

A Bigger Government Means Giving Up Almost Half Your Paycheck

BY ADAM N. MICHEL

EXECUTIVE SUMMARY

If federal spending continues to rise, the US budget will increasingly resemble government budgets in Europe, where government spending dominates economic activity. High spending requires high taxes, which affect not only wealthy taxpayers but also lower- and middle-income earners. Workers earning the average wage across a group of 22 European countries pay \$11,676 more in taxes than they would if they lived in the United States. Lower-income workers, higher-income workers, and families also pay significantly higher taxes than in the United States. High wage taxes disincentivize work, resulting in lower material well-being compared to

Americans, who benefit from relatively lower tax rates.

Absent significant spending reforms, Americans may face a future resembling the European tax system, requiring an almost 50 percent tax increase on many middle-class Americans. America can avoid the European fiscal model by decisively cutting major spending programs to reduce the current \$2 trillion annual federal budget deficit. This report describes the size of European governments, the tax systems used to finance their high levels of spending, the middle-class tax burden in the United States and in member countries of the European Union, and the impact of high taxes on incentives to work.



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INTRODUCTION

The United States is at a fiscal policy crossroads. If federal spending remains on its current upward trajectory, the US budget will resemble government budgets in Europe, where government spending dominates economic activity. High spending necessitates high taxes, not just on the rich but also on lower- and middle-income taxpayers. Workers earning the average wage across a group of 22 European countries pay \$11,676 more in taxes than they would if they lived in the United States; a family of four pays \$21,546 more in taxes. Across Europe, middle-class taxpayers send almost half—and as much as 56 percent—of their paycheck to the government. High wage taxes incentivize Europeans to work less, making them materially and financially poorer than Americans, who enjoy relatively lower taxes.

In the absence of significant reforms, Americans should be prepared for a future that looks more like the European tax system and less like the relatively low US tax rates over the past several decades. Importing the European fiscal and economic model is not inevitable. However, choosing another path will not be easy. It requires Congress to reduce the growth of government and scale back major spending programs. Facing a \$2 trillion annual federal budget deficit in 2024, Americans are underpaying for the government they currently receive.¹ Politicians should be honest with their constituents; comprehensive welfare programs, generous retirement benefits, and an expansive military cannot be sustained by primarily taxing narrow segments of the population.

“If Congress allows spending to remain on its current path, American workers at every income level should be prepared to pay higher, European-style taxes.”

The following report summarizes the tax systems and the size of government across Europe and then presents data on the middle-class tax burden in the United States and 22 European countries. The final sections show that Europe’s high tax burdens incentivize people to work less and contribute to significantly lower consumption levels.

A crucial part of America’s economic dominance and social vibrance can be attributed to a limited government, with less interference in private life. Without reforms that reduce the size of government, the United States is close to losing this competitive edge.

GOVERNMENTS IN EUROPE ARE BIGGER THAN IN THE UNITED STATES, BUT THE UNITED STATES IS CATCHING UP

The United States taxes and spends at lower levels than European countries. In 2022, the 22 countries that are members of both the European Union and the Organisation for Economic Co-operation and Development (OECD)—hereafter, EU countries—collected an average of 43.8 percent of their country’s economic activity in tax and other revenue.² Revenue collected in the United States across all levels of government was 35 percent of gross domestic product (GDP) in 2022, almost 9 percentage points lower than the EU countries’ average.³ Revenue levels across the EU countries range from 53.5 percent of GDP in France to 22.9 percent in Ireland (Figure 1).⁴

Measuring the size of government by annual expenditures shifts the United States up one place, from 22nd out of 23 countries, to the 21st-biggest government in the group.⁵ Currently, the United States taxes and spends at much lower levels than almost all European governments. However, if federal spending remains on its projected path, the American size of government will reach 45.8 percent of GDP by 2054.⁶ Spending at that level would put America at the EU country average of 46 percent of GDP and move its rank from 21st-largest government by expenditures to 12th out of 23. Sustained spending at this level will eventually require US taxes to increase to the levels seen in EU countries. If simply left on its current path, the United States would reach European levels of spending while providing fewer services to a smaller share of the population.

The United States consistently relies on deficit spending to keep expenditures higher than revenues. As a measure of the size of government, revenues slightly understate the relative rank of the United States because EU countries have smaller average deficits. Pre-pandemic deficits in the EU countries were about 0.5 percent of GDP, while the US deficit

was 6.6 percent in 2019.⁷ EU country deficits are projected to continue declining from 2.2 percent of GDP in 2022. The US deficit was 4.2 percent of GDP in 2022; absent other reforms the US deficit will steadily increase in future years.

VALUE-ADDED TAXES EXPLAIN EUROPE'S BIGGER GOVERNMENT

Taxes on wages—individual income and payroll taxes—make up the largest share of revenue in every EU country and the United States. Figure 2 shows that consumption taxes (taxes on goods and services) account for almost three times as much revenue in the EU countries than in the United States.⁸

Every European country uses a value-added tax (VAT), a type of national sales tax collected by businesses at each stage of production instead of at the point of sale. In the United States, most consumption tax revenue is collected by state governments through a point-of-sale retail sales tax.⁹ In 2022, the average standard VAT rate in the EU countries was 21.8 percent, and the average state and local sales tax rate in the US was 6.6 percent.¹⁰ EU country VATs raise revenue equal to 12 percent of GDP, compared to sales taxes, which collect 4.3 percent of GDP in the United States. The adoption of VATs is closely associated with government growth because new revenue sources, especially when the cost of the tax is not transparent, tend to fuel new public expenditures and reduce pressure on spending reforms.¹¹ This association is evident in the reliance on VAT revenue across EU countries, where governments are almost 20 percent larger than in the United States.

The United States relies more heavily on property taxes, and EU countries collect more revenue from the corporate income tax. However, about 60 percent of business profits in the United States are taxed as individual income instead of corporate income.¹² After adjusting for this discrepancy, business tax revenues in the United States and Europe are roughly comparable.

