Highway Subsidies

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Based upon year 1999 data

Does our road and highway system pay for itself or is it the beneficiary of huge government subsidies? This paper addresses this issue in detail, from the perspective of government net cost affordability. We find that in terms of net monetary costs, U.S. highways are more than paid for by highway user taxes, returning in 1999, a net profit to government of 60% over expenditures.

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SUMMARY

Does our road and highway system pay for itself, or is it, as some claim, the beneficiary of heavy subsidies, which distort the natural free enterprise mechanism, and lead to uneconomic and socially undesirable behavior patterns?

This seemingly simple question has evoked an astounding range of answers. Much of the prior disagreement on this issue appears to have been the result of addressing different questions under different implicit definitions of the term "subsidy". Therefore, it is important to be painstakingly explicit about the question we are addressing and definitions of terms.

The principal objective here is to support the government policy issue of *relative affordability* of various transportation alternatives. To this end, we seek to evaluate the *net, direct, monetary government cost* or subsidy to the roads and highways system, net of *highway user taxes*. There are of course other issues that may enter transportation policy decisions, such as external or intangible costs and benefits, environmental concerns, "equity" however defined, and theoretical economic efficiency. These are not considered here; instead, we restrict ourselves to the simpler fundamental objective of net real monetary cost affordability.

The term "user fee" has come to have a number of closely related but different definitions in prior usage. In order to avoid fruitless semantic misunderstandings insofar as possible, we will start with a fresh slate and use the term "user taxes", (which may or may not be equivalent to "user fees" as variously defined) to denote the difference between government gross and net cost of roads and highways.

We carefully define the terms "*user taxes* " and "*subsidy*" in the only way that appears relatable to the above policy issue. We then derive fully documented estimates of these quantities for our national roads and highways system.

Considering all *user-taxes*, as compared to total public road and highway expenditures, we find that in the United States, the *subsidy* is negative, that is, not a subsidy but a *profit*. Based on 1999 data, user taxes more than pay all direct government costs of the roads and highways system by $69.6 billion, 60% over expenditures.

BACKGROUND

Here and in the following, we will use the terms "roads" or "highways" interchangeably to include all levels of roads and highways without distinction. Further for reasons to be discussed we find it not feasible to meaningfully distinguish subsidies at different *levels* of government, local, state or federal. Consequently our accounting will be for the *composite* government with accounts aggregated over all levels.

In the highway context, there appears to be general agreement with the usage that:

Highway Subsidy = Net government cost attributable to highways activities
= Gross attributable government cost - user attributable government income

However, without further elaboration, there is a vast variance of various authors' estimates of "costs", and attributable income, and therefore, of "subsidy". As a measure of this disparity, estimates of the total current annual costs of highways in the US range from $86 billion (FHWA[1]) to $2,937 billion, (Mark DiLuchi, UCI Davis[2]) roughly half the Gross National Product.

Some authors, e.g. Hart[4] and Komonoff[5], have analyzed expenses and "user fees" for a municipality (Pasadena) or state (New Jersey) and found such expenditures greatly exceed "user fees". This is probably true for most municipalities and states. The problem is that these analyses ignore *transfers* among levels of government. These are "gifts" generally from *user payment* funded federal "Highway Trust Funds" downward to states, counties, and municipalities. And if – as is the case – the ultimate source of those transferred funds is user taxes, then the transfer funds themselves are user taxes. Failure to account for transfers gives the misleading result that the county and city level is taking in vastly less than it spends while such an analysis at Federal level would show just the opposite. Because of commingling and fungibilty of general fund accounts it appears difficult if not impossible meaningfully to track these transfer funds from source to use. Accordingly, we have concluded that meaningful net cost accounting can only be done as an aggregate account over all levels of government; that is what is done here. We will refer to user taxes and expenditures of the "government", meaning the aggregate over all levels of government.

It is tempting, to identify highway system expenditures or transfers from general funds at any level of government as "subsidy funds." This appears to be at least partially the basis of some of the claims of large highway subsidies, e.g. MacKenzie[6]. To do so, however, is seriously wrong. Indeed, there are payments for highways from general funds,. But there are at the same time significant payments of user taxes *into* general funds. As it will turn out, those highway user taxes into general funds are far greater than the withdrawals from general funds for highway expenditures. For that reason it is not possible to identify particular items of highway receipts, particularly not receipts from general funds as "subsidy."

