Tax Policy Center

Urban Institute and Brookings Institution

GASOLINE TAXES AND RISING FUEL PRICES

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ABSTRACT

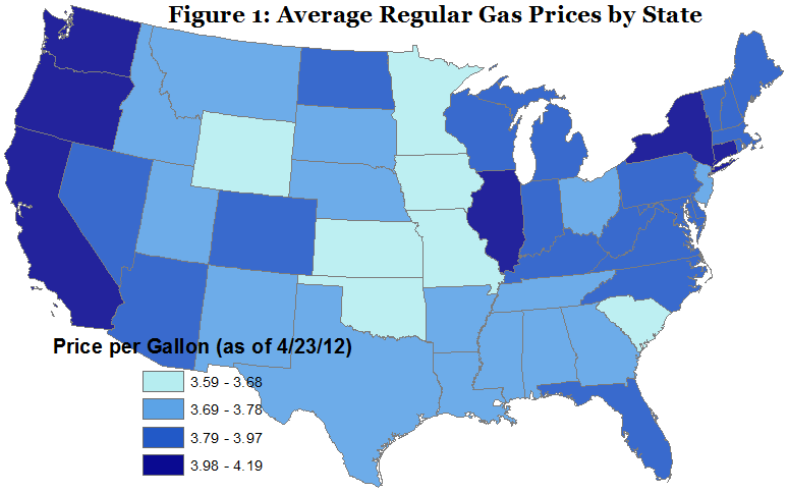
Gas prices have increased substantially since the beginning of this year, continuing their upward trend since 1990. American drivers are pushing the federal and state governments to implement policies to lower gas prices. But gasoline taxes have not contributed to the increase in gas prices. Rather than bringing pump prices down, lowering gasoline taxes or having gas tax holidays will mostly shift gasoline purchases across state lines or encourage people to fuel up during the gas tax holidays. Such proposals will siphon away revenues from already cash-strapped states and do little to help consumers and the economy.

Gas prices have increased substantially since the beginning of this year, continuing their upward trend since 1990. American drivers are pushing the federal and state governments to implement policies to lower gas prices, including a gas tax holiday. But gasoline taxes have not contributed to the increase in gas prices. Rather than bringing pump prices down, lowering gasoline taxes or having gas tax holidays will mostly shift gasoline purchases across state lines or encourage people to fuel up during the gas tax holidays. Such proposals will siphon away revenues from already cash-strapped states and do little to help consumers and the economy.

From January through April of this year, gas prices rose from $3.30 per gallon to $3.94, on average, according to the Energy Information Administration (EIA) (Energy Information Administration 2012). This is close to the recent historic high of $4.11 achieved in July 2008. Since gas prices usually rise during the summer, they will likely approach that high in the coming months. Further, average real prices in 2011 were at an all-time high of $3.52, and this year's prices look primed to break that record. Last year, gas prices averaged $3.30 through the first week of April whereas they are averaging $3.61 through the first week of April this year.

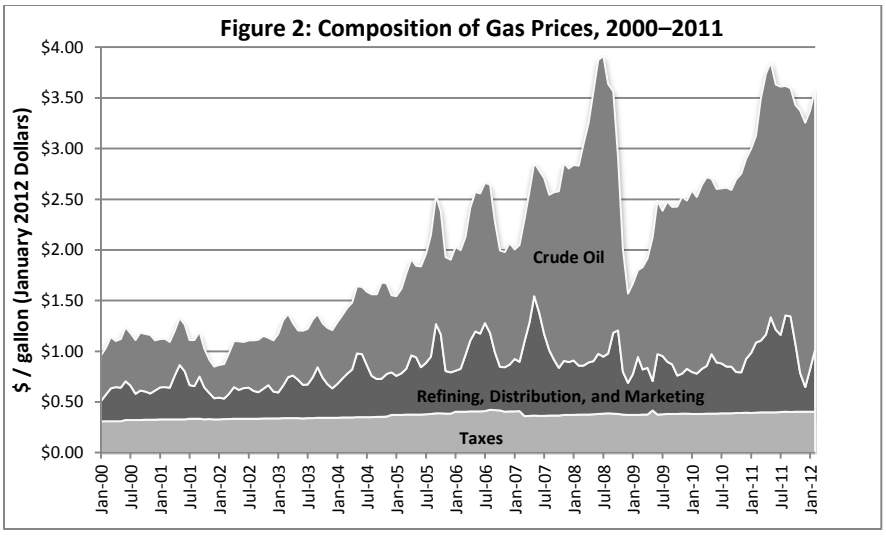
The national average masks considerable variation across states (figure 1). According to the American Automobile Association Daily Fuel Gauge Report, on April 23, Hawaii had the highest average gas price ($4.61) while Alaska had the second highest ($4.35) (table 1). An additional six states and the District of Columbia also had averages above $4.00 a gallon. The lowest average price was in Missouri and Oklahoma ($3.60).