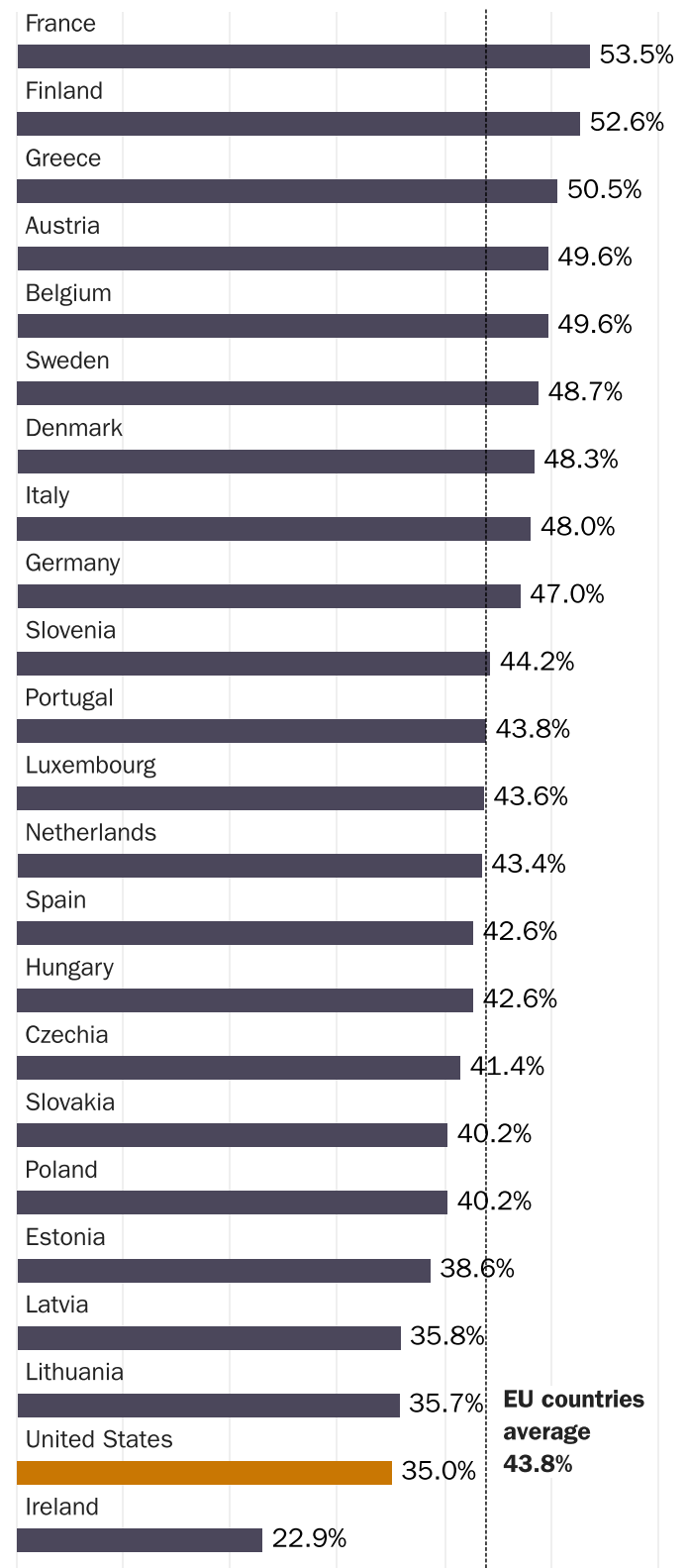
THE EUROPEAN MIDDLE CLASS PAYS HIGH TAXES

An average single worker with no children in the EU countries faces an all-inclusive average tax rate of

Figure 1

The United States has low taxes compared to other countries

Total national and subnational revenues as a percentage of gross domestic product, 2022



Source: OECD, *Government at a Glance 2023* (Paris: OECD, June 30, 2023), p. 147, Figure 10.1.

Notes: Includes both tax and nontax revenue. OECD = Organisation for Economic Co-operation and Development.

47 percent. A similar worker in the United States faces a 32 percent tax rate and pays almost \$12,000 less in taxes. If Congress allows spending growth to remain on its current path, American workers at every income level should be prepared to pay European-style taxes that are roughly 50 percent higher than current US levels.

The total tax burden on labor, or the “tax wedge,” is made up of four main components: income taxes, employee payroll taxes, employer payroll taxes, and consumption taxes. The annual OECD *Taxing Wages* report includes estimates of the first three direct labor taxes as a share of pretax gross labor costs.¹³ The pretax gross labor cost represents the total cost of an employee to an employer, which includes nonwage compensation and employer payroll taxes, whose ultimate cost is borne by workers.¹⁴ The OECD-reported wage tax wedge is the difference between the employer’s total cost (pretax gross labor costs) and the worker’s after-tax take-home pay.

A more comprehensive measure of the tax wedge on labor should also include consumption taxes. Consumption taxes reduce the purchasing power of an individual’s wages and thus impose an additional tax burden on labor income used to purchase taxed goods and services.¹⁵ The following analysis builds on the Tax Foundation’s methodology to add consumption taxes to the tax wedge to assess the total tax burden on workers.¹⁶ Corporate income taxes, excise taxes, and tariffs also tend to have an incidence that falls on workers but they are excluded from this analysis due to unavailability of data. These revenue sources also tend to account for smaller shares of the total tax burden.

In the United States, a single worker earning the average wage could earn about \$75,000 a year in 2023 if no taxes were imposed. (The \$75,000 figure is the consumption tax–inclusive gross labor cost before taxes, including wages and other employer costs).¹⁷ The average US worker pays \$23,732 in taxes to the government (\$11,233 in income taxes, \$5,177 in employee payroll taxes, \$5,501 in employer payroll taxes, and \$1,821 in sales taxes), leaving them with \$51,268 of after-tax personal income. That worker gets to keep 68 percent of their total earnings.

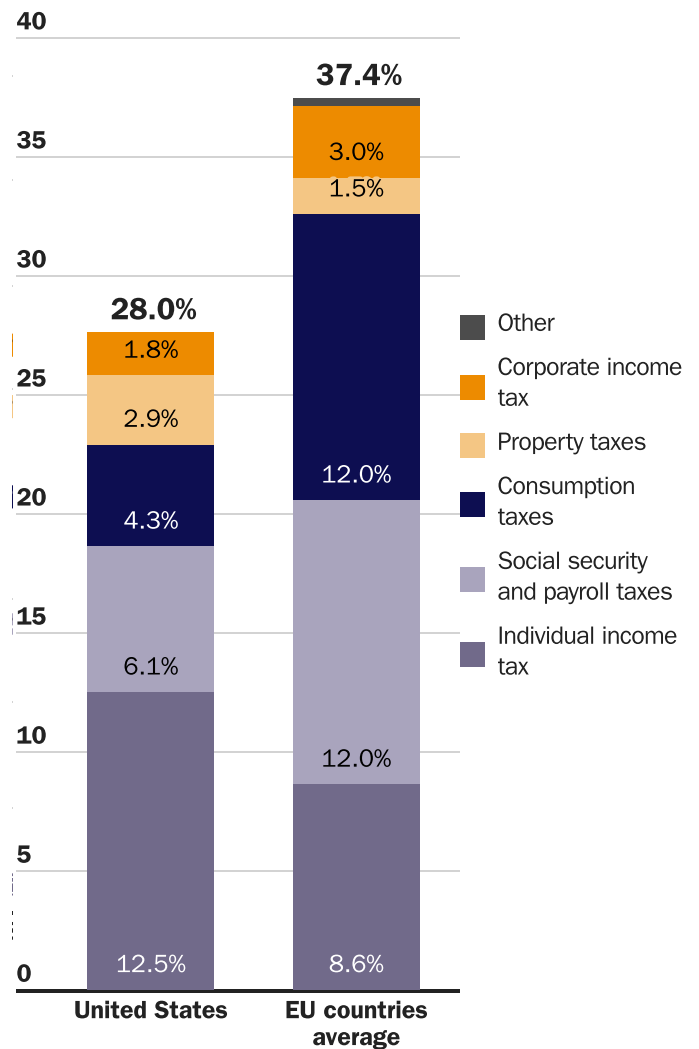
A single worker making the average wage in the average EU country also earns about \$75,000, if no taxes were imposed (consumption tax–inclusive gross labor costs). In

the EU countries the average worker pays \$35,408 in taxes to the government (\$9,799 in income taxes, \$6,697 in employee payroll taxes, \$12,297 in employer payroll taxes, and \$6,616 in VAT), leaving them with \$39,592. The worker gets to keep only 53 percent of their total earnings (Figure 3). The average EU country worker pays 49 percent higher taxes, or \$11,676 more, than a similar worker in the United States.

Figure 4 shows the total tax wedge for average single workers in each EU country. Belgium, Germany, Austria, and France confiscate more than half of their workers’ pretax compensation. Compared to the EU countries, workers in

Figure 2
Consumption taxes raise almost three times as much revenue in EU countries

Tax revenue as percent of gross domestic product by source, 2022



Source: “Revenue Statistics: Comparative Tables (Edition 2022),” OECD. Notes: Greece uses data from 2021. “EU countries” is the average across 22 EU-OECD countries. The totals are lower than in Figure 1 because the data here do not include nontax revenue sources. OECD = Organisation for Economic Co-operation and Development.

the United States face the lowest average tax wedge.

