

The Tax Burden on the Brewing Industry

**PREPARED BY
GLOBAL INSIGHT, INC. AND THE PARTHENON GROUP**

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Study Goals and Scope

The study defines the comprehensive burden of all government taxes on beer, and compares this burden with the equivalently measured tax burden on all other purchases in the United States. This comparison thus cleanly assesses the fairness of the industry's tax burden.

The “comprehensive burdens” include direct taxes such as sales and special excise taxes, as well as personal income, payroll, property, and business profit taxes paid by consumers, employees, and other providers of value-added. These computations therefore also measure the absolute and relative contributions made by the brewing industry and its suppliers to all levels of government.

Tax burdens include:

- Taxes paid at all stages of production, distribution, and sales;
- Taxes related to sales, income, profits, and payroll;
- Taxes paid to Federal, state, or local governments;

A standard procedure was adopted to obtain reliable results, clearly defining sources and methods to assure credibility.

- The data sources for the calculations are public, published information primarily from the Department of Commerce and the Internal Revenue Service, allowing confirmation of the conclusions by any interested parties.
- Economic value-added components and taxes are presented in both absolute magnitudes (billions of U.S. dollars) and proportions (shares of value added or spending and effective average tax rates.)
- 2003 was the most recent year for which all necessary data was available, thus this is the reference year for all computations.
- This study updates a similar study based on 1997 data, confirming the methods, sources, and fundamental conclusions.



Summary of Findings

The tax burden borne by beer consumers is more than 68% higher than average for the U.S. economy.

In 2003, taxes represented 40.8% of the retail price of beer. In comparison, total Federal, state, and local taxes equal 24.2% of all other purchases in the U.S.

The enormously higher burden—16.6% of spending--has three principal components:

- Special excise taxes directly targeting beer equal 7.2% of consumer spending on beer
- Other “indirect taxes”, such as general sales and property taxes are 7.5 percentage points higher, representing 14.3% of the beer retail spending versus 6.8% on average for other purchases. This excess beer burden exists in spite of the inclusion of all other special excise taxes such as those on gasoline and tobacco within this category when measuring the burden on non-beer products. Beer is almost never excluded from general sales taxes, is sometimes subject to special restaurant taxes, and as a dominantly domestic industry, pays full property taxes. Many other purchases are subject to no retail sales or excise taxes.
- Income, profit, and payroll taxes paid by the brewing industry and its suppliers account for an additional 19.4% of spending, 2.0 percentage points higher than the average product for which this burden is 17.4%. A key explanation for this higher beer burden on labor and capital inputs is the fact that to a greater degree than other goods, beer is produced in the United States with inputs from the US.

In the reference year (2003), taxes on beer raised \$31.9 billion, while total beer spending (including taxes paid) was \$78 billion, hence the calculated 40.8% burden.

- The income generated by beer industry manufacturers and related sales and distribution partners added \$13.4 billion in Federal personal income, profit, and payroll revenues and \$1.7 in similar state-local revenue.
- Sales, property and excise taxes on the beer value-added chain added a further \$16.8 billion to government coffers.

In contrast, total taxes of \$2,767 billion were raised in the United States on all other purchases (\$11,424 billion), indicating a burden of 24.2%.

Technical Note: Comparison to Prior Study

The 2003 tax burden on beer is 41%, whereas it was computed to be 44% in the last study examining 1997 data. This is not due to a reduction in the relative burden on beer versus other items in the economy. Instead, this change reflects two shifts affecting measured tax burdens in the US economy: 1) genuine reductions in tax rates on all personal income and corporate profits; and 2) a redefinition or reclassification by the US Department of Commerce of important state-local receipts from “taxation” to non-tax revenue. The former change, legislated tax cuts, provides by far the dominant explanation for the reduction in both burdens.

According to current definitions and data, total taxes as a percent of GDP are 3 percentage points lower, 25.5% in 2003 versus 28.5% in 1997. Federal taxation fell from 19.4% to 16.6% of GDP, while state plus local taxation fell from 9.2% to 8.9%. On the federal side, the greatest change was with regard to personal income taxation, where the effective rate on all taxable income was reduced from 21.7% to 18.8%. These tax rates, and related rates, are used to compute the total burden on all producers, suppliers, wholesalers, and retailers.

A minor reduction between the 1997 and 2003 studies in the measured taxation of beer also occurs because federal grants to states were previously counted in official state-local “tax revenues.” They are now considered, appropriately, to be non-tax receipts. This did not have a material effect on the beer tax burden calculation because the aggregate tax/GDP ratio was only used to compute the tax burden on beer value-added that could not be otherwise specifically attributed to wages, profits, or sales revenues of the brewing industry and its suppliers. That is, specific income and payroll tax rates were assessed against wages, profit tax rates against profits, and sales or excise tax rates against revenues or production volumes. However, the earlier definition—which is clearly illogical when assessing business burdens—would have artificially boosted the assessment of taxation on the rest of the economy for comparison to the beer tax burden. The current definition avoids these problems.