Figure 1: Average Regular Gas Prices by State



Source: American Automobile Association (2012).

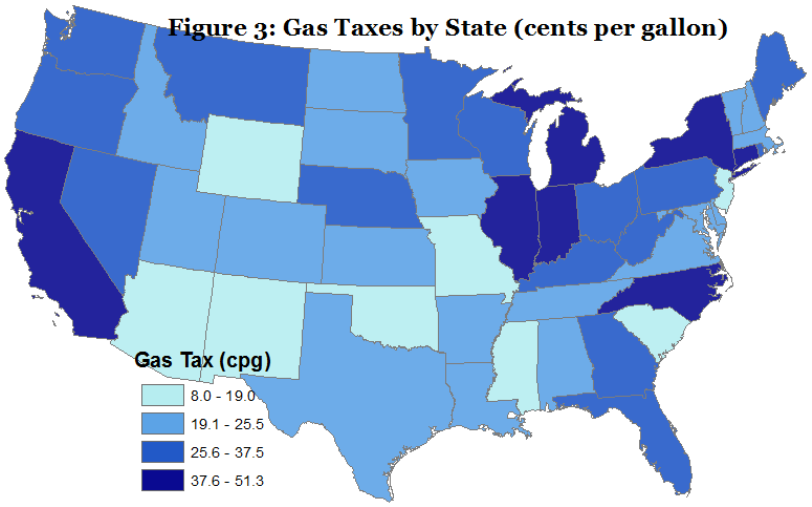
In contrast to the substantial change in gas prices, gas taxes have varied little in recent years. The federal gas tax has been 18.4 cents per gallon since October 1997. State and local gas taxes and fees per gallon have meanwhile averaged between 21 cents and 27 cents since January 2000, according to the EIA (Energy Information Administration 2012). As of 2011, average state and local gas taxes and fees were about 22 cents, or 11 percent of gas prices, down sharply from 31 percent of gas prices in 2002 (table 2). The price of crude oil is the dominant driver of gas prices, as it has risen from 45 cents per gallon in January 2000 to $2.57 per gallon in February 2011 (January 2012 dollars; figure 2).



Source: Energy Information Administration (2012).

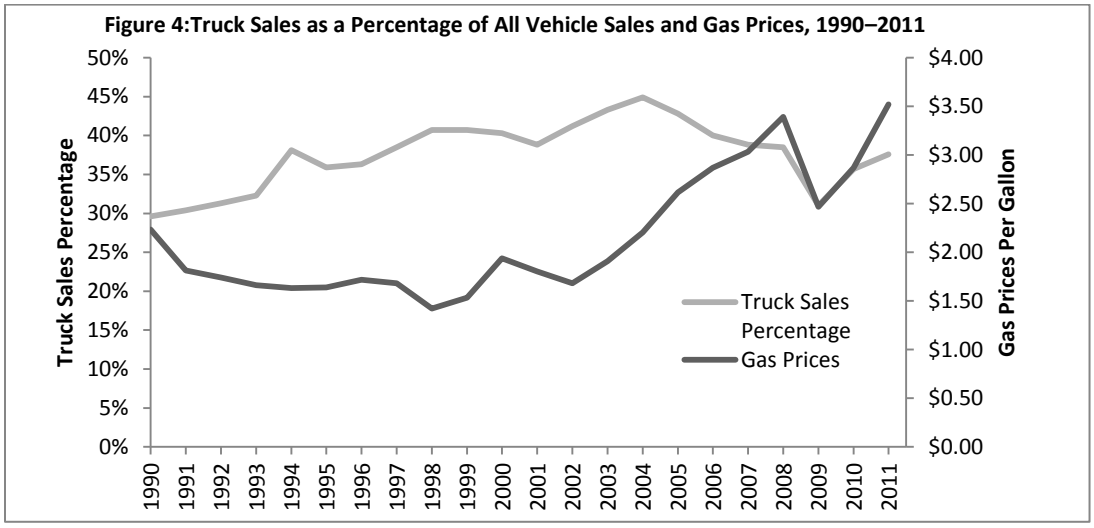
A more complete picture of taxes on gasoline takes into account both state excise taxes (usually levied per gallon) and other state and local taxes that affect gas prices (American Petroleum Institute 2012). In January 2012, state excise taxes averaged about 21 cents per gallon. Other taxes, including sales taxes on gasoline, gross receipts taxes, oil inspection fees, local taxes, storage tank fees, and other environmental fees, averaged an additional 10 cents (American Petroleum Institute 2012).