Some writers, e.g. MacKenzie[6], have included such items as employer- or business-provided parking and even the personal costs of driving and congestion delay in their definition of highway subsidy. Clearly however, such items are irrelevant to the issue of *government* net cost affordability, just as is the private cost of owning a car and driving.

Many writers on the subject of highway subsidies have attempted to account for the "external" or societal costs of highways and automobiles on the non-driving public. Among these have been pollution impacts, noise impacts, geopolitical costs, congestion, etc. MacKenzie[6] attributes 50% of cost of the Persian Gulf War to the external costs of U.S. autos, *every year*. The OTA (Congressional Office of Technical Assessment in "Energy Savings in Transportation"[3]) has pointed out that besides external costs, there are substantial external highway system *benefits* , such as travel freedom, efficiency, time savings, and general support of the modern industrialized economy and that a balanced assessment of externalities should consider both. To our knowledge, however, none of the authors dealing with externalities have attempted to make such a balanced assessment. Not only are these items mostly difficult if not impossible to quantify in objective terms, but once estimated, the allocation of costs raises another difficult issue. For example, the entire cost of traffic congestion is often identified as "external" and added to the "cost" that user taxes should presumably pay. Since those who suffer highway congestion are the highway users, this would result in double charging the driving community for congestion and is clearly inappropriate in the present context (not to be confused with the context of economic efficiency).

On the user attributable income side there are also significant divergences. Some authors and in some cases DOT "Highway Statistics" (See Table 1 following) have excluded taxes not *used for highways;* this excludes, for example, the 2.86¢/gal gas tax paid by highway users but dedicated to mass transit. In fact, the FHWA accounting uses several different user-fee-like terms to refer to three somewhat differently defined user-fee-like concepts. (The details of this will be discussed below in Table 1). Some authors hold that even though they are paid by –and only by – highway users, ad valorem sales taxes on gas and automobiles are not user taxes because, they are *part of a general sales tax* that everyone pays on all purchases. While this has a long history of usage in generally accepted accounting practice, it is nonetheless illogical and erroneous in the present context (see the discussion following). So we see that the concept of user fees is far from having an agreed upon meaning.

DEFINING HIGHWAY USER TAXES AND SUBSIDIES

Our approach to resolving all these differences is pragmatic, related to the present study objective, which is to support the study and comparison of net cost *affordability* of highways as compared to other transportation modes under limited availability of government funds. Can the government afford to build more highways? What is the *net* government monetary cost (or profit) impact on government general funds of building and operating roads , and how does that compare with alternatives such as bus or rail. The net cost, or subsidy, then is the amount by which funds available for other purposes are diminished by highway activities (attributable income and expenditures).

To amplify this objective, it may be a useful thought exercise to imagine that we were able somehow suddenly to abolish the entire roads and automobiles system from our society and replace it with a private enterprise *teleportation* system that *costs the total government nothing*, leaving all the rest of the social system, incomes, taxation, and fiscal structure intact as is. Everyone employed in the roads and automotive industry finds equivalent employment in the new teleportation industry. Certain items of government expense would suddenly disappear, they are by our pragmatic definition, the highway *costs*. Similarly certain items of government income from former road users would disappear; they are highway "user taxes". The net direct decrease (or increase) in total government funds available for other uses is the net government highway cost i.e., *subsidy* (or profit if an increase). The subjective morass of externalities issues is irrelevant to this issue, leaving the question of net external or societal cost or benefit to a separate consideration.

In accordance with this objective, we define:

highway *user taxes:*
all those categories of government fees and taxation, paid by and only by road users to the total government, as a consequence of their use of roads and automobiles, irrespective of the use to which those funds may be put.

highway *gross costs:*
the direct monetary expenditures by the total government for all activities in direct support of the roads system

highway *subsidy:*
[highway gross costs] minus [highway user taxes]

A negative subsidy under this definition is a *profit*

For example, the category: {sales taxes on the value of road vehicles, fuel, and parts and accessories} is such a category, paid by and only by road users as a consequence of their use of roads and automobiles, and therefore is *user payment.* That such taxes may *also* be members of other broader categories, e.g. the category of {sales taxes which are paid by everyone}, is in no way contradictory, but simply irrelevant. In fact, all user taxes of all types are "part of broader categories that are paid by everyone", for example, the category of: {all taxes and fees}, so that fact is not only irrelevant but meaningless.