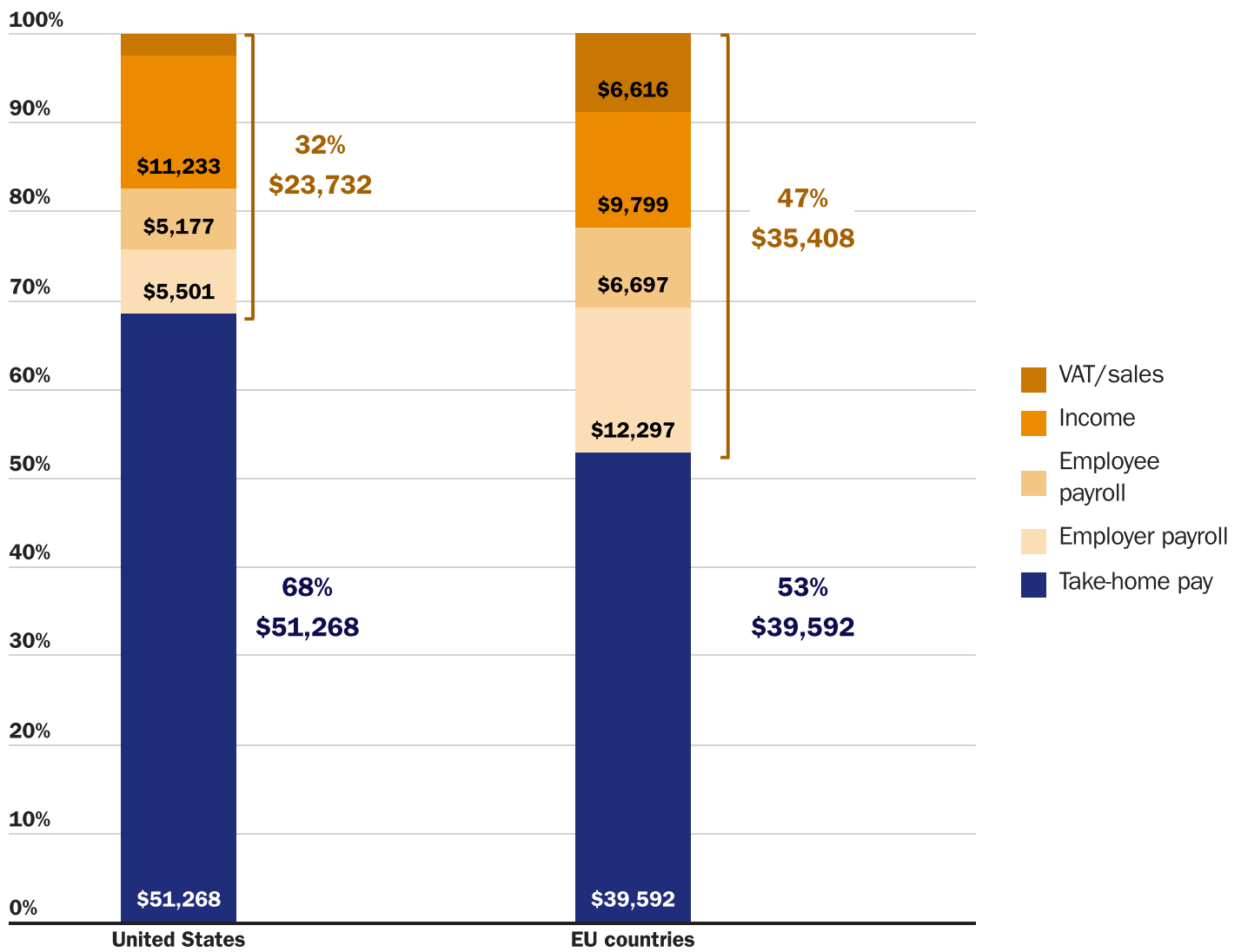
Across Europe, people pay significantly more in taxes, whether they are lower-income taxpayers, higher-income taxpayers, or families. Figure 5 shows that a worker in the average EU country who earns \$50,000 (about 67 percent of the average EU consumption tax-inclusive gross labor cost) pays almost \$7,000 more in taxes compared to a similar taxpayer in the United States (dollar figures may not add up due to rounding). A higher-income single earner in EU countries pays 51 percent of their \$125,000 total pretax earnings in taxes. In the United States, that

same taxpayer sends 36 percent of their earnings to the government and gets to keep more than \$18,000 more of their earnings than a similar EU worker. A family of four with two earners making a combined \$125,000 in an EU country pays a 44 percent tax rate and \$21,500 in higher taxes compared to a similar American family of four that pays an average tax rate of 26 percent. Lastly, a family of four with just one earner making the average wage pays over \$8,000 more in taxes in an EU country, facing a 31 percent tax rate—11 percentage points higher than for a similar family in the United States.

Figure 3

The average worker in Europe pays almost \$12,000 more in taxes each year than an American worker

Taxes paid by a single average-income worker, with pretax total earnings of \$75,000



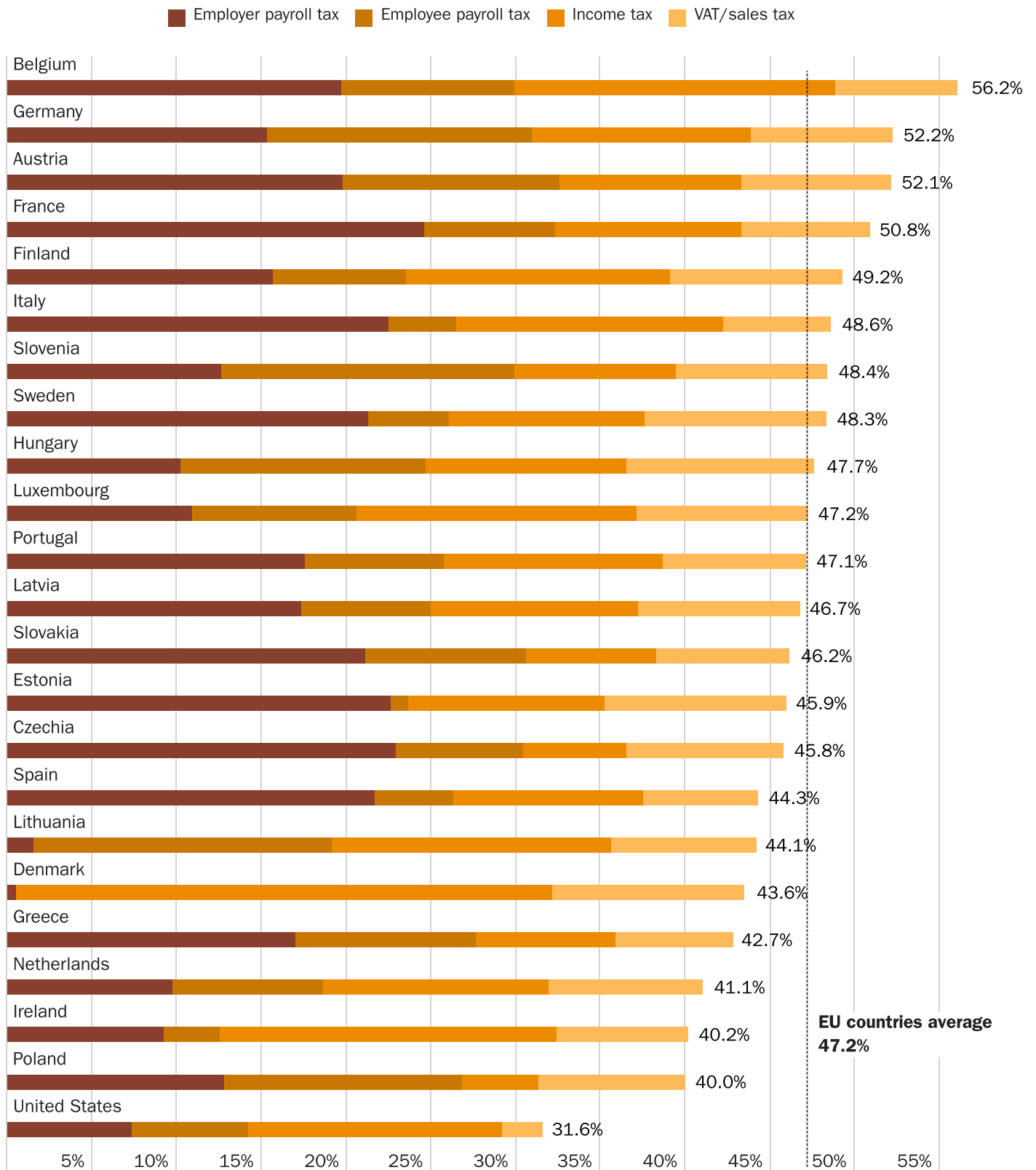
Sources: Author's calculations; *Taxing Wages 2024: Tax and Gender through the Lens of the Second Earner* (Paris: OECD, 2024); *Consumption Tax Trends 2022: VAT/GST and Excise, Core Design Features and Trends* (Paris: OECD, 2022); Jared Walczak, "Facts & Figures 2024: How Does Your State Compare?," Tax Foundation, April 3, 2024; and Cristina Enache, "A Comparison of the Tax Burden on Labor in the OECD, 2024," Tax Foundation, May 31, 2024.

