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Cato Institute Briefing Paper No. 15: A Consumer Guide to Taxes: How Much Do You Really Pay in Taxes?

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Executive Summary

Most Americans complain that taxes are taking a larger bite out of their incomes than ever before. During the month of April, tax-filing time, they complain most bitterly.

This study calculates how much additional money middle-income workers must earn to purchase various goods and services--a new car, a computer, or a year's college tuition for their children--after all taxes are fully taken into account. For instance, a wage earner in an average-tax state must earn $17,038 to purchase a $10,000 car. That means that the worker pays $7,038 in income, payroll, and sales taxes on a $10,000 car. The study finds that in some high-tax states, such as California and New York, the "true" price to consumers of goods and services is twice the retail price because of taxes. Self-employed workers, who must pay a self-employment tax, routinely must also earn double the retail price of an item to have the after-tax income to buy it. That is the "rule of two on taxes."

Introduction

Most Americans complain that taxes are taking a larger bite out of their incomes than ever before. During the month of April, tax-filing time, they complain most bitterly. But do workers really know how much they pay in combined federal, state, and local taxes each year?

In 1960 middle-income Americans paid less than 30 percent of their earnings in local, state, and federal taxes; today that figure is up to 40 percent.[1] Furthermore, many middle- and upper-income families living in the states that have the highest taxes, such as New York and California, pay nearly half their incomes in taxes. High taxes reflect the growth of government, at all levels, in the United States since World War II.[2]

This study presents a new and easily understood method of measuring the impact of taxes on the finances of American workers. We calculate how much additional income middle- income workers must earn to purchase various goods and ser- vices--a new car, a computer, a year's college tuition for their children, or a year's supply of gasoline--after all taxes are fully taken into account.

That is a good measure of the impact of taxes on American workers because the main reason people work is to earn money to buy the things they want. But much of American workers' income is consumed by taxes. The question is, how much? Our standard example is the purchase of a new car with a sticker price of $10,000.[3] Because of taxes, the average worker needs to earn significantly more than $10,000 extra income to pay for that car.

* In an average-tax state a middle-income worker with earnings of $34,000 must earn an additional $17,038 to

purchase a $10,000 car. That means the worker must earn $1O,000 to pay for the car and $7,038 to pay the sales tax on the car and the income and payroll taxes on the earnings used to pay for the car.

* A worker with an income of $34,000 must work three and a half months of the year to pay for the car, and then two and a half additional months to pay the taxes on the income used to purchase the car.

* For a self-employed middle-income worker, the true cost of the $10,000 car is $18,320, because self- employed workers pay a 14.1 percent self-employment tax, to cover the employee and the employer shares of Social Security and Medicare (FICA) payroll taxes, on their incomes.

* In a high-tax state, such as California, the pre-tax cost of the car is $18,776 for a wage earner and $20,186 for a self-employed worker. In a low-tax state, such as New Hampshire, the car costs a middle-income wage earner $15,540 in pre-tax income and a self-employed worker $16,708.

* In the five states with the highest taxes, wage- earners have to make roughly $2,000 more to purchase a $10,000 car than they do in the five states with the lowest taxes.

Taxes also affect the true price of a variety of other products and services.

* In an average-tax state the amount of earnings needed to pay for a $1,500 computer is $2,568. A self-employed worker needs $2,748.

* In an average-tax state the amount of earnings needed to pay for a year's tuition at a private college ($8,000) is $13,107, and a self-employed worker needs $14,092.

* In an average-tax state the typical driver spends $479 a year on gasoline, excluding all taxes. But the income needed to purchase that gasoline, after accounting for all taxes including the federal and state gasoline taxes, is $1,065. Self-employed workers must earn $1,145 to purchase the gasoline.

As those examples demonstrate, taxes take a much larger chunk out of Americans' incomes than is generally realized--which leads us to our rules of thumb on taxes:

* In high-tax states the true price of goods and services is roughly twice the retail price at the store. To figure how much income you need to purchase an item, multiply its price by two.

* The rule of two applies to self-employed workers in most states. Half of their earnings are consumed by taxes.

* In low-tax states the true price of goods and services, including all taxes, is one and a half times the stated price. To figure how much of your income goes to purchase an item, multiply its price tag by 1.5.

Calculating Your Tax Burden

The purpose of this study is to provide practical and understandable examples of how much middle-income workers actually pay in taxes when purchasing goods and services. We address the question by showing how much extra income a person must earn to pay for major purchases. In all of our examples we examine the taxes paid by a married couple with an income between $34,000 and $53,400.