In order to minimize misunderstanding in the following, the terms highway *user payment*, *cost*, and *subsidy* in italics as here, will hereinafter denote meaning exactly in accordance with the above definitions.

User taxes also include those road vehicle fuel taxes used for general fund deficit reduction, or to support mass transit. *User taxes* do not include *in*direct government receipts such as the income taxes paid by an

automobile dealer or the income taxes of a person who could not get to work and earn his income except by automobile. Relative to the present analysis, those are unaccounted benefits of the highway system.

Aside from satisfying the government affordability objective of this study, this narrow definition nicely separates the objective tangible, question-of-fact issues from the more difficult subjective ones. We will deal solely with questions-of-fact, and the results should be objectively verifiable or refutable by other workers. It is to be hoped that some consensus on this issue could be reached as at least a sound point of departure for discussion of the more difficult externalities or societal cost issues. In order to support such critical review and consensus, all source references have been extensively documented, explained, and identified as to precise line item in each reference.

DATA SOURCES

The seminal reference for the fundamental data is the Federal Highway Administration (FHWA) annual data compendium "Highway Statistics",(HS)[1]. These reports compile annual data on revenues and expenditures from all sources, for highway uses at all levels of U.S. government. There are, however, some subtleties in the use of this data that have been overlooked by some writers. HS nowhere uses the exact term "user payment" or even "user fee" but instead uses similar sounding terms "Highway-User-Revenue/Taxation/Imposts" and "Tax Revenues" which variously exclude several different categories of user imposts as explained in the following discussion and table.

First we define several sub-categories of *user taxes:*

1. (**OP**) Highway *user taxes* used for **O**ther **P**urposes than highways (for example, the 2.86 ¢/gal motor fuel tax designated for mass transit) excluded from FHWA user payment-like categories even though those funds are derived entirely from *user taxes*..
2. (**STX**) "**S**ales **T**a**X**es on automotive equipment and supplies", a category of taxes imposed on and only on highway users, but excluded from the FHWA definition of "highway user revenue", because they are at the same time, members of the broader category of sales taxes imposed generally.
3. (**INT**) **Int**erest on surplus funds excluded even though those surplus funds were entirely generated by *user taxes*.
4. (**TOL**) Some road and bridge **toll**s excluded even though those income items are from *user taxes*.

The exact FHWA category names and specific items excluded from categories called by user-fee-like names in various 1999 HS tables are as follows:

Table 1. "Highway User Revenues" Usage in Highway Statistics.

AS GIVEN IN HS TABLE:	NAME	INCLUDED (Y/N) OP	STX	INT	TOL	1999 AMOUNT
HF-1	"Hwy-User Tax Revenues"	N	N	N	N	$68.9 b
HF-10	"Hwy-User Revenue"	Y	N	N	Y	102.9 b
HDF	"Hwy-User Revenues"	Y	N	N	Y	$97.6 b

We include this detail to make two points:

1. Even within "Highway Statistics", the definition of the user-fee-like quantity has a significantly variable terminology and implicit definition.

2. In using these nonetheless invaluable results, one must be careful about the (implicit) definition pertaining to each usage of the user payment-sound-alike categories in Highway Statistics.

For whatever reason, many writers on highway subsidies[2,5,6] have overlooked these details and taken one or another of FHWA's "highway-user revenue/taxation/imposts/ or tax" for *user taxes*. To do so vastly understates actual highway *user taxes*. The following results are compiled in such a way as to show the very important significance of these exclusions.

RESULTS

Details of the data compilation are contained in Table A1-1 and the accompanying notes. Results are summarized here:

Expenditures: Total highway system expenditure in 1999 were $116.0 billion. This is stated to include all direct, tangible maintenance, administration and research and planning, capital outlay (Rights-of-Way and construction), police and safety, and bond interest and redemption expenditures at all levels of U.S. government.

User payment receipts:. The result, detailed in Appendix 1 hereto, and Table A1-1 is total 1999 highway *user taxes* receipts, exclusive of collection costs, of $185.6 billion,. Of this, only $104.8 billion or 56% is accounted for by what "Highway Statistics" calls "Highway User Revenues"

In 1999, the government thus realized a net profit of $70 billion or 60 % over expenditures on roads and highways.

