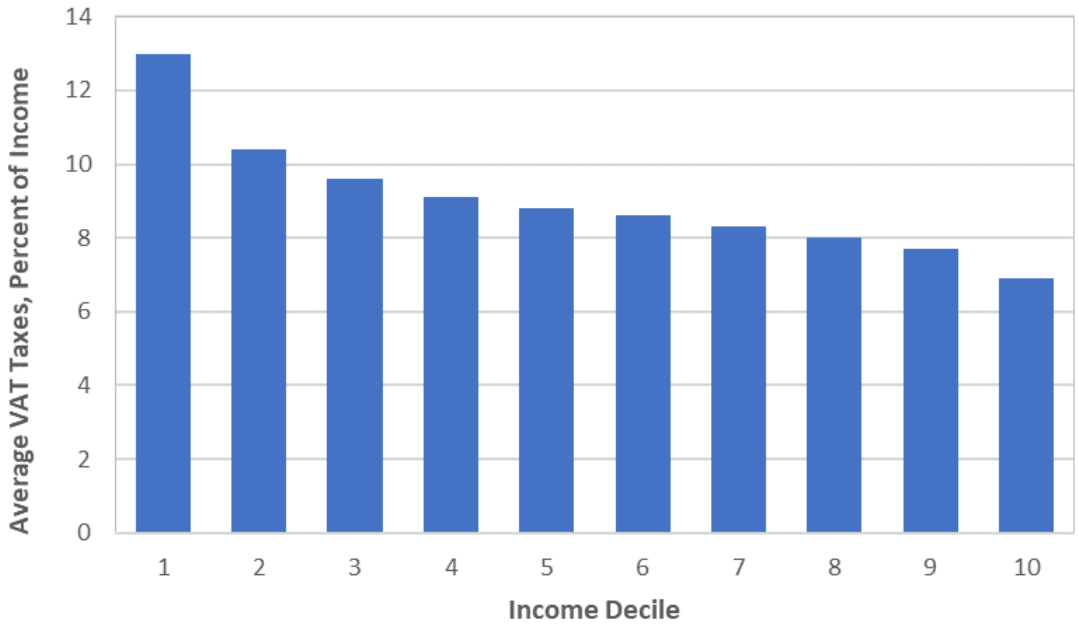
of their income in taxes (even if they do not pay federal income tax) when we consider all taxes. Those in the middle-income group pay about 26 percent of their total income in taxes. After the middle-income group, average overall tax rates continue to rise, up to 34 percent for those in the top 1 percent.

Whether the current progressivity of the overall tax system in the United States is appropriate is, of course, a normative issue. According to a 2021 survey, 71 percent of Americans support raising taxes on wealthy individuals,[29] suggesting that most would indeed prefer a tax system that is more progressive.

The United States actually has a more progressive tax system than most other high-income countries. Unfortunately, tax progressivity data are not available in a consistent format for a wide range of countries. But according to one analysis from the mid-2000s, the U.S. tax system was the most progressive of 24 industrialized countries except for Ireland.[30] In some countries, including Belgium, Norway, and Switzerland, the top-income decile (the top 10 percent) paid a smaller share of all taxes than the share of income they receive, suggesting these tax systems may be regressive overall.[31]

The main reason the U.S. tax system is relatively progressive is that all other rich countries except the United States rely upon value-added taxes for a significant share of their tax revenue, as discussed earlier. A 2020 analysis studied the VATs of 26 OECD countries, concluding that VAT systems tend to be regressive as shown in Figure 5. Those in the lowest income decile pay, on average, 13 percent of their income on VAT taxes. Those in the top income decile only pay about 7 percent of their income on VAT taxes.

Figure 5. *Value-Added Taxes as a Percent of Income, by Income Decile, for 26 OECD Countries*



Source: Thomas, 2020.

[29] Williams, 2021.
[30] Crook, 2012.
[31] OECD, 2008.

The analysis notes that VATs can potentially push some households into poverty. The author recommends that VATs be combined with progressive transfers and tax credits to make an equitable overall system:

> [The analysis shows] the importance of ensuring the progressivity of the tax-benefit system as a whole in order to compensate poor households for the loss in purchasing power from paying VAT. … VAT increases, including VAT base broadening measures that impact the poor, should be accompanied by compensation measures for poorer households, such as targeted tax credits or benefit payments.[32]

Another equity concern is that tax systems have generally become less progressive in recent decades. A 2018 study by the International Monetary Fund found that tax progressivity has, on average, declined for a sample of 161 countries since the 1980s. Both corporate taxes and top marginal income tax rates (the rates assessed on the highest incomes) have generally fallen for both high- and low-income countries. The authors attribute declining tax progressivity to competition among countries to attract increasingly mobile businesses and high-income earners.[33]