Notes: This figure uses \$75,000 as the base consumption tax-inclusive gross labor costs, which is approximately the average total earnings in the United States and EU countries. EU countries is the average across 22 EU-OECD countries. OECD = Organisation for Economic Co-operation and Development.

Figure 4

Average American workers pay low taxes compared to EU countries

Consumption tax-inclusive wedge for single childless worker making average wage



Sources: Author's calculations; *Taxing Wages 2024: Tax and Gender through the Lens of the Second Earner* (Paris: OECD, 2024); *Consumption Tax Trends 2022: VAT/GST and Excise, Core Design Features and Trends* (Paris: OECD, 2022); Jared Walczak, "Facts & Figures 2024: How Does Your State Compare?," Tax Foundation, April 3, 2024; and Cristina Enache, "A Comparison of the Tax Burden on Labor in the OECD, 2024," Tax Foundation, May 31, 2024. Note: OECD = Organisation for Economic Co-operation and Development.

HIGH TAXES EXPLAIN WHY EUROPEANS WORK LESS

Workers in EU countries, on average, work 10 days—two full work weeks—less than their US counterparts.¹⁸ Differences across countries in employment levels and hours worked are primarily explained by differences in taxes on workers’ wages. In countries with high income and payroll taxes, individuals work fewer hours, take longer vacations, work shorter careers, and work more hours in nonmarket settings (housework, childcare, eldercare, etc.). If the federal budget continues on its current path toward European spending levels, the higher taxes that will necessarily follow will make American labor markets look more like those in high-tax countries.

When taxes reduce would-be workers’ take-home pay, and with it their economic return to working, they will tend to work less. For employers, high payroll taxes raise the cost

of adding new jobs, thus decreasing available employment opportunities, especially for lower-productivity and entry-level positions.

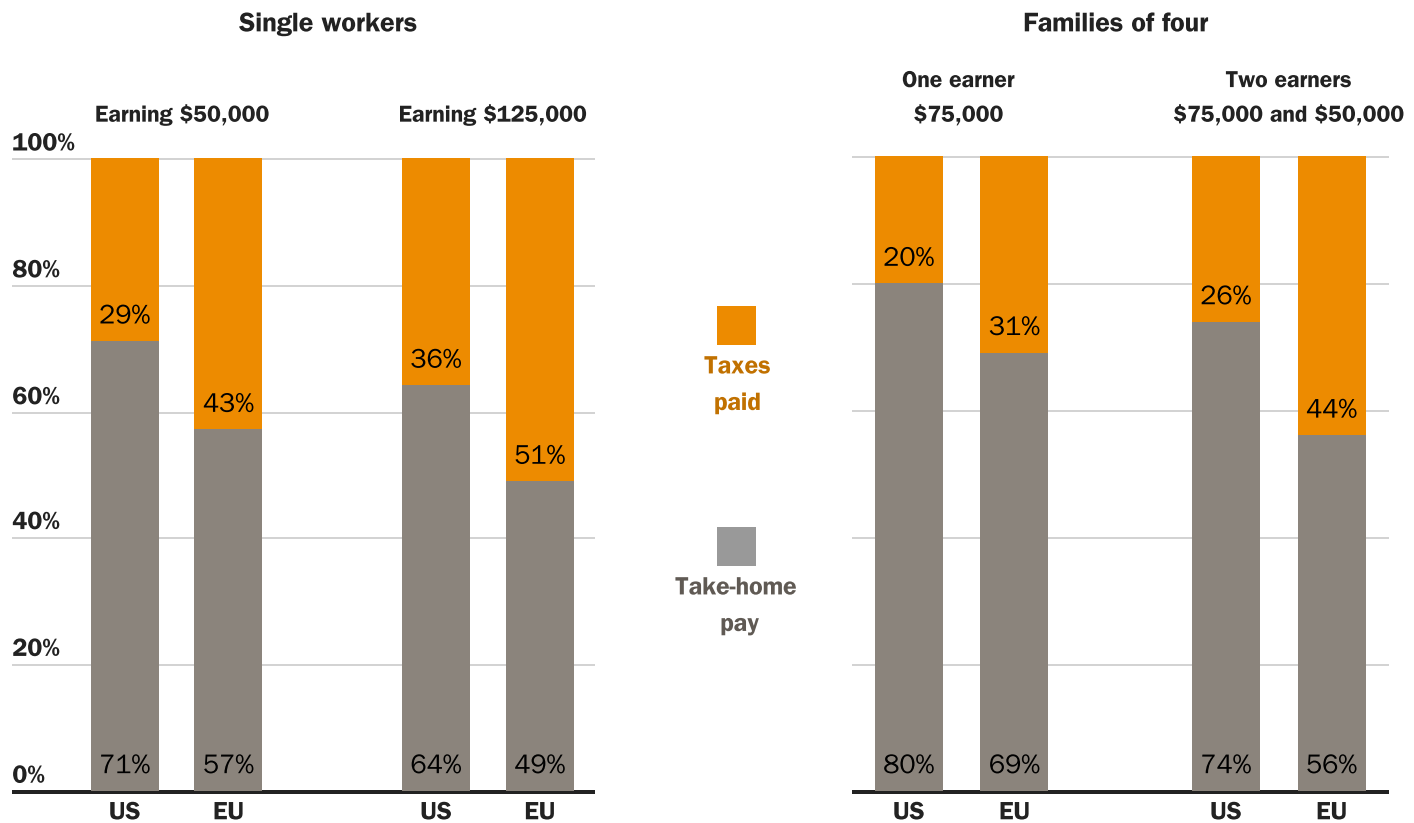
Tax-induced differences in labor-market outcomes affect societal well-being and economic prosperity. Because labor is an essential input of all forms of economic activity, wage taxes that reduce incentives to work depress a nation’s total output and, thus, its societal wealth. High tax rates also have a negative impact on entrepreneurship and business formation, which are necessary to support long-run productivity growth.