The major contributor to the apparent discrepancy between this and FHWA accounting is their exclusion of the category of automotive sales taxes paid by and only by automobile and highway users as a consequence of their use of roads and automobiles. While this has been generally accepted practice in other contexts, we conclude it is inapplicable and badly misleading in the present context of government net cost accounting.

During 1999 the roads and highways system supported 2.69 trillion vehicle-miles, or 4.27 trillion person-miles of travel (1995 NPST, US Natl. Avg. AVO, all trip purposes =1.59 ps/veh). Expressed per unit service benefit, the normalized cost/benefit factors are then:

Gross *cost*	2.7 ¢/ps-mi
User taxes	4.5 ¢/ps-mi
Net *Profit*	1.8 ¢/ps-mi

IMPLICATIONS

1. In terms of tangible government monetary costs, highway users much more than pay their way. In 1999, they returned a *profit* over total government highway expenditures of about 60% or $70 billion in 1999, up from $49 billion in 1993. This profit was used largely in support of general fund deficit reduction and mass transit subsidies.

2. Neither external benefits (such as mobility, economic stimulation, freedom of movement, social welfare) nor external costs (such as air pollution, noise) have been included in these totals.

3. FHWA should revise or augment its "Highway Statistics" tabulations to at least include a complete tabulation of automotive sales tax receipts and *user taxes* as defined here, as required for policy guidance on the important issue of net government monetary cost and affordability of the highway system.

4. Finally, efforts should be continued to *objectively* quantify the external costs and benefits of roads and highways so that they can properly be included in an objective analyses of societal highway profits or subsidies.

REFERENCES

1 "Highway Statistics, 1999," Annual, Federal Highway Administration, US GPO, Superintendent of Documents, Washington, DC.

2. DeLuchi, Mark, ITS, UC Davis, in OTA, ”Saving Energy in US Transportation”.

3. “Saving Energy in U.S. Transportation”, Congressional Office of Technical Assessment, July 14, 1994.

4. Hart, Stanley, “An Assessment of the Municipal Costs of Automobile Use”, Sierra Club, December 1985.

3. Komonoff, Charles, “Highway-Finance Subsidies in New Jersey”, Komonoff Energy Associates, April 1995.

4. MacKenzie, Dower, and Chen, "The Going Rate, What it Really Costs to Drive," World Resources Institute, 1992.

6. Murphy, James J. and Deluccchi, Mark A.”A Review of the Literature on the Social Cost of Motor Vehicle Use in the United States.”, Journal of Transportation and Statistics, January, 1998.

APPENDIX 1. DATA ANALYSIS

The principal results are summarized in Table A1-1 followed by detailed notes keyed to line items.

Table A1-1 Highway User Payments and Net Subsidy

Amounts in billions of 1999 dollars

	Source of Funds	Category:				
Line	**FEDERAL**	**HUR**	**STX**	**BND**	**INT**	**TOTAL**
1	MV Fuel & Veh Tax	39.8				39.8
2	HTF Interest				2.1	2.1
3	Federal SubTotal	39.8	0.0		2.1	41.9
	STATE:	**HUR**	**STX**		**INT**	**TOTAL**
4	MV Fuel & Veh Tax and Tolls	56.6	11.0			67.6
7	Motor Veh. sales tax		37.4			37.4
8	MV Parts & Acc. Sales Tax		3.8			3.8
10	Bond Proceeds			8.3		
11	Interest on Funds				2.4	2.4
12	State SubTotal	56.6	52.2	8.3	2.4	119.5
	LOCAL:	**HUR**	**STX**		**INT**	**TOTAL**
13	MV Fuel & Veh Tax and Tolls	2.7	3.0			5.7
15	MV Sales Tax		10.2			10.2
16	MV Parts & Acc. Sales Tax		1.0			1.0
17	MV Prop Taxes					0.0
18	Bond Proceeds			3.0		
19	Interest on Funds				4.3	4.3
20	Other Taxes and Fees					0.0
21	Local Sub-total	2.7	14.2	3.0	4.3	24.2
22	**Total User Payments**	99.0	66.4	11.3	8.9	185.6
23	**Total Hwy Expenditures**					116.0
24	**Net Government Cost** (current disbursements)					-69.6
25	**Net Government Profit**					69.6
26	**Profit as percent of Expenditures**					60%

NOTES TO TABLE A1-1

1. *USER PAYMENT* RECEIPTS:

User taxes paid to all levels of government are compiled in Table A1-1. For the most part these items are self explanatory. The table content is in 5 columns, respectively:

HUR: "This is the entire category defined as "Highway User Revenues" in FHWA's "Highway Statistics" (HF-10A) line 1 except that it is net of collection expenses (properly so as those expenses are not included in expenditures). It includes funds spent for other purposes such as mass transit and general fund support. It does not include tolls, bond proceeds, sales taxes on automotive parts and supplies nor interest on surplus funds.