Although gas taxes do not explain much of the variation in gas prices across time, they do explain variation in gas prices between states (figure 3 and table 3). Of the eight states and D.C. with gasoline prices above $4.00 a gallon, six have combined state excise and other taxes above the 31 cent national average. According to UCSD economist James Hamilton, coauthor of the blog *Econbrowser*, the biggest factor besides taxes that accounts for variation in prices is differences in the cost of crude oil available to refineries in those states (Hamilton 2012). Since refineries in the middle of the country, like those in Wyoming, have access to much cheaper crude oil than those on the coasts, Wyoming and its neighboring states have cheaper gasoline. However, the pipeline system in the United States for transporting refined products is better than the pipeline system for transporting crude oil. This serves to temper the differences in the costs of gasoline production across states.



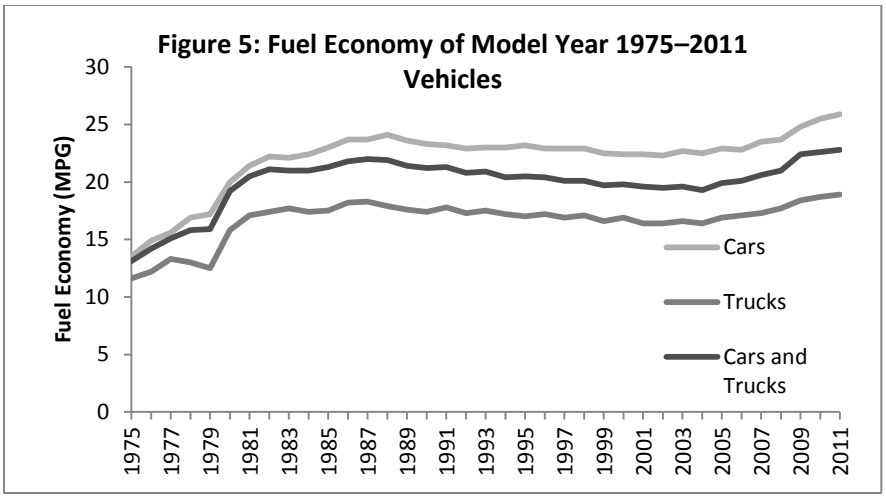
Source: American Petroleum Institute (2012).

Partly in response to changes in gas prices, Americans have shifted their choice of vehicles. In 1990, 30 percent of new vehicles purchased in the United States were trucks. That share rose to 45 percent in 2004 but then fell to 38 percent in 2011 in the face of rising gas prices (figure 4).



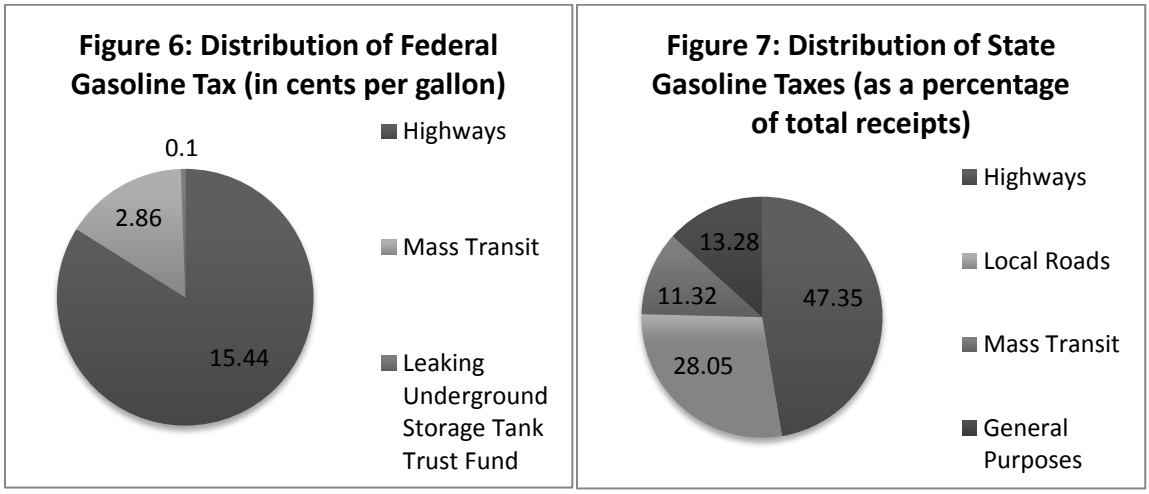
Sources: Energy Information Administration (2012); Office of Transportation and Air Quality (2011).