Finally, “domestic spending” was used to compare the tax burden on beer relative to the rest of the economy. The previous study used GDP. The tax burden on beer equals beer industry taxes divided by consumer spending on beer. Therefore the burden on all other goods and services should be measured relative to total spending in the US rather than US output (GDP). Technically, domestic spending equals GDP plus imports minus exports. In 2003, domestic spending was \$11,502 billion, 4.5% higher than GDP of \$11,004 billion. On this correct basis, the total tax burden nationally for all good and services spending including beer was 24.4%, versus 25.5% if measured with GDP in the denominator. Subtracting the more-heavily taxed beer sector to estimate the burden on all other goods and services reduces both of these ratios by 0.2%. Thus, the final comparison of the tax burden on beer of 40.8% was compared to total domestic spending minus beer of 24.2% (24.4% -0.2%). This amounts to the burden on beer being more than 68% above the tax rate on the rest of the economy.

SUMMARY TABLES

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2003 Taxes on Beer vs Other Purchases in the United States

	Beer	Total US Purchases (GDP adjusted for Net Imports)	US Purchases except Beer
Spending (Including All Taxes)	\$78.1	\$11,502.1	\$11,424.0
All Taxes	\$31.9	\$2,799.0	\$2,767.1
Tax Share (%) of Spending	40.8%	24.3%	24.2%
Federal Taxes on Income, Profits, Wages,adjusted*	\$13.4	\$1,725.3	\$1,711.9
State & Local Taxes on Income, Profits, Wages,adjusted*	\$1.7	\$275.6	\$273.9
Total Indirect Taxes, adjusted*	\$16.8	\$798.1	\$781.3
Special Beer Excise Taxes	\$5.6	\$5.6	\$0.0
All Other	\$11.1	\$792.4	\$781.3
<u>Allocation of the Beer Indirect Taxes</u>			
State-Local Excise Taxes	\$12.0	\$708.7	\$696.7
Property	\$4.3	\$305.0	\$300.7
General Sales and Other Excises	\$5.7	\$401.7	\$396.0
Special Beer Excise Taxes	\$2.0	\$2.0	\$0.0
Federal Excise Taxes	\$4.7	\$89.4	\$84.6
Gasoline	\$0.5	\$33.9	\$33.4
Other Other Sales, Property, Excise Taxes, Except Beer	\$0.7	\$51.9	\$51.2
Special Beer Excise Taxes	\$3.6	\$3.6	\$0.0

* adjusted to classify indirect tax portion of taxes on "other value added" (See below for details)

<u>Effective tax shares of spending</u>				Beer Burden Relative to Other Products
All Taxes	40.8%	24.3%	24.2%	168%
Federal Taxes on Income, Profits, Wages,adjusted*	17.2%	15.0%	15.0%	115%
State & Local Taxes on Income, Profits, Wages,adjusted*	2.2%	2.4%	2.4%	90%
Total Indirect Taxes, adjusted*	21.5%	6.9%	6.8%	314%
Special Beer Excise Taxes	7.2%	0.0%	0.0%	only on beer
All Other Sales, Property, Excise Taxes	14.3%	6.9%	6.8%	209%

Tax Detail on a “Per-Bottle” Basis

Total Consumer Cost Per “Bottle” (12 ounces)	\$1.16
Breakdown of 40.6% of cost that is taxes:	
Beer-specific taxes	\$0.08
Other sales, excise and direct taxes	\$0.17
Federal income, payroll, and other taxes	\$0.20
State and local income, payroll, and other taxes	\$0.02
Sum of Taxes	\$0.47

BACKGROUND TABLES

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**Analysis of Beer Industry (in \$ millions)
Distribution of Value Added**

Formula	2003 Beer VA	Coeff. I/O -2b	Total Labor Comp.	Wages as % of L.C.	Wages & Sal. D*E	Pre-tax Profit	Indirect Taxes	Other Value Added	Beer Excise
Total Domestic Consumption	\$ 78,100.0								
Exports	\$ 421.8	0.54%							
Retail	38,762.6	49.63%							
On-premise share of retail revenue	48.8%								
On-premise share of retail margin	72.9%	72.9%	72.9%	72.9%	72.9%	72.9%	72.9%	72.9%	
Eating & Drinking (& sales tax)	28,270.7	36.20%	18,402.9	86.6%	15,941.6	1,785.9	2,202.5	5,879.3	
Off-premise	10,492.0	13.43%	3,899.8	84.9%	3,309.5	581.0	4,548.0	1,463.1	
Wholesale Services	11,490.5	14.71%	6,220.6	84%	5,204.4	469.0	2,104.1	692.6	2,004.2
Transport. Services	1,150.8	1.47%	679.1	80%	541.8	14.7	20.7	436.2	
Domestic Brewers' Contribution (inc Imports	\$ 24,453.47 \$ 2,664.5	31.31% 3.41%	2,388.4	76%	1,826.1	3,189.0	630.2 21.9	15,065.7	3,180.2 423.3
Total Brewer & Dist.	\$ 78,100	100%	\$ 31,591		\$ 26,823	\$ 6,040	\$ 9,527	\$ 23,537	\$ 5,608