As we might expect, there is a relationship between changes in tax progressivity and economic inequality. A 2017 paper found that when tax progressivity is reduced, the income share of those in the top percentiles increases, thus increasing overall income inequality.[34] While increasing tax progressivity can reduce inequality, analysis by the OECD finds that the inequality-reducing impact of tax systems in rich countries has generally been declining in recent decades.[35]

Changes in tax policies can be used to change the overall progressivity of the tax system. The 2017 Tax Cuts and Jobs Act was the most significant change to the U.S. tax code since the 1980s. While it lowered taxes for most taxpayers, the largest cuts (measured both in absolute dollars and as a percentage of income) were received by high-income earners. Thus, the Act reduced the progressivity of the U.S. tax system. For more on the Tax Cuts and Jobs Act, see Box 2.

BOX 2: THE 2017 TAX CUTS AND JOBS ACT IN THE UNITED STATES

The Tax Cuts and Jobs Act (TCJA), passed by the Trump administration in 2017 without any Democrats in Congress voting for it, is one of the largest tax cuts in U.S. history. Proponents argued that the TCJA would stimulate economic growth by encouraging business investment, reduce the complexity of the tax code, and increase disposable incomes. Analysis by the conservative-leaning Tax Foundation concluded that the TCJA would lead to a 1.7 percent increase in GDP over the long term, and create more than 300,000 jobs.[36] Analysis by the liberal-leaning Tax Policy Center, however, estimated that it would have little effect on GDP

[32] Thomas, 2020, p. 3.
[33] Gerber *et al*., 2018.
[34] Rubolino and Waldenström, 2017.
[35] OECD, 2011.
[36] Tax Foundation, 2017.

in the long term, but significantly increase the national deficit as tax revenues decline.[37] The nonpartisan Joint Committee on Taxation, which provides independent analysis for the U.S. Congress, estimated that the $1.5 trillion cost of the TCJA would be partially offset by additional tax revenues associated with economic growth of about $500 billion. Thus, the net cost to the U.S. government would be about $1 trillion. [38]

Several years after the passage of the TCJA, its impacts can be estimated although there are numerous other factors that have affected the economy, especially the COVID-19 pandemic. Unsurprisingly, there is not a consensus among economists on the impact of the Act on investment, jobs, and growth. While business investment in the U.S. did increase following the passage of the TCJA, it did not increase as much as some expected and the increase may have been due to other factors. [39]

A 2021 analysis by the non-partisan Brookings Institution studied the impact of the TCJA through the end of 2019, noting that in 2020 it would be too difficult to separate the impacts of the Act from the impacts of the pandemic. Their analysis concludes that:

> "[The] TCJA clearly reduced federal revenues significantly and several pieces of evidence suggest that TCJA's supply-side incentives had little effect on investment, wages, or profit-shifting. … the insensitivity of aggregate investment to tax incentives may be due in part to a rise in economic uncertainty or to increasing market power of big businesses in the economy." [40]

There is more agreement that the TCJA primarily benefited higher-income households. Households in the lowest income quintile received, on average, about a $100 tax cut in 2020 as a result of the Act. Households in the middle quintile received a cut of about $700. But the cut for those in top 1 percent was over $44,000. Given that the TCJA reduced taxes as a percent of income the most for higher-income households, we can conclude that it increased income inequality. [41]

5.2 Taxation and Economic Growth

Any discussion of tax policy should consider the debate over the relationship between taxation and macroeconomic growth. In addition to raising revenues for the government, taxes generally create a disincentive for individuals to engage in certain activities. For example, high taxes on investment are expected to reduce overall investment.

One theory is that a high overall rate of taxation creates a disincentive for people to work hard and invest, because they will keep less of their money after taxes. This theory implies that rates of macroeconomic growth will be higher when tax rates are low. Many proponents of this theory focus in particular on the marginal tax rates of high-income earners. According to **supply-side economics**, low marginal tax rates encourage entrepreneurs and investors to

[37] Tax Policy Center, 2017.
[38] Joint Committee on Taxation, 2017.
[39] Anonymous, 2019.
[40] Gale and Haldeman, 2021, p. 9.
[41] Wamhoff and Gardner, 2020.

increase their economic efforts, leading to more employment and, ultimately, benefits that "trickle down" to workers and the broader economy.

Does the evidence support the view that taxes represent a drag on economic growth? We can analyze the relationship between economic growth and taxes by comparing data across countries and by looking at data over time within a single country. In particular, do countries with lower overall tax rates tend to have higher growth rates, and when tax cuts are implemented in specific countries or regions, do economic growth rates increase, ceteris paribus?