Increasing fuel efficiency standards have also affected which vehicles Americans purchase. Between 1990 and 2010, fuel efficiency standards for cars stayed constant at almost 28 miles per gallon (mpg). Fuel efficiency standards for light trucks changed little between 1990 and 2004 (20 mpg to nearly 21 mpg) but increased to more than 24 mpg over the subsequent seven years. High gas prices and increasing fuel efficiency standards combined to push the average fuel economy of model year 2011 vehicles to just about 23 mpg, higher than in any year since the EPA started keeping track (figure 5 and table 4).



Source: Office of Transportation and Air Quality (2011).

Finally, note how gasoline taxes are used. The 18.4 cent federal gasoline tax is divided among three purposes: nearly 84 percent for highways, almost 16 percent for mass transit, and half a percent for the leaking underground storage tank trust fund (figure 6). States distribute their gasoline taxes differently. In 2008, on average, 47 percent went to highways, 28 percent to local roads, 11 percent to mass transit, and 13 percent to general purposes (figure 7 and table 5). Just like within gas prices, the national average masks a lot of variation between the states. For example, six states (Alaska, Louisiana, Maine, Nevada, South Carolina, and West Virginia) use more than 90 percent of their gasoline tax receipts on state highways (table 5) while four (Alabama, Arizona, Iowa, and Nebraska) plus the District of Columbia use more than 60 percent of the funds for local roads and streets. Eleven states use more than 20 percent of their gasoline tax receipts on mass transit, with Connecticut, Maryland, Massachusetts, Pennsylvania, and interestingly, Wyoming allocating more than one-third of the proceeds to mass transit. As these revenues stagnate, states will have to find other ways of funding transportation infrastructure.



Sources: Federal Highway Administration (2011); Federal Highway Administration (2008).

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Table 1: Gas Prices by State, April 23, 2012 (dollars per gallon)			
State	**4/23/2012**	**State**	**4/23/2012**
Alabama	3.73	Montana	3.77
Alaska	4.35	Nebraska	3.75
Arizona	3.86	Nevada	3.95
Arkansas	3.70	New Hampshire	3.85
California	4.19	New Jersey	3.78
Colorado	3.89	New Mexico	3.75
Connecticut	4.14	New York	4.13
Delaware	3.84	North Carolina	3.85
District of Columbia	4.15	North Dakota	3.82
Florida	3.88	Ohio	3.70
Georgia	3.75	Oklahoma	3.60
Hawaii	4.61	Oregon	4.05
Idaho	3.77	Pennsylvania	3.92
Illinois	4.06	Rhode Island	3.96
Indiana	3.84	South Carolina	3.67
Iowa	3.67	South Dakota	3.77
Kansas	3.64	Tennessee	3.71
Kentucky	3.83	Texas	3.76
Louisiana	3.75	Utah	3.71
Maine	3.95	Vermont	3.97
Maryland	3.90	Virginia	3.83
Massachusetts	3.89	Washington	4.10
Michigan	3.83	West Virginia	3.89
Minnesota	3.68	Wisconsin	3.84
Mississippi	3.74	Wyoming	3.64
Missouri	3.60		

Source: American Automobile Association (2012).

Table 2: Composition of Gas Prices, 2000–2011 (percentage of total price)			
Year	Taxes	Crude oil	Refining, distribution, and marketing
2000	28	46	26
2001	30	39	31
2002	31	43	26
2003	27	44	29
2004	23	48	29
2005	20	53	27
2006	18	56	26
2007	15	58	27
2008	13	69	18
2009	18	61	21
2010	14	68	17
2011	11	68	20

Source: Energy Information Administration (2012).