Figure 6 shows the strong negative association between average hours worked across 37 OECD countries and the tax wedge for average childless workers in 2019.¹⁹ The trend line explains about 26 percent of the variation and implies that a 1-percentage-point reduction in the tax wedge increases the average hours worked by 50 hours (about six workdays).

Figure 5

Low-income, high-income, and families all pay higher taxes in Europe than in the United States

Percent of total pretax earnings by income and family type



Sources: Author’s calculations; *Taxing Wages 2024: Tax and Gender through the Lens of the Second Earner* (Paris: OECD, 2024); *Consumption Tax Trends 2022: VAT/GST and Excise, Core Design Features and Trends* (Paris: OECD, 2022); Jared Walczak, “Facts & Figures 2024: How Does Your State Compare?,” Tax Foundation, April 3, 2024; and Cristina Enache, “A Comparison of the Tax Burden on Labor in the OECD, 2024,” Tax Foundation, May 31, 2024.
Notes: \$50,000 is about 67 percent of average earnings in the United States and EU countries, \$75,000 is 100 percent of the average earnings, and \$125,000 is 167 percent of the average earnings. EU is the average across 22 EU-OECD countries. OECD = Organisation for Economic Co-operation and Development.

More sophisticated econometric analysis finds similar results.

In a seminal paper, “Why Do Americans Work So Much More than Europeans?” Nobel Prize-winning economist Edward Prescott concluded that, to his surprise, “virtually all the large differences between the US labor supply and those of Germany and France are due to differences in tax systems.”²⁰ The subsequent research refining Prescott’s results has confirmed the strong negative relationship between wage taxes and time devoted to work.

In the mid-1950s, the average number of hours worked in many European countries was higher than in the United States. Coincident with government revenue growth over the subsequent decades, labor-market participation fell across Europe. In France and Germany, hours worked have declined by more than 35 percent since the 1950s. Over the same period, hours worked in the US have remained relatively constant.²¹

In a survey of OECD countries from 1956 through 2004, Lee Ohanian, Andrea Raffo, and Richard Rogerson show that in a neoclassical growth model, taxes on labor and consumption explain “much of the variation in hours worked both over time and across countries.”²² In an International Monetary Fund working paper, Agustin Velasquez and Svetlana Vtyurina extend a similar analysis to new EU member states. They find that, in their sample, declining tax rates in the new member states between 1995 and 2017 account for nearly half of the increase in hours worked.²³

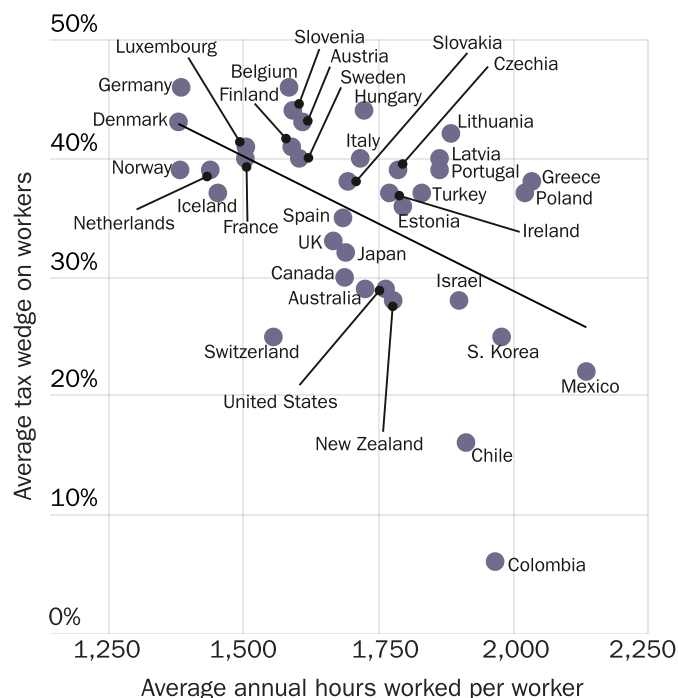
In a summary of the literature, Scott Hodge and Bryan Hickman conclude that “most of the relevant economic research has demonstrated the negative relationship between the tax wedge and employment.”²⁴ For example, in a linear regression analysis of EU member states, Primož Dolenc and Suzana Laporšek show that a 5-percentage-point decrease in the tax wedge could increase the EU employment rate by 3.6 percentage points.²⁵ Similar studies have shown that an increase in the average tax wedge is associated with higher unemployment, lower exports (due to higher labor costs), and a reduction in the economic growth rate.²⁶

High labor and consumption taxes incentivize individuals and families to devote more time to home production (cooking, cleaning, childcare, eldercare) instead of purchasing those services in the market. Research by Steven Davis and Magnus Henrekson confirms that tax differences

explain why the European Union has a smaller service sector and higher rates of home production compared to the United States.²⁷ High wage taxes also shorten individuals’ lifetime employment by incentivizing delayed labor-market entry and early retirement. Rogerson and Johanna Wallenius develop a life cycle model to show that the negative effect of wage taxes on lifetime hours worked is larger and independent of the prime-age labor responses to tax changes (which tend to be smaller).²⁸ This result indicates that workers are more sensitive to tax rates at the beginning and end of their careers.

The data presented so far have focused on average tax burdens. However, high tax rates on the highest-income workers also have distinct economic costs. High marginal tax rates—the tax rate paid on the worker’s next dollar of income earned—can reduce incentives for some of society’s highest-return human capital investments (additional years of education or technical training) and entrepreneurship.

Figure 6
People work more when they can keep more of their earnings



Sources: Author’s calculations; *Taxing Wages 2020* (Paris: OECD, 2020); and Robert C. Feenstra, Robert Inklaar, and Marcel P. Timmer, “The Next Generation of the Penn World Table,” *American Economic Review* 105, no. 10 (2015): 3150–82.

Notes: Average annual hours worked and tax wedge for 2019. Tax wedge is consumption tax-inclusive for a single childless worker making 100 percent of the country’s average wage. OECD = Organisation for Economic Co-operation and Development.

For example, a young doctor may choose to not spend additional years developing a technical specialty in surgery or research if they get to keep only 30 or 40 cents of every additional dollar that they will earn.