In either case, we need to be careful in making conclusions as many economic analyses on the topic are published by organizations with specific policy agendas. For example, a 2012 publication by the conservative-leaning Tax Foundation reviewed 26 studies on the relationship between taxes and economic growth, including cross-country and single-country studies, and concluded that "the results consistently point to significant negative effects of taxes on economic growth even after controlling for various other factors."[42] But a 2014 response by the liberal-leaning Center on Budget and Policy Priorities argued that the Tax Foundation paper mischaracterized several of the included studies, omitted "dozens of relevant studies," and falsely asserted an economic consensus on the topic.[43]

A 2014 paper by the Congressional Research Service looked at six decades of U.S. data which suggested "that periods of lower taxes are not associated with higher rates of economic growth or increases in investment."[44] We can see this evidence in Figure 6, which shows the highest federal marginal income tax rate over time and the cumulative growth of GDP per capita in each decade since the 1950s. The highest rates of economic growth occurred when the top marginal tax rates were very high in the 1950s and 1960s. Despite the significant cuts to the top tax rates in the 1980s, economic growth remained about the same as it was in the 1970s. And the tax increases in the 1990s didn't seem to have a negative impact on growth. While the highest marginal income tax has been low since 2000, economic growth has also been low.

Figure 6 does not, however, present a conclusive analysis. First, we observe that economic growth rates in the United States have generally been declining over time regardless of changes in marginal tax rates. Second, this analysis does not consider the impacts of other factors affecting economic growth rates, such as technology, labor force participation, population changes, and so on.

A 2016 non-partisan paper studied how changes in U.S. tax policy affect economic growth rates, including numerous other factors. The authors conclude that there is not necessarily a simple answer to the relationship between taxes and growth.

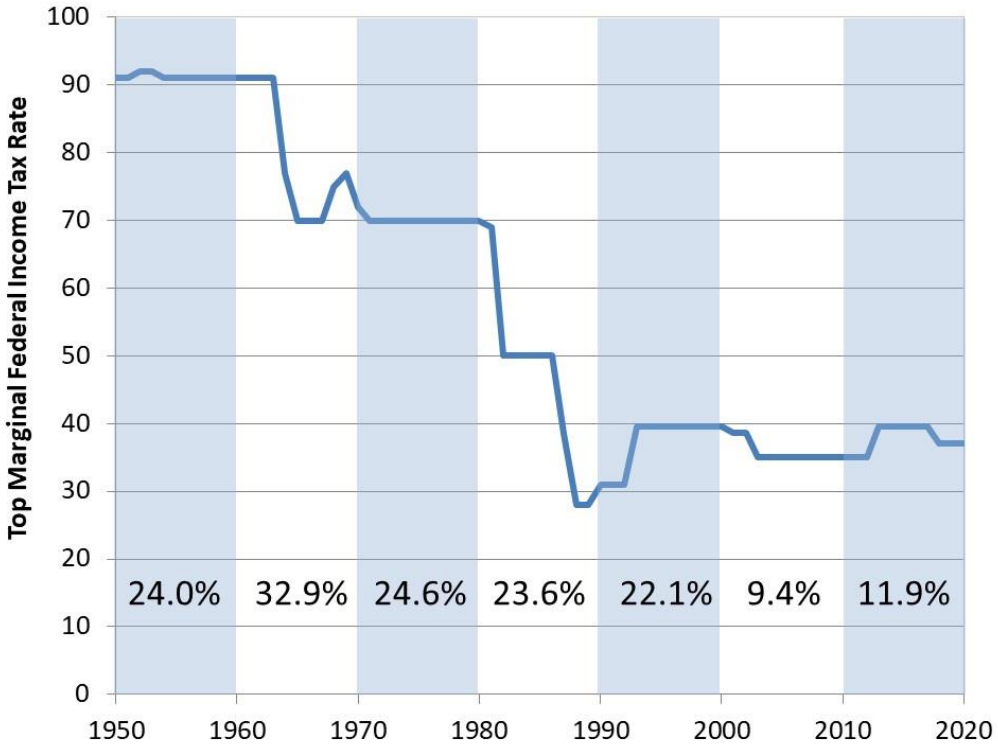
> The argument that income tax cuts raise growth is repeated so often that it is sometimes taken as gospel. However, theory, evidence, and simulation studies tell a different and more complicated story. Tax cuts offer the potential to raise economic growth by improving incentives to work, save, and invest. But they also create income effects that reduce the need to engage in productive economic activity, and . . . will typically raise the federal budget deficit . . . which will negatively affect investment. The net effect of

[42] McBride, 2012.
[43] Huang and Frentz, 2014.
[44] Gravelle and Marples, 2014.

tax cuts on growth is thus theoretically uncertain and depends on both the structure of the tax cut itself and the timing and structure of its financing.[45]

A 2022 analysis compiled the results of 42 existing studies from OECD and non-OECD countries on the relationship between corporate taxes and economic growth.[46] After statistically analyzing these studies, the authors found that "we cannot reject the hypothesis that corporate tax changes have, on average, no economically relevant or statistically significant effect on economic growth." They noted that older studies were more likely to identify a positive relationship between corporate tax cuts and economic growth, but that recent studies generally found no relationship. They conclude that "our results suggest that the attention that corporate taxation has received in debates on structural reforms as a source of economic growth has often been exaggerated."