This study takes into account four types of taxes that raise the "true" price of a product. We ignore the impact of business taxes, which are ultimately borne by workers and the owners of capital. For wage earners we also ignore the employer portion of FICA payroll taxes. Four taxes are examined.

* The income tax paid on the worker's earnings. We assume that the worker in our examples has an income between $34,000 and $53,400 per year. That means that workers are paying a 28 percent marginal federal tax rate on all additional earnings.

* The payroll tax. For most workers (with earnings up to $53,400) this constitutes a 7.65 percent tax on earnings on

top of the income tax. Self-employed workers must pay a self-employment tax that raises their effective payroll tax rate to 14.1 percent.[4]

* The state income tax. Rates vary widely from state to state. They range from a low of zero in 10 states to a high of 12 percent in North Dakota.

* The state and local sales tax. Those taxes also vary from state to state and even among localities within states. The highest combined state and local sales tax rate is 10 percent in Louisiana, but many states have no sales tax.

Taxes on a Car in a Typical State

Taxes on Wage Earners

In our first example we examine the amount of extra money a middle-income worker needs to earn to purchase a car in a state where taxes are typical, Michigan. (A detailed summary of the tax calculations is given in the Appendix.) Michigan taxpayers pay a 4.6 percent income tax on taxable income. (For simplicity we ignore the personal exemption; the standard deduction; and itemized deductions, except the state income tax deduction, in all analyses.) Michigan also imposes a 4 percent nondeductible sales tax on the retail purchase of most products.

When all income, payroll, and sales taxes are taken into account, how much money does the typical middle-income Michigan wage earner have to make to purchase a $10,000 automobile?

First, to determine the required earnings, the consumer adds the 4 percent sales tax to the price of the automobile. In Michigan that adds $400 to the retail cost, so the automobile now costs $10,400.

But to earn $10,400 in take-home pay, the worker will have to make an additional $17,038 because the government will take $7,038 from the worker's paycheck in (1) state income tax, (2) payroll taxes, and (3) federal income taxes. The breakdown of those taxes is given in Table 1 and shown in Figure 1. (The formula for deriving the numbers is given in the Appendix.)

Table 1 True Cost of a Car to a Wage Earner

Retail sales price of car	10,000
Taxes	
Michigan sales tax	$ 400
Michigan income tax	784
FICA payroll taxes	1,303
Federal income tax	4,551
Total taxes	7,038
Earnings required to purchase car	17,038

Figure 1 How Taxes Add to the "True" Price of a New Car in an Average-Tax State (Michigan) [Bar Graph Omitted]

$10,000

$4,551	$5,854	$7,038	$17,038	
Retail Sales Price	Federal Income Tax	Federal Income Tax and Payroll Tax	Federal Income, Payroll,and State Taxes	Retail Sales Price and All Taxes

State Income and Sales Taxes: $1,184 Federal Payroll Tax: $1,303 Federal Income Tax: $4.551 Retail Sales Price: $10,000

Taxes on the Self-Employed

All self-employed workers are keenly aware that they have additional taxes taken directly out of their incomes because they pay a self-employment tax, which is equal to the employer and the employee shares of FICA payroll taxes. The self-employment tax rate was 14.1 percent on 1991 earnings of up to $53,400,[5] which means, of course, that self-employed workers must earn an even greater amount of extra income to

Table 2 True Cost of a Car to a Self-Employed Worker

Retail sales price of car $10,000

Taxes

Michigan sales tax $ 400 Michigan income tax 783 Self-employment tax 2,589 Federal income tax 4,548

Total taxes $ 8,320

Earnings required to purchase car $18,320

purchase a new $10,000 car. In fact, total earnings required to purchase the car rise to $18,320 (see Table 2).

In our example a self-employed worker must earn $1,282 more in pre-tax income than a non-self-employed worker must to pay for the car. That is because of the hefty self- employment tax.

Taxes in High- and Low-Tax States

The above example shows the tax liability in a typical state. But the states vary widely in the level and mixture of taxes they impose on their residents. The state with the highest sales and income taxes, California, charges an 8.25 percent sales tax on most items and imposes a 9.3 percent marginal income tax rate on middle-income workers, whereas Alaska and New Hampshire have neither a state income nor a sales tax. Table 3 compares the amount of income a worker must earn to purchase a $10,000 car in eight jurisdictions with the highest taxes and the eight with the lowest taxes.[6] It also shows the amount of taxes self-employed workers pay in those jurisdictions.

In California, a middle-income worker must earn an additional $18,776 to be able to purchase a $10,000 car. A self-employed worker in California must earn $20,186 to purchase the car. That worker must earn more than double the sticker price of the car if all taxes are taken into account. In other words, in the high-tax states, self-employed workers spend more of their income to pay the taxes on the car than on the car itself.