Similarly, high marginal tax rates diminish the returns to starting or expanding businesses. Business start-ups are risky (most fail), and the high earnings of founders and executives compensate for long hours, specialized skills, and the likely risk of failure. William Gentry and Glenn Hubbard use US data from the Panel Study on Income Dynamics to show “a significant increase in entrepreneurial entry when tax rates are less progressive.”²⁹ Other research corroborates these findings, using a life cycle model to show that lower taxes cause entrepreneurs to increase investment and expand their businesses.³⁰

Santiago Calvo López and Diego Sánchez de la Cruz report that effective marginal tax rates for top-income earners average 58 percent across all EU member states.³¹ Twenty-one of the 27 EU member states impose top marginal tax rates above 50 percent, and workers in 6 countries (Belgium, Slovenia, Portugal, Finland, Sweden, and France) face rates above 70 percent. Top earners in the average US state face an effective marginal tax rate of 47 percent, but the rate can reach as high as 55 percent in California and New York, two of the most populous states.³²

Such high rates likely lead to reduced revenue as they are above the revenue-maximizing top of the Laffer curve—the point beyond which the economic damage and induced avoidance of a higher tax rate is so large that a higher tax rate leads to lower total revenue collections.³³ Consensus estimates of the elasticity of taxable income—a measure of the decline in reported income as tax rates rise—imply that 49 percent is the upper-bound, revenue-maximizing income tax rate. In other words, any rate increase above 49 percent will lead to less revenue. Calvo López and Sánchez de la Cruz argue that the wide variation in tax rates across EU countries (ranging from 73 percent in Belgium to 27 percent in Bulgaria) creates strong incentives for high-income earners to migrate out of high-tax jurisdictions. This result is also evident following a 3-percentage-point tax increase on high-income California residents in 2012.³⁴ When taxpayers can easily move between taxing jurisdictions, the revenue-maximizing rate could be as low as 25 percent, and is most likely between 35 percent and 40 percent using other plausible parameters.³⁵

A country’s tax wedge is partly endogenous to institutional factors and local preferences.³⁶ However, evidence from time series of increases and decreases in the tax wedge in the same country, as well as from differences across culturally similar countries, indicates that taxes on work have a nontrivial causal effect on labor-market outcomes. Both economic theory and empirical evidence show that differences in income, payroll, and consumption taxes explain a significant portion of the variation across countries in labor-force participation, hours worked, sectoral composition, career length, and entrepreneurship.

WHAT ARE EUROPEANS PAYING FOR?

Individuals in high-tax countries often receive more government services, such as government-provided health care or fully subsidized higher education. Many US taxpayers must purchase these services in the market, although most people in the United States still receive generous government subsidies. Despite larger tax and transfer systems, big middle-class tax bills in Europe are not associated with higher personal consumption.

People better their lives by having access to more resources. In the United States, average individual consumption—a measure of material well-being—is 70 percent higher than in EU countries. Relative consumption levels measure societies’ ability to purchase food, housing, health services, technology, entertainment, and any other goods or services that individuals demand. Total consumption also includes government-provided goods and services that are funded by higher taxes. If the thousands of dollars in additional taxes paid by European workers made them better off, we would expect these goods and services to show up as higher consumption.³⁷ Figure 7 reports average individual consumption per capita at current prices and exchange rates, adjusted for purchasing power parity; the United States is indexed to 100.³⁸ In 2020, average individual consumption was 12 percent lower in Luxembourg (the EU country with the highest consumption) and 58 percent lower in Hungary (the EU country with the lowest consumption) than in the United States.

Two prominent examples of services provided directly by European governments—financed by higher taxes—are education and health care. However, the US government

also spends significant resources in these sectors. For example, the US government spent about \$22,903 per full-time-equivalent student in postsecondary education, \$1,766 more than the EU country average of \$21,136 in equivalent US dollars (these figures include government-provided and subsidized loans).³⁹ Even more strikingly, in the health care sector, the US government ranks first in per capita government spending on health expenditures and has the largest share of total government expenditures devoted to health spending compared to EU countries.⁴⁰

Ultimately, comparing these sectors between countries is difficult due to the many explicit and implicit distorting subsidies paired with vastly different regulatory environments. For example, US subsidies for the health sector tend to come with less rationing and fewer price controls, resulting in significantly higher prices buoyed by government spending and an implicit subsidy for foreign markets that *are* subject to price controls.⁴¹ The US system of effectively uncapped government subsidies is not a model to emulate, but neither is Europe’s subsidy, ration, and price-control model.

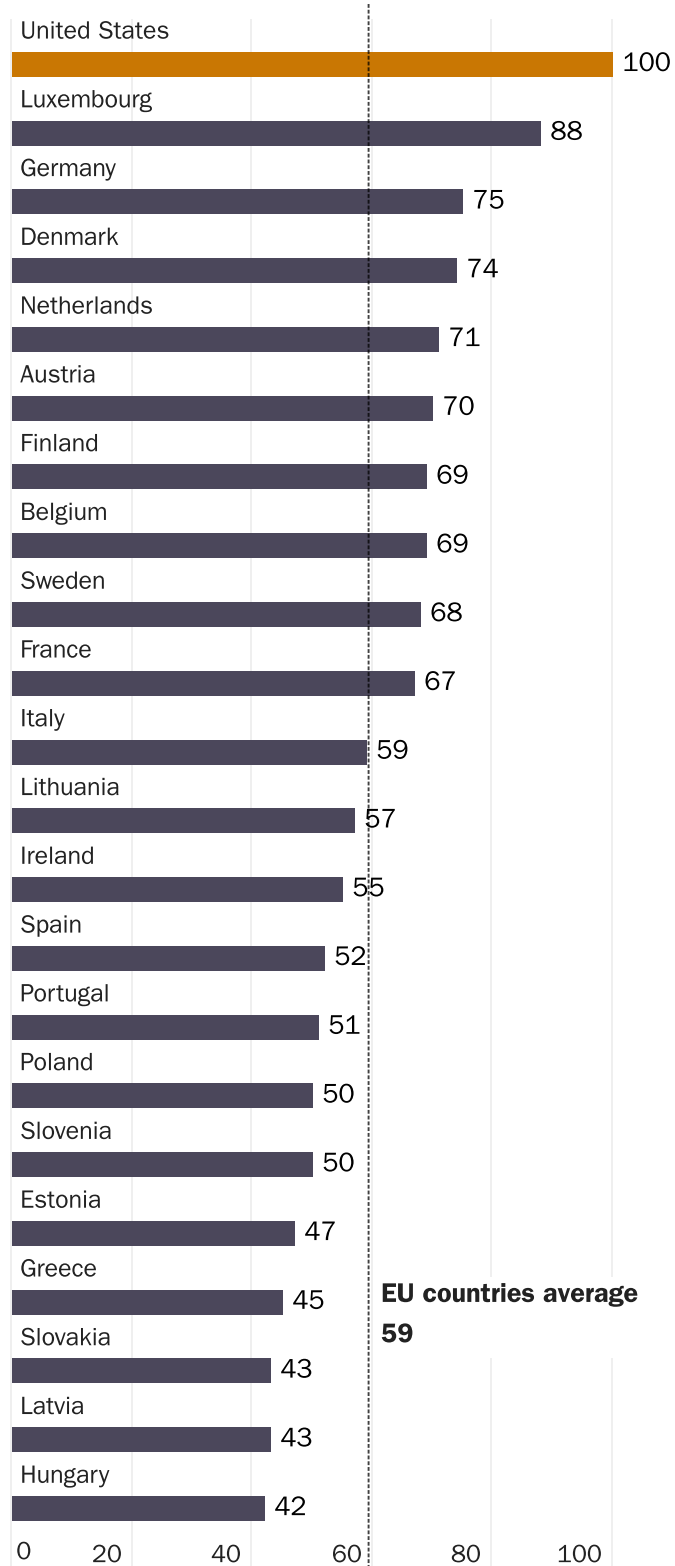
In addition to government policy directly inflating US health and education spending, education and health care are services that people tend to consume proportionally more of as incomes rise, so total US spending in these sectors tends to be higher than in the economically poorer EU countries.⁴² Higher wealth levels and government policy have led to inflated levels of private US health spending. This is one reason the United States ranks highest in total government health spending but lowest in government health spending as a share of total (government and private) health expenditures.