Detail: Value of Domestic Beer

Value of Brewer Inputs	\$ 11,149								
Agriculture	\$ 181	2%	\$ 7	\$ 1	\$ 6	\$ 4	\$ 4	\$ 166	
Energy	\$ 264	2%	\$ 38	\$ 1	\$ 29	\$ 11	\$ 27	\$ 187	
Malt Manufacturing	\$ 974	9%	\$ 90	\$ 1	\$ 69	\$ 34	\$ 8	\$ 843	
Paperboard	\$ 894	8%	\$ 200	\$ 1	\$ 156	\$ 39	\$ 9	\$ 646	
Glass Containers	\$ 1,886	17%	\$ 513	\$ 1	\$ 414	\$ 79	\$ 21	\$ 1,272	
Metal Cans	\$ 2,849	26%	\$ 421	\$ 1	\$ 331	\$ 107	\$ 18	\$ 2,303	
Wholesale Trade	\$ 1,583	14%	\$ 550	\$ 1	\$ 459	\$ 97	\$ 289	\$ 647	
Transportation	\$ 750	7%	\$ 213	\$ 1	\$ 170	\$ 9	\$ 7	\$ 521	
Business Services	\$ 472	4%	\$ 116	\$ 1	\$ 96	\$ 38	\$ 7	\$ 311	
Advertising	\$ 587	5%	\$ 202	\$ 1	\$ 170	\$ 14	\$ 52	\$ 319	
Management	\$ 564	5%	\$ 346	\$ 1	\$ 288	\$ 340	\$ 1	\$ (122)	
Other	\$ 144	1%	\$ 36	\$ 1	\$ 29	\$ 2	\$ 6	\$ 100	
Tot. Suppliers (VA)	\$ 11,149	100%	\$ 2,732	\$ 1	\$ 2,217	\$ 775	\$ 448	\$ 7,194	

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Analysis of Beer Industry (in \$ millions)

Taxes on Value Added in 2003\$

Formula	Taxes on Labor			Taxes on Profits				Tax on Other VA		Total Taxes			Grand Total
	Fed. Payroll	Fed. Income	S/L Income	Fed. Profit	Fed. Income	S/L Profit	S/L Income	Federal	S/L	Fed. Factor	S/L Factor	Indirect	
	F*a	F*b	F*c	G*d	G*(1-d)*b	G*e	G*(1-d)*c	I*f	I*g	L,M,O,P,S	N,Q,R,T	H	V+W+X
Total Domestic Consumption Exports													
Retail (net of alcohol taxes)													
E&D shares													
Eating & Drinking (& sales tax)	1,921.9	2,436.6	413.2	476.0	200.2	90.7	34.0	931.7	503.1	5,966.5	1,040.9	2,202.5	9,210.0
Off-premise	399.0	505.8	85.8	154.9	65.1	29.5	11.0	231.9	125.2	1,356.7	251.5	4,548.0	6,156.3
Wholesale Services	627.5	795.5	134.9	125.0	52.6	23.8	8.9	109.8	59.3	1,710.3	226.9	2,104.1	4,041.3
Transport. Services	65.3	82.8	14.0	3.9	1.7	0.7	0.3	69.1	37.3	222.8	52.4	20.7	295.9
Domestic Brewers' Contribution*	220.2	279.1	47.3	1,093.8	357.5	161.9	60.6	2,387.4	1,289.3	4,338.0	1,559.1	630.2	6,527.3
Imports												21.9	21.9
Federal Alcohol Taxes												3,603.6	3,603.6
State Alcohol & License Tax												2,004.2	2,004.2
Total Brewer & Dist.	3,233.9	4,099.9	695.3	1,853.7	677.1	306.6	114.8	3,729.9	2,014.2	13,594.4	3,130.9	15,135.2	31,860.4
* excluding Fed. & State alcohol taxes													
Detail: Value of Domestic Beer													
Value of Brewer Inputs													
Agriculture	0.8	1.0	0.2	1.1	0.4	0.2	0.1	26.4	14.2	29.6	14.7	3.6	47.9
Food Products	3.5	4.4	0.8	3.0	1.2	0.6	0.2	29.7	16.0	41.8	17.6	27.0	86.4
Malt	8.3	10.5	1.8	9.0	3.8	1.7	0.6	133.6	72.1	165.1	76.3	7.6	249.0
Glass Containers	18.8	23.8	4.0	10.5	4.4	2.0	0.7	102.4	55.3	159.9	62.1	8.8	230.8
Metal Containers	49.9	63.2	10.7	21.2	8.9	4.0	1.5	201.5	108.8	344.7	125.1	21.3	491.2
Paperboard	40.0	50.7	8.6	28.6	12.0	5.4	2.0	364.9	197.0	496.1	213.1	18.2	727.4
Transport	11.6	14.7	2.5	10.1	4.3	1.9	0.7	49.3	26.6	90.0	31.8	7.0	128.8
Wholesale Trade	20.5	26.0	4.4	3.7	1.6	0.7	0.3	50.6	27.3	102.4	32.7	52.0	187.2
Advertising	34.7	44.0	7.5	90.6	38.1	17.2	6.5	-19.4	-10.5	188.0	20.7	1.1	209.8
Other	3.5	4.5	0.8	0.6	0.2	0.1	0.0	15.8	8.5	24.6	9.4	5.9	39.9
Total Suppliers (VA)	191.5	242.8	41.2	178.3	75.0	33.9	12.7	954.8	515.6	1,642.3	603.4	152.6	2,398.3