Table 3 Earnings Needed to Buy a $10,000 Car in Eight High-Tax and Eight Low-Tax Jurisdictions

	State Incomes Tax Rate (%)	State & Local Sales Tax Rate (%)	Estimated Earnings Req'd Wage Earner ($)	Estimated Earnings Req'd Self Employed ($)
High-tax jurisdictions				
California	9.300	8.25	18,776	20,186
Maine	9.900	6.00	18,524	19,916
New York	7.875	8.50	18,490	19,879
District of Columbia	9.500	6.00	18,432	19,816
Minnesota	8.00	7.50	18,348	19,727
Rhode				

Island	7.400	7.00	18,129	19,492
Maryland	7.500	5.00	17,812	19,150
Wisconsin	6.900	5.50	17,766	19,101
Low-tax jurisdictions				
Alaska	0.0	0.00	15,540	16,708
New Hampshire	0.0	0.00	15,540	16,708
Wyoming	0.0	5.00	16,317	17,543
South Dakota	0.0	6.00	16,472	17,710
Florida	0.0	7.00	16,628	17,878
Nevada	0.0	7.00	16,628	17,878
Texas	0.0	8.20	16,814	18,078
Tennessee	0.0	8.25	16,822	18,086

Our examples demonstrate that workers in high-tax states must earn significantly more extra income to purchase goods and services than those in low-tax states (see Figure 2). For example, a California worker must earn $3,000 more income to purchase a $10,000 car than a worker living in New Hampshire or Alaska.

There is evidence that people try to avoid working and purchasing goods and services in high-tax states. For instance, to avoid high income taxes, businesses and workers tend to move from high-tax to low-tax states.[7] That was clearly the case in the 1980s, for example, when low-income- tax states saw business and population growth, while high- income-tax states experienced little or no business and population growth. Moreover, to avoid high sales taxes, many consumers shop for major items in low-sales-tax states. For

Figure 2 Comparison of Taxes on a New Car in the Highest and Lowest Tax States for a Self-Employed Worker

[Bar Graph Omitted]

New Hampshire California Price: $10,000 $10,000

Taxes: $6,708 $10,186

example, although Portland, Oregon, has a much smaller population than Seattle, Washington, Portland, which has no sales tax has twice the annual retail sales of Seattle, which has an 8 percent sales tax.[8]

Taxes on Other Goods and Services

Taxes raise the true cost of all goods and services, not just cars. The examples below show the amount of extra money a middle-class worker must earn to purchase a number of goods and services in a typical state.

A $1,500 Computer

The retail price of a new IBM personal computer is roughly $1,500. The income needed to purchase that computer after taking into account all taxes is $2,556 for a wage earner and $2,748 for a self-employed worker. A summary of the taxes is given in Table 4.

Table 4

True Cost of a Computer

Retail sales price of computer $1,500

Taxes

Michigan sales tax $ 60 Michigan income tax 118 FICA payroll taxes 195 Federal income tax 683

Total taxes $1,056

Earnings required to purchase computer

Wage earner $2,556 Self-employed worker (extra tax = $192) $2,748

A Year's Tuition at a Private College

Many parents spend years sacrificing and saving money to pay for their children's college tuition. Those parents are paying much more than they may suspect. Although there is no sales tax on college tuition, the parents must pay income and payroll taxes on the money they use to send their child to college. To pay the $8,000 tuition, the parents must earn $13,107 if they are wage earners and $14,092 if they are self-employed (see Table 5).

Table 5

True Cost of Tuition

Tuition $ 8,000

Taxes Michigan income tax $ 603 FICA payroll taxes 1,003 Federal income tax 3,501

Total taxes $ 5,107

Earning required to pay tuition

Wage earner $13,107 Self-employed worker (extra tax = $985) $14,092

A Year's Supply of Gasoline

A typical car owner uses 504 gallons of gasoline a year, according to the Federal Highway Administration.[9] The pre-tax price of that gasoline (premium unleaded) is $479. Yet gasoline is different from most other products in that it is subject to special federal and state excise taxes in addition to normal sales taxes. The $1.29 per gallon pump price includes those taxes. In a typical state the combined state and federal gasoline tax is roughly 34 cents a gallon. The income needed to purchase the year's supply of gasoline, after all taxes including the federal and state gasoline taxes are accounted for, is $1,065. Self-employed workers must earn $1,145 to purchase the gasoline (see Table 6).