In Scandinavia, governments also tend to spend a relatively larger share of total expenditures on family policy.⁴³ Richard Rogerson explains that additional spending on childcare and eldercare “serve[s] to subsidize market activity, thereby undoing some of the distortions associated with high tax rates on labor.”⁴⁴ In these countries, higher taxes “purchase” government-provided family and other labor-market subsidies that partially offset the tax system’s negative work disincentives. However, such a system denies individuals the choice to arrange their time (such as the choice to pursue nonmarket work) differently from what the government has designed. It is better to eliminate the taxes and the subsidies

Figure 7

Americans consume 70 percent more than EU countries

Average individual consumption per capita, 2020; United States indexed to 100



Source: Organisation for Economic Co-operation and Development, *National Accounts of OECD Countries, Volume 2022, Issue 1* (Paris: OECD, April 21, 2022), Main Aggregates.

Notes: Consumption reported at current prices and exchange rates, adjusted for purchasing power parity. OECD = Organisation for Economic Co-operation and Development.

rather than attempt to paper over the negative effects of high taxes with offsetting labor-market interventions.

CONCLUSION

The United States is at a fiscal crossroads. Down one path lie spending reforms that are necessary to maintain America's vibrant labor market and its position as a comparatively low-tax country. The other path—the one the country is currently headed down—is toward a European-style welfare state that requires significantly higher taxes on all Americans. Funding a European-style welfare state would require a roughly 50 percent tax increase on lower- and middle-income American workers and families.

There are no easy political solutions. Proposals to increase taxes only on high-income Americans are neither a mathematically nor economically feasible mechanism to

raise significant amounts of new revenue.⁴⁵ Proposals to cut spending that do not tackle Social Security and Medicare—the federal programs almost exclusively responsible for long-run spending growth—will not sustainably reduce expenditures enough to prevent large future tax increases.⁴⁶

The United States has been trapped in a fiscal illusion for more than two decades. When deficit financing can no longer sustain the illusion, Americans will have to face the reality that the only way to fund a big and growing government is with high taxes on the middle class. Without spending reforms, the American people should be prepared for a future that looks more like Europe and less like the United States they are accustomed to. However, spending reforms would allow Congress to keep taxes low, boost economic growth, and stabilize federal debt. Congress can avert a stagnant, high-tax European future by decisively cutting spending—the sooner and deeper the cuts, the better.

NOTES

1. *Mid-Session Review, Budget of the US Government, Fiscal Year 2025* (Washington: Office of Management and Budget, July 19, 2024).

2. Those 22 countries are Austria, Belgium, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, and Sweden. These countries are members of both the OECD and the European Union.

3. Unless otherwise noted, all figures in this report represent totals for combined national and subnational taxes and spending.

4. *Government at a Glance 2023* (Paris: OECD, June 30, 2023), Figure 10.1.

5. Measured by expenditures, Lithuania and Ireland spend a smaller share of their GDP than the United States.

6. State and local expenditures are assumed to remain constant at 14.4 percent of GDP. The current policy federal expenditure baseline in 2054 is 31.4 percent of GDP. Brian Riedl, "A Comprehensive Federal Budget Plan to Avert a Debt Crisis," Manhattan Institute, June 27, 2024.

7. These data come from the OECD and represent cumulative deficits at all levels of government. This is different from

federal figures, such as those produced by the Congressional Budget Office.

8. Data on total revenues in Figure 1 come from the OECD System of National Accounts and include both tax and nontax revenue. Figure 2 uses data from OECD Revenue Statistics, which does not include nontax revenue sources. Some definitions of tax revenues differ between the two sources. *Government at a Glance 2023* (Paris: OECD, June 30, 2023).

9. The United States is the only major developed country that uses a retail sales tax. VATs tend to have much less evasion and are less likely to result in tax pyramiding. Tax pyramiding occurs when sales tax is applied at multiple stages of production, leading to higher tax burdens on products with more discrete stages of production—and thus increasing the economic distortion from the tax. VATs also tend to have lower tax salience, as they are incorporated gradually and incrementally into the final sales price—a process that reduces the transparency of the total tax burden. The ease with which politicians can keep VAT tax rates high, due to low salience and higher economic efficiency, is one reason that many libertarians oppose the implementation of a VAT in the United States. Tax Policy Center Briefing Book, "What Is the Experience of Other Countries with National Retail Sales Taxes?" Tax Policy Center, updated January 2024; and Daniel J. Mitchell, "The Case against the Value-Added Tax," Cato Institute, July 26, 2011.

10. *Consumption Tax Trends 2022: VAT/GST and Excise, Core Design Features and Trends* (Paris: OECD, 2022); and Janelle Fritts, “State and Local Sales Tax Rates, 2022,” Tax Foundation, February 3, 2022.
11. Michael Keen, “What Do (and Don’t) We Know about the Value Added Tax? A Review of Richard M. Bird and Pierre-Pascal Gendron’s *The VAT in Developing and Transitional Countries*,” *Journal of Economic Literature* 47, no. 1 (2009): 159–70; Michael Keen and Ben Lockwood, “Is the VAT a Money Machine?,” *National Tax Journal* 59, no. 4 (2006): 905–28; Michael Keen and Ben Lockwood, “The Value Added Tax: Its Causes and Consequences,” *Journal of Development Economics* 92, no. 2 (2010): 138–51; and Amy Finkelstein, “E-ztax: Tax Salience and Tax Rates,” *Quarterly Journal of Economics* 124, no. 3 (August 2009): 969–1010.
12. Huaqun Li, “How the TCJA Affected Legal Business Forms,” Tax Foundation, June 19, 2024.
13. *Taxing Wages 2024: Tax and Gender through the Lens of the Second Earner* (Paris: OECD, 2024).
14. The employer payroll tax is legally paid by the business, but the economic cost of the tax is paid by the worker in the form of lower take-home pay.
15. The VAT is paid by businesses, but the economic cost falls on workers because the VAT lowers the purchasing power of their wages. “Effects of Adopting a Value-Added Tax,” Congressional Budget Office, February 1992; and Eric Toder, James R. Nunns, and Joseph Rosenberg, “Implications of Different Bases for a VAT,” Tax Policy Center, February 2012.
16. VATs and sales taxes (consumption taxes) are incorporated into the tax wedge according to the formula: $(\text{income taxes} + \text{payroll taxes} + \text{consumption taxes}) / (\text{gross pretax labor costs} + \text{consumption taxes})$. Consumption taxes are: $(\text{tax-inclusive VAT/sales tax rate}) \times (\text{VAT/sales tax revenue ratio}) \times (\text{gross pretax labor costs})$. The pretax consumption tax–inclusive gross labor cost includes the cost of consumption taxes because it is a cost of production to employers that is assumed to be ultimately borne by workers. This methodology follows the one described by Cristina Enache, “A Comparison of the Tax Burden on Labor in the OECD, 2024,” Tax Foundation, May 31, 2024. The VAT rates and revenue ratios are from *Consumption Tax Trends 2022: VAT/GST and Excise, Core Design Features and Trends* (Paris: OECD, 2022), Annex Table 2.A.1 and 2.A.7. The US sales tax rate and the revenue ratio are a simple average across states; see Janelle Fritts, “State and Local Sales Tax Rates, 2022,” Tax Foundation, February 3, 2022; and Jared Walczak, “Facts & Figures 2024: How Does Your State Compare?,” Tax Foundation, April 3, 2024.
17. The average consumption tax–inclusive gross labor cost before taxes for a single person with no children in the United States was \$74,542 in 2023. The US dollar purchasing-power-parity exchange-rate-adjusted labor cost varies by country. The average EU country labor cost is \$74,772, ranging from \$111,577 (Belgium) to \$42,037 (Slovakia). Figure 3 uses \$75,000 as the base consumption tax–inclusive gross labor costs. Before adding in employer and consumption tax costs to the gross consumption tax–inclusive labor costs, US average gross pretax earnings are \$67,264.
18. These were eight-hour workdays in 2019. Robert C. Feenstra, Robert Inklaar, and Marcel P. Timmer, “The Next Generation of the Penn World Table,” *American Economic Review* 105, no. 10 (2015): 3150–82.
19. Data are from 2019 (the most recent that are available). Figure 6 uses tax wedge data from 2019. Restricting the data to only EU countries shows similar results. Robert C. Feenstra, Robert Inklaar, and Marcel P. Timmer, “The Next Generation of the Penn World Table,” *American Economic Review* 105, no. 10 (2015): 3150–82.
20. Edward C. Prescott, “Why Do Americans Work So Much More than Europeans?,” Federal Reserve Bank of Minneapolis, *Quarterly Review* 28, no. 1 (July 2004).
21. Richard Rogerson, “Taxes and Market Work: A Cross-Country Comparison,” *The Reporter*, National Bureau of Economic Research, June 1, 2009.
22. Lee Ohanian, Andrea Raffo, and Richard Rogerson, “Long-Term Changes in Labor Supply and Taxes: Evidence from OECD Countries, 1956–2004,” *Journal of Monetary Economics* 55, no. 8 (2008): 1353–62.
23. Agustin Velasquez and Svetlana Vtyurina, “How Does Taxation Affect Hours Worked in EU New Member States?,” IMF Working Paper no. 130, June 17, 2019.
24. Scott Hodge and Bryan Hickman, “The Importance of the Tax Wedge on Labor in Evaluating Tax Systems,” Tax Foundation, September 2018.
25. Primož Dolenc and Suzana Laporšek, “Tax Wedge on Labour and Its Effect on Employment Growth in the European Union,” Prague Economic Papers, December 2010, pp. 344–58.
26. *OECD Employment Outlook 2006: Boosting Jobs and Incomes* (Paris: OECD, June 16, 2006); Alberto Alesina and Roberto Perotti, “The Welfare State and Competitiveness,” *American Economic Review* 87, no. 5 (1997): 921–39; and Francesco Daveri and Guido Tabellini, “Unemployment, Growth and Taxation in Industrial Countries,” *Economic*