Table 3: State Motor Fuel Excise and Other Taxes, as of January 1, 2012 (cents per gallon)

State	State excise tax	Other state taxes/fees	Total state taxes/fees	Total state and federal excise taxes
Alabama	16.0	4.9	20.9	39.3
Alaska	8.0	0.0	8.0	26.4
Arizona	18.0	1.0	19.0	37.4
Arkansas	21.5	0.3	21.8	40.2
California	35.7	14.9	50.6	69.0
Colorado	22.0	0.0	22.0	40.4
Connecticut	25.0	21.0	46.0	64.4
Delaware	23.0	0.0	23.0	41.4
District of Columbia	23.5	0.0	23.5	41.9
Florida	4.0	31.0	35.0	53.4
Georgia	7.5	21.9	29.4	47.8
Hawaii	17.0	32.6	49.6	68.0
Idaho	25.0	0.0	25.0	43.4
Illinois	19.0	25.4	44.4	62.8
Indiana	18.0	25.0	43.0	61.4
Iowa	21.0	1.0	22.0	40.4
Kansas	24.0	1.0	25.0	43.4
Kentucky	26.4	1.4	27.8	46.2
Louisiana	20.0	0.0	20.0	38.4
Maine	30.0	1.5	31.5	49.9
Maryland	23.5	0.0	23.5	41.9
Massachusetts	21.0	2.5	23.5	41.9
Michigan	19.0	23.9	42.9	61.3
Minnesota	28.0	0.1	28.1	46.5
Mississippi	18.0	0.8	18.8	37.2
Missouri	17.0	0.3	17.3	35.7
Montana	27.0	0.8	27.8	46.2
Nebraska	26.7	0.9	27.6	46.0
Nevada	23.0	10.1	33.1	51.5
New Hampshire	18.0	1.6	19.6	38.0
New Jersey	10.5	4.0	14.5	32.9
New Mexico	17.0	1.9	18.9	37.3
New York	8.1	43.2	51.3	69.7
North Carolina	38.9	0.3	39.2	57.6
North Dakota	23.0	0.0	23.0	41.4
Ohio	28.0	0.0	28.0	46.4
Oklahoma	16.0	1.0	17.0	35.4
Oregon	30.0	1.0	31.0	49.4
Pennsylvania	12.0	20.3	32.3	50.7
Rhode Island	32.0	1.0	33.0	51.4
South Carolina	16.0	0.8	16.8	35.2
South Dakota	22.0	2.0	24.0	42.4
Tennessee	20.0	1.4	21.4	39.8
Texas	20.0	0.0	20.0	38.4
Utah	24.5	0.0	24.5	42.9
Vermont	19.0	6.5	25.5	43.9
Virginia	17.5	2.7	20.2	38.6
Washington	37.5	0.0	37.5	55.9
West Virginia	20.5	12.9	33.4	51.8
Wisconsin	30.9	2.0	32.9	51.3
Wyoming	13.0	1.0	14.0	32.4
U.S. average	18.5	10.5	29.0	47.4

Notes: Some totals may not add due to rounding. For states with sales tax on fuel, price per gallon is calculated based on AAA average prices for January 1, 2012.

Source: American Petroleum Institute (2012).

Table 4: EPA-Adjusted Fuel Economy Values and Truck Sales Fraction, 1975–2011 (mpg)

Model year	Mileage (miles per gallon)			Truck sales (percent of total)
	Cars	Trucks	Cars and trucks	
1975	13.5	11.6	13.1	19.2
1976	14.9	12.2	14.2	20.9
1977	15.6	13.3	15.1	19.7
1978	16.9	13.0	15.8	22.4
1979	17.2	12.5	15.9	22.1
1980	20.0	15.8	19.2	16.4
1981	21.4	17.1	20.5	17.2
1982	22.2	17.4	21.1	19.5
1983	22.1	17.7	21.0	22.0
1984	22.4	17.4	21.0	23.4
1985	23.0	17.5	21.3	24.7
1986	23.7	18.2	21.8	27.9
1987	23.7	18.3	22.0	27.1
1988	24.1	17.9	21.9	29.0
1989	23.6	17.6	21.4	29.9
1990	23.3	17.4	21.2	29.6
1991	23.2	17.8	21.3	30.4
1992	22.9	17.3	20.8	31.3
1993	23.0	17.5	20.9	32.3
1994	23.0	17.2	20.4	38.1
1995	23.2	17.0	20.5	35.9
1996	22.9	17.2	20.4	36.3
1997	22.9	16.9	20.1	38.5
1998	22.9	17.1	20.1	40.7
1999	22.5	16.6	19.7	40.7
2000	22.4	16.9	19.8	40.3
2001	22.4	16.4	19.6	38.8
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2004	22.5	16.4	19.3	44.9
2005	22.9	16.9	19.9	42.8
2006	22.8	17.1	20.1	40.0
2007	23.5	17.3	20.6	38.8
2008	23.7	17.7	21.0	38.5
2009	24.8	18.4	22.4	31.0
2010	25.5	18.7	22.6	35.7
2011	25.9	18.9	22.8	37.6

Source: Office of Transportation and Air Quality (2011).