Table 6

True Cost of Gasoline

Pre-tax price of a year's purchases of gasoline $ 479

Taxes Michigan state gasoline & sales tax $ 101 Federal gasoline tax 71 Michigan income tax 49 FICA payroll taxes 81 Federal income tax 284

Total taxes $ 586

Earnings required to pay for gasoline

Wage earner $1,065 Self-employed worker (extra tax = $80) $1,145

The Rule of Two on Taxes

Table 7 summarizes the amount of extra earnings necessary to purchase each of the four items examined in this study. The table shows the amount of taxes paid in an average-tax and a high-tax state. As the table demonstrates, for certain products, taxes can add up to more than the retail price of the purchased item.

That suggests that there are several easy-to-remember rules of thumb for determining how taxes affect your financial condition and your consumer behavior.

Table 7 Income Needed to Purchase Various Goods and Services after Taxes

	Price	Income Needed, Wage Earner	Income Needed, Self-Employed
Average-tax state (Michigan)			
Car	$10,000	$17,038	$18,320
Computer	$1,500	$2,556	$2,748
Tuition	$8,000	$13,107	$14,092
Gasoline	$479	$1,065	$1,145
High-tax state (California)			
Car	$10,000	$18,776	$20,186
Computer	$1,500	$2,816	$3,028
Tuition	$8,000	$13,877	$14,918
Gasoline	$469	$1,127	$1,212

In high-tax states the true price of goods and services is about twice the retail price. To calculate how much income you need to earn to purchase an item, multiply its price tag by two. That is the rule of two on taxes.

The rule of two on taxes also applies to most self- employed workers. To pay all taxes, those in business for themselves must earn twice the retail price of goods and services. Half of the income self-employed workers earn pays for the goods and services they purchase, and half goes to pay all federal, state, and local taxes. That means their marginal tax rate is more than 50 percent.

In low-tax states the true price of goods and services, including all taxes, is closer to one and a half times the stated price. To figure how much additional income you need to earn to purchase an item, multiply its price tag by 1.5.

Conclusion

There is an old saying that describes the feelings of workers in difficult economic times: my take-home pay won't take me home. One reason for the squeeze on workers is the rising tax burden at all levels of government. Since 1990 the federal government has enacted a five-year $200 billion tax increase and the states have added $40 billion in new taxes to the total. After a brief respite in the early 1980s, taxes are climbing again. By one calculation Americans work from January to the end of the first week in May just to pay their tab to the government.

For most Americans, tallying all the various taxes that they pay to all levels of government is a hopeless task. Americans pay excise taxes, sales taxes, income taxes, and payroll taxes.

This study develops a direct and easily understood method of determining the impact of taxes on middle-income Americans' finances: calculate the amount of extra income workers must earn to pay for the goods and services they desire. In many states workers have to earn twice the retail price of most goods and services before they have the after- tax income to purchase them. In those states middle-income workers are devoting over half their income, not to the goods and services they want, but to the government tax collector.

Appendix

The terms used in calculating the income a middle-income wage earner needs to purchase a new car in Michigan are as follows.

State and Local Sales Tax = Retail Sales Price x State and Local Sales Tax Rate. State Income Tax = State Income Tax Rate x Taxable Income. FICA Tax = 7.65% x Taxable Income up to $53,400. Federal Income Tax = 28% of taxable income after deduction of state income tax.

The formula for the purchase of a $10,000 car in Michi- gan is:

State and Local Sales Tax = $10,000 x 4% = $400 + State Income Tax = Required Earnings x 4.6% + FICA Tax = Required Earnings x 7.65% + Federal Income Tax = 28% x (Required Earnings - State Income Tax).

Required Earnings = (Retail Sales Price + State and Local Sales Tax)/ [1 - Federal Income Tax Rate x (1 - State Income Tax Rate) - State Income Tax Rate - FICA Tax Rate] = $10,000 + $400/[1 - 28% x (1 - 4.6%) - 4.6% - 7.65%] = $10,400/(1 - 0.28 x 0.954 - 0.046 - 0.0765) = $10,400/(1 - 0.267 - 0.046 - 0.0765) = $10,400/0.6105 = $17,038.

To buy a $10,000 car a wage earner needs $17,038. The summary of each tax is as follows:

State and Local Sales Tax = $10,000 x 4% = $400. State Income Tax = Required Earnings x 4.6% = $17,038 x 0.046 = $784. FICA Tax = Required Earnings x 7.765% = $17,038 x 0.0765 = $1,303. Federal Income Tax = (Required Earnings - State Income Tax) x 28% = ($17,038 - $784) x 28% = $4,551. Total Taxes = State and Local Sales Tax + State Income Tax + Federal Income Tax + FICA Tax = $400 + $784 + $1,303 + $4551 = $7,038. Total Required Income = Retail Price + Taxes = $10,000 + $7,038 = $17,038.