STX (Sales Tax) HS excludes from highway user revenues taxes on automobiles and automotive products that are imposed as a part of a general sales tax on other items as well even though these are a category of tax *"paid by and only by road and automobile users as a result of their use of roads and automobiles"* and are therefor most be accounted as *user taxes* for the purpose of net government cost accounting.

BND Bond proceeds. These balance bond redemption and interest payment, both of which are included in expenditures

INT (Interest) These are interest earned on surplus funds. To the extent that those funds have their source in *user taxes*, (which turns out to be entirely) then the interest on them is also *user payment*.

TOT is the summation over all the above revenue categories for each source.

Lines are categorized by collecting level of government and by taxed category. The following discussion of Table A1-1 follows the line item numbers: Amounts are all for the year ending in1999 (fiscal or calendar in various

tables). This concurrency problem as well as the different handling of a number of minor adjustment categories results in a number of minor disagreements among various tabulations of the nominally same item in different HS tables. Thus in order to support full verifiability of these results, each item in the following tabulation is referenced to source, table (t.), data column (c.), and row (r.) item.

Highway Statistics ("HS") references are to the 1999 or 2000 volume whichever, for the various tables referenced gives the results for year ending in 1999. Sometimes a nominal quantity is given in different sections of the HS reference with slightly different amounts due presumably to timing differences or differing parts included in the higher level summary sheets. Such differing multiple amounts are resolved by using the latest reference (2000 volume if possible, else 1999) in most cases this means Table HF-10A where possible. All amounts in 1999 $billion. Specific references in parenthesis on each item use the designators: t. (table), c. (column), r. (row).

FEDERAL:

1: MV Fuel and Vehicle Taxes.
HUR: $39.8billion (HS2000 t.HF10-A c.3, r.1). This includes all highway user taxes in support of mass transit and general funds. It does not include bond proceeds.

2: Interest. $2.1 billion
INT:To the extent that interest income is generated by surplus *user taxes*, (100% in this case), they represent the time-added value of such *user taxes* and are therefore *user-taxes* themselves. Prior to 1998 surplus Highway Trust Funds, held in the form of Treasury Certificates of Indebtedness, generated interest accruing to the fund at the then current federal funds rate. The 1998, budget reconciliation legislation, transferred some $8 billion (approximately ½ the then current balance) from HTF surplus to the treasury general fund, and mandated that henceforth, Highway Trust Fund balances, would draw no interest. In 1999 the remaining balances generated 2.0 billion dollars in interest (HS2000, t.HF10-A, c.3,r.13). The $8 billion surplus transferred to general fund would have earned $92 million at the then current rate of 4.67%. Irrespective of the fact that such funds were not transferred into the Highway Trust Fund, this represents time-added real value of earlier *user taxes* so is properly highway *user-payment*, allocated to general fund support.

3: Total Federal *user payment* receipts: $41.9 billion.

STATE

4: Motor Vehicle Fuel and Vehicle tax and Tolls.
HUR: $56.6billion. (HS2000 HF-10Ac.4, r.1) $59.7, minus collection costs (HS2000 HF-10A c.4, r.4) $3.2 billion
STX: ad valorem fuel sales taxes, $11.0b. (Appendix 2 below).