Table 5: Disposition of State Motor-Fuel Tax Receipts, 2008

State	Net funds distributed (thousands of dollars)[a]	Percentage Shares to Specific Purposes			
		State-administered highways[b]	Local roads and streets	Mass transit	General and non-highway
Alabama	611,560	32.95	62.77	0.04	4.24
Alaska[c]	30,759	96.52	1.47	0.06	1.95
Arizona	702,554	1.70	70.82	1.48	26.00
Arkansas	463,677	64.97	23.17	3.58	8.28
California	4,084,946	31.53	46.18	20.36	1.93
Colorado	554,936	75.73	19.48	4.08	0.71
Connecticut	683,103	46.54	3.44	49.12	0.91
Delaware	129,798	73.68	--	4.50	21.82
District of Columbia[c]	23,199	0.04	93.57	6.38	--
Florida	2,215,452	54.55	17.42	12.67	15.36
Georgia	934,590	75.45	9.25	0.57	14.73
Hawaii	87,885	78.23	10.99	1.68	9.10
Idaho	213,886	47.14	44.71	0.60	7.55
Illinois	1,422,935	68.33	28.71	0.11	2.86
Indiana	855,848	70.23	22.53	5.94	1.30
Iowa	434,727	25.29	72.40	1.61	0.70
Kansas	423,635	37.77	54.62	--	7.61
Kentucky	607,420	69.88	20.69	5.40	4.02
Louisiana	602,199	99.09	0.24	0.68	--
Maine	244,402	90.49	9.23	0.00	0.28
Maryland	833,792	18.96	28.10	36.80	16.14
Massachusetts	670,940	4.24	50.14	44.44	1.17
Michigan	973,549	28.39	56.51	13.44	1.65
Minnesota	664,393	17.97	57.16	24.72	0.15
Mississippi	418,632	54.86	39.14	2.22	3.78
Missouri	710,351	59.18	40.65	--	0.18
Montana	193,775	48.24	4.93	2.52	44.30
Nebraska	307,729	6.73	89.83	--	3.43
Nevada	294,138	99.10	--	0.57	0.32
New Hampshire	151,516	77.95	11.60	1.09	9.35
New Jersey[c]	551,757	48.99	1.38	26.11	23.53
New Mexico	313,265	39.50	9.55	29.09	21.85
New York	1,658,881	25.75	36.21	28.98	9.06
North Carolina	1,629,909	77.59	6.72	3.12	12.57
North Dakota	144,355	42.84	47.20	2.22	7.74
Ohio	1,836,825	53.99	43.96	0.14	1.91
Oklahoma	393,719	89.05	9.26	1.43	0.25
Oregon	398,347	66.39	18.26	1.09	14.26
Pennsylvania	2,091,957	55.85	8.68	34.81	0.66
Rhode Island[c]	139,296	40.61	2.83	19.52	37.03
South Carolina	538,914	91.42	5.29	3.28	--
South Dakota	128,972	51.93	36.54	9.55	1.98
Tennessee	834,777	49.27	37.93	4.46	8.34
Texas	3,057,581	41.99	5.80	1.50	50.71
Utah	362,938	55.98	41.10	--	2.92
Vermont	86,866	45.16	26.18	2.99	25.67
Virginia	926,935	52.71	21.70	20.62	4.97
Washington	1,253,946	37.24	56.98	0.98	4.80
West Virginia	359,473	99.21	--	--	0.79
Wisconsin	2,322,160	15.15	16.44	3.52	64.90
Wyoming	60,669	62.71	--	34.03	3.26
Total	39,637,868	47.35	28.05	11.32	13.28

-- = data not available

a. The distributions shown include both specific dedications and the prorated share of motor-fuel tax distributions from common funds with multiple revenue sources.

b. Includes expenditures for county roads under state control.

c. In these states, most highway-user revenues are placed in the state general fund.

Source: Federal Highway Administration (2008).