Policy 15, no. 30 (2000): 48–104.

27. Steven J. Davis and Magnus Henrekson, “Tax Effects on Work Activity, Industry Mix and Shadow Economy Size: Evidence from Rich-Country Comparisons,” National Bureau of Economic Research Working Paper no. 10509, May 2004; and Richard Rogerson, “Structural Transformation and the Deterioration of European Labor Market Outcomes,” *Journal of Political Economy* 116, no. 2 (2008): 235–59.

28. Richard Rogerson and Johanna Wallenius, “Micro and Macro Elasticities in a Life Cycle Model with Taxes,” *Journal of Economic Theory* 144, no. 6 (2009): 2277–92.

29. William Gentry and R. Glenn Hubbard, “Tax Policy and Entrepreneurial Entry,” *American Economic Review* 90, no. 2 (2000): 283–87.

30. Patrick Macnamara, Myroslav Pidkuyko, and Raffaele Rossi, “Marginal Tax Rates and Income in the Long Run: Evidence from a Structural Estimation,” *Journal of Monetary Economics* 142 (2024): 1–16.

31. Santiago Calvo López and Diego Sánchez de la Cruz, “Overview and Analysis of the Impact of Marginal Taxes on High Incomes in the European Union,” Tax Foundation, May 24, 2024.

32. Author’s calculation. Adam N. Michel, “Top Tax Rates Are Already on Wrong Side of Laffer Curve in at Least Ten States,” *Cato at Liberty* (blog), Cato Institute, April 24, 2024.

33. The Laffer curve is a useful tool to understand the limits to how high tax rates can go. However, tax cuts are usually worth pursuing, even when they result in less revenue. Adam N. Michel, “Resist the Allure of Laffer Curve Logic,” *Cato at Liberty* (blog), Cato Institute, November 21, 2023.

34. Joshua Rauh and Ryan Shyu, “Behavioral Responses to State Income Taxation of High Earners: Evidence from California,” *American Economic Journal: Economic Policy* 16, no. 1 (2024): 34–86.

35. Adam N. Michel, “Top Tax Rates Are Already on Wrong Side of Laffer Curve in at Least Ten States,” *Cato at Liberty* (blog), Cato Institute, April 24, 2024; and Alan Reynolds, “Optimal Top Tax Rates: A Review and Critique,” *Cato Journal* 39, no. 3 (Fall 2019): 635–65.

36. Yishay David Maoz, “Labor Hours in the United States and Europe: The Role of Different Leisure Preferences,” *Macroeconomic Dynamics* 14, no. 2 (2010): 231–41.

37. There is no correlation between the average tax wedge or

total revenue collection as a percent of GDP and consumption.

38. Author’s calculations using “Table 18: Actual Individual Consumption per Head at Current Prices and Current PPPs, Index,” *National Accounts of OECD Countries, Volume 2022, Issue 1* (Paris: OECD, April 21, 2022).

39. The OECD reports gross loans as spending, and most post-secondary loans in the United States are provided and subsidized by the government. As a larger share of loans are forgiven, the difference between direct outlays and loans will shrink. The US dollar was converted using purchasing power parity for GDP. Author’s calculations using *Education at a Glance 2023* (Paris: OECD, September 12, 2023), Table C1.2.

40. Author’s calculations using “Figure 7.4. Health Expenditure per Capita, 2022 (or Nearest Year)” and “Figure 7.12. Health Expenditure from Public Sources as Share of Total Health Expenditure, 2021 (or Nearest Year),” *Health at a Glance 2023* (Paris: OECD, November 7, 2023).

41. Michael F. Cannon, “End the Tax Exclusion for Employer-Sponsored Health Insurance,” Cato Institute Policy Analysis no. 928, May 24, 2022; and Irene Papanicolas, Jonathan Cylus, and Luca Lorenzoni, “Cross-Country Comparisons in Health Price Growth Over Time,” Health Services Research, March 7, 2024.

42. “Figure 7.12. Health Expenditure from Public Sources as Share of Total Health Expenditure, 2021 (or Nearest Year),” *Health at a Glance 2023* (Paris: OECD, November 7, 2023).

43. Richard Rogerson defines Scandinavia as Denmark, Finland, Norway, and Sweden. In the case of Denmark and Norway, the average tax wedge is on the lower end of the EU distribution, although it is still more than 10 percentage points higher than in the United States.

44. Richard Rogerson, “Taxation and Market Work: Is Scandinavia an Outlier?,” National Bureau of Economic Research Working Paper no. 12890; and Richard Rogerson, “Taxes and Market Work: A Cross-Country Comparison,” *The Reporter*, National Bureau of Economic Research, June 1, 2009.

45. Adam N. Michel, “Biden’s Math of Just Taxing the Rich Doesn’t Add Up,” *Cato at Liberty* (blog), Cato Institute, March 22, 2023; and Brian Riedl, “The Rich Aren’t Rich Enough to Balance the Federal Budget,” Manhattan Institute, January 22, 2024.

46. Romina Boccia, “US Workers Earning \$60,070 Face \$3,063 in Higher Taxes to Keep Social Security Solvent,” *Cato at Liberty* (blog), Cato Institute, July 18, 2024; and Paul Winfree, “The Looming Debt Spiral: Analyzing the Erosion of US Fiscal Space,” Economic Policy Innovation Center, March 5, 2024.

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