Total 2003 Consumption in barrels	203,827,058
Total 2003 Consumption in gallons	6,318,638,798
Total 2003 Taxes Paid per Barrel Manufactured and Sold	\$ 156.31
Total 2003 Taxes Paid per gallon Manufactured and Sold	\$ 5.04
Total Beer Sales in 2003	\$ 78,100,000,000
Total Direct Revenues per Barrel	\$ 383.17
Total Direct Revenues per gallon	\$ 12.36

beer tax rate	40.8%
avg tax rate on goods and services purchases in the US	10 24.2%
difference (% POINTS)	16.6%
% DIFFERENCE	68.4%

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Changes in Taxation and Economic Measurements / Definitions, 1997 to 2003

Effective Tax Rates					
Effective	1997 Study	2003 Study	total change	due to legislated tax rate changes	due to revised data and definitions
Federal Payroll:	12.4%	12.1%	-0.3%	-0.3%	
Federal Income:	18.3%	15.3%	-3.0%	-3.0%	
State/Local Income:	3.1%	2.6%	-0.5%	-0.5%	
Federal Profit:	27.3%	26.7%	-0.6%	-0.6%	
State/Local Profit:	5.2%	5.1%	-0.1%	-0.1%	
Federal Tax @ GNP:	19.5%	16.6%	-3.0%	-2.8%	-0.2%
S/L Tax @ GNP:	12.2%	8.9%	-3.2%	-0.2%	-3.0%
Federal Tax @ US Spending	19.1%	15.8%	-3.3%	-2.8%	-0.5%
S/L Tax @ US Spending	11.9%	8.6%	-3.3%	-0.2%	-3.1%

Sources of lower estimated tax rates on GDP

1. Data revisions to tax revenues and GDP

(Compare 1997 ratios)

1997 values	Old	New	impact
Federal	19.5%	19.4%	-0.2%
State-Local	12.2%	11.6%	-0.6%
Total	31.7%	30.9%	-0.8%

2. Changes in the official definition of state-local revenues

Federal grants no longer officially included as "state revenues"

(Compare 1997 ratios, with original data)

1997 values	Old	New	impact
Federal	19.5%	19.5%	0.0%
State-Local	12.2%	9.8%	-2.4%
Total	31.7%	29.3%	-2.4%

(Compare 1997 ratios, with revised data)

1997 values	Old	New	impact
Federal	19.4%	19.4%	0.0%
State-Local	11.6%	9.2%	-2.4%
Total	30.9%	28.5%	-2.4%

(Compare 2003 ratios)

2003 values	Old	New	impact
Federal	16.6%	16.6%	0.0%
State-Local	12.0%	8.9%	-3.1%
Total	28.6%	25.5%	-3.1%

3. Reductions in tax rates with constant definitions

(Compare 1997 with 2004, newest data and newest definition)

	1997	2003	
Federal	19.4%	16.6%	-2.8%
State-Local	9.2%	8.9%	-0.2%
Total	28.5%	25.5%	-3.0%

Total Impact on reported tax shares of GDP

Federal	-3.0%		-3.0%
State-Local	-3.9%	to	-3.2%
Total	-6.9%	to	-6.2%