Figure 6. *The Top Marginal Federal Income Tax Rate and Cumulative Growth of Real GDP per Capita by Decade, 1950-2020*



Sources: Federal Reserve Economic Data, Real Gross Domestic Product per Capita; Tax Policy Center, https://www.taxpolicycenter.org/statistics/historical-highest-marginal-income-tax-rates.
Note: Percentages are cumulative growth of real GDP per capita per decade.

These studies indicate that lowering taxes is not a guaranteed way to increase economic growth. The evidence suggest that economic growth is highly contextual, dependent upon a country's history, institutions, trade relations, human capital, and many other factors. Policies that may be highly effective in one country may have no effect in other countries, and there are no "one size fits all" policies to promote growth such as simply lowering taxes.

[45] Gale and Samwick, 2016.
[46] Gechert and Heimberger, 2022.

6. CONCLUSION

While we may not particularly enjoy paying taxes, they have been called "the price we pay for a civilized society."[47] Taxes fund critical public services including social security, health care, environmental protection, police departments, and highways. While higher-income people can afford private substitutes for some of these services, such as private security and private schools, *everyone* receives substantial benefits funded through taxes. There are no adequate private substitutes for a well-functioning legal system, a clean environment, or extensive transportation infrastructure. Thus, we all have an interest in a tax system that is appropriate to our society's needs and fair across the income spectrum.

Taxes are a political issue as much as an economic issue. Economics can provide insights into how various taxes impact different groups, as we saw with our discussion of tax incidence analysis. Economics can also inform discussions about the relationship between taxes and economic growth. But how much a society collects in overall taxes and how much different groups pay are ultimately political questions. A society's tax system reflects its priorities and its distribution of political power. A better understanding of taxes is a critical tool for anyone seeking to understand or improve how their government works.

[47] The quote is attributed to U.S. Supreme Court Justice Oliver Wendell Holmes, Jr. (1841-1935).

7. KEY TERMS AND CONCEPTS

budget deficit: an excess of total government expenditures over total government tax revenues in a given year

deadweight loss: a reduction in net social benefits as a result of a market regulation, such as a tax

effective tax rate: one's taxes expressed as a percentage of total income

estate taxes: taxes on the transfers of large estates to beneficiaries

excise tax: a per-unit tax on a good or service

gift taxes: taxes on the transfer of large gifts to beneficiaries

marginal propensity to consume: the tendency to spend, rather than save, an additional dollar of income

marginal tax rate: the tax rate applicable to an additional dollar of income

price elasticity of demand: the responsiveness of the quantity demanded to a change in price. An elastic demand means that quantity demanded falls relatively significantly when price changes. An inelastic demand means that quantity demanded changes little when price changes.

progressive tax: a tax in which the percentage of one's income that is paid in taxes tends to increase with increasing income levels

proportional tax: a tax in which all taxpayers pay the same tax rate, regardless of income

regressive tax: a tax in which the percentage of one's income paid in taxes tends to decrease with increasing income levels

social insurance taxes: taxes used to fund social insurance programs such as Social Security, Medicare, and Medicaid

supply-side economics: the macroeconomic theory that low marginal tax rates lead to higher rates of economic growth by encouraging entrepreneurship and investment

tariffs: taxes charged by national governments to the importers of goods from other countries

tax incidence analysis: the study of who bears the ultimate burden of a tax

taxable income: the portion of one's income that is subject to taxation after deductions and exemptions

total income: the sum of income that an individual or couple receives from all sources

value-added tax (VAT): a tax levied at each stage in the production process of a product, collected from manufacturers according to the value added at each stage

8. DISCUSSION QUESTIONS

1. What recent news stories have you heard about taxes? How does the material in the module relate to these stories?
2. Do you think it is necessary for countries to have so many different types of taxes? What would you change about the structure of taxation in your country? Do you think certain taxes should be eliminated or revised?
3. Do you think the current tax system in your country is too progressive, about right, or not progressive enough? How much do you think different income groups should pay in taxes?
4. Given that tax rates in higher-income countries tend to be higher than tax rates in lower-income countries, do you think lower-income countries should increase their tax rates?
5. Suppose a friend or relative says to you: “The government should reduce taxes so people get to keep more of their own money.” How would you respond to this based on what you learned in this module?

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