The terms used in calculating the income a self-employed worker needs to purchase the car are as follows:

State and Local Sales Tax = Retail Sales Price x State and Local Sales Tax Rate. State Income Tax = State Income Tax Rate x (Taxable Income after deduction of half of Self-Employment Tax). = State Income Tax Rate x (Taxable Income - one-half x Self-Employment Tax). Self-Employment Tax = 14.13 percent x Taxable Income. Federal Income Tax = 28 percent of taxable income after deduction of State Income Tax and half of Self-Employment Tax = 28% x (Taxable Income - State Income Tax - 0.5 Self-Employment Tax).

The formula for the purchase of a $10,000 car in Michigan is:

State and Local Sales Tax = $10,000 x 4% = $400 + State Income Tax = Required Earnings x 4.6% (1 - 14.13% x 0.5) = Required Earnings x 4.6% x (0.92935) = Required Earnings x 4.275% + Self-Employment Tax = Required Earnings x Self-Employment Tax Rate = Required Earnings x 15.3 x (1 - 15.3 x 0.5) = Required Earnings x 14.13% + Federal Income Tax = (Required Earnings - State Income Tax - 0.5 Self-Employment Tax) x 28% = Required Earnings x 28% x (1 - 4.6% x 0.92935 - 14.13% x 0.5) = Required Earnings x 28% x [(1 - 0.046 x 0.92935) - 0.07065] = Required Earnings x 28% x (1 - 0.04275 - 0.07065) = Required Earnings x 28% x 0.8866 = Required Earnings x 0.24825.

Required Earnings = Retail Sales Price + State and Local Sales Tax/ [1 - Federal Income Tax Rate x (1 - State Income Tax Rate x 0.92935 - 0.07065) - State Income Tax Rate x 0.92935 - Self-Employment Tax Rate] = $10,000 + $400/[1 - 28% x (1 - 4.6%) x 0.92935 - 4.6% x 0.92935 - 14.13%] = $10,400/(1 - 0.28 x 0.954 x 0.92935 - 0.046 x 0.92935 - 0.1413) = $10,400/(1 - 0.24825 - 0.04275 - 0.1413) = $10,400/0.5677 = $18,320.

To buy a $10,000 car the self-employed worker must earn $18,320. The summary of each tax is as follows:

State and Local Sales Tax = $10,000 x 4% = $400. State Income Tax = Required Earnings x 4.6% x 0.92935 = $18,320 x 0.04275 = $783. Self-Employment Tax = Required Earnings x 14.13% = $18,320 x 14.13% = $2,589. Federal Income Tax = (Required Earnings - State Income Tax - 0.5 Self-Employment Tax) x 28% = ($18,320 - $783 - $2,589 x 0.5) x 28% = $4,548.

Total Taxes = State and Local Sales Tax + State Income Tax + Federal Income Tax + Self-Employment Tax = $400 + $783 + $2,589 + $4,548 = $8,320.

Total Required Income = Retail Price + Taxes = $10,000 + $8,320 = $18,320.

Notes

[1] Tax Foundation, Tax Features (Washington: Tax Foundation, 1992), p. 1.

[2] Stephen Moore, "How Much Government Can America Afford?" Institute for Policy Innovation, Dallas, Texas, 1991.

[3] Total taxes paid on income used to purchase the car are roughly the same, regardless of how the car is paid for (cash or loan).

[4] The effective self-employment tax rate is 15.3% x 92.35% on earnings up to $53,400.

[5] The 14.13 percent FICA rate is calculated as follows. The workers pays a rate of 15.3% for the employer and the employee shares of the FICA tax. But the 7.65% employee share of the tax is deducted from earnings, so that the effective rate is 15.3% x (1 - 7.65%) = 14.1%. In addition, the employer share of the FICA payroll tax is deductible from the federal income tax, so that the effective rate is not 28% but 28% x {[1 - 7.65% x (1 - 7.65%)]} = 26%.

[6] Only state income and sales taxes are used in rating state tax burdens. Other state taxes, such as those on corporate income and property, are not included.

[7] See "Fleeing Tax Fairness," Wall Street Journal, June 12, 1991, editorial page.

[8] For this and other examples of the impact of state taxes on economic behavior, see Stephen Moore, "A Pro-Growth Tax Agenda for the States," Texas Public Policy Foundation, San Antonio, 1991.

[9] Based on Federal Highway Administration, Hiahway Statistics. 1990 (Washington: FHWA, 1991).