7... Motor Vehicle Sales Tax
STX: $37.4billion (see Appendix 2, Table A2-1, below)

8. MV Parts and Accessories Sales Tax
STX: $3.8billion (See Appendix 2, Table A2-1, below)

10. Bond proceeds, $8.309 billion (HS2000, t.HF-10A,c.5, r.15)

11. Interest on funds
INT: This is the time-added value of prior user taxes. In this case, that income was entirely user taxes so interest must be counted as entirely *user taxes*. $2.4b (HS2000 t.HF10-A,c.5 r.13)

12. State sub-total $119.5 billion.

LOCAL

13. MV Fuel and Vehicle tax
HUR: $2.7 billion (HS2000 t. HF-10A, c.5, r.1 – c.5, r.3)
STX $3.0 billion (See Appendix 2)

15. MV Sales tax $10.2billion. (See Appendix 2)

16. MV Parts and Accessories Sales tax. $1.0billion (See Appendix 2)

17. MV Property tax. $0. Placeholder assigned pending determination of fraction countable as road user payment.

18. BND Bond Proceeds, $3.0 billion (HF-10A, c.6, r.15)
19. INT: $4.3b (HF10A c.5 r.13) See comment under #11.
20. Other taxes and fees. $0.0 billion. Placeholder assigned pending determination of fraction countable as road user payment.
21. Local subtotal: $24.2 billion

22 **TOTAL *USER TAXES*** $185.6 billion.

23. **TOTAL HIGHWAY EXPENDITURES** (current disbursements, not including bond repayment)(HS2000, t. HF-10A, c.6, r.37, $116.0 billion.

These total highway system expenditures are stated to include: "..land acquisition and other right-of-way costs, preliminary and construction engineering; construction and reconstruction; resurfacing, rehabilitation and restoration costs of roadway and structure;
installation of traffic service facilities such as guard rails, fencing, signs, and signals.
maintenance: "..routine patching repairs, bridge painting, other maintenance of condition costs; traffic service costs, snow and ice removal, pavement markings, signs, signals, litter cleaning, toll collection expenses."
administration: "..general overhead and engineering and research costs,
highway law enforcement, Federal highway safety program, State highway patrols, safety education, driver training programs, enforcement of vehicle size, weight, and emissions, municipal traffic police."
financing: bond interest and redemption
summed over all levels of U.S. government.

24. **NET GOVERNMENT COST** $ -69.6 billion.
25. **NET GOVERNMENT PROFIT** $ +69.6 billion.
26. **PROFIT AS A PERCENTAGE OF EXPENDITURES**, 60%

Appendix 2
Automotive Sales Taxes

Under the pragmatically adopted definition of "*user taxes*", for the purpose of government net cost accounting, all sales taxes incumbent on automotive equipment and supplies must be regarded as *user taxes.*

The national (Motor Vehicle count) weighted average state and local sales tax rates, 5.13% and 1.4%, derived in Table A2-2 following, are applied to national total sales from US Dept of Commerce, Bureau of Economic Analysis, "Retail Sales, 1999" in Table A2-1, yielding total tax receipts of $52.2 billion state, and $14.2 billion local, carried back to Table A1-1.

Table A2-1 Automotive Sales Taxes

1999 $ billions

		Taxes	
	tax rate:	5.13%	1.40%
	Sales	**State**	**Local**
Motor Vehicles	729.0	37.4	10.2
Fuel, oil	213.8	11.0	3.0
Parts and accessories	74.0	3.8	1.0
Total Sales Taxes	1016.7	52.2	14.2

Table A2-2
State and Local Retail Sales Taxes Rates, %

	State	Local	Non-Public Motor Veh.
	%	%	(000)
Alabama	4	3.45	3,811
Alaska	0	1.05	636
Arizona	5.6	2	2,905
Arkansas	4.125	2.675	1,758
California	5.75	2.15	28,148
Colorado	2.9	2.9	3,426
Connecticut	6	0	605
Delaware	0	0	
D.C.	5.75	0	217
Florida	6	0.5	11,000
Georgia	4	2.55	6,795
Hawaii	4	0	390
Idaho	5	0.05	1,092
Illinois	6.25	1.1	9,227
Indiana	5	0	5,292
Iowa	5	1.05	3,007
Kansas	4.9	1.3	2,093
Kentucky	6	0	2,805
Louisiana	4	4.35	3,367
Maine	5.5	0	911
Maryland	5	0	3,709
Massachusetts	5	0	2,105
Michigan	5	0	7,991
Minnesota	6.5	0.15	4,137
Mississippi	7	0	2,216
Missouri	4.225	2.125	4,344
Montana	0	0	964
Nebraska	5	0.75	1,492
Nevada	6.5	0.65	1,195
New Hampshire	0	0	1,023
New Jersey	6	0	5,629
New Mexico	5	0.95	1,558
New York	4	3.95	10,225
North Carolina	4.5	2.05	5763
North Dakota	5	0.45	658
Ohio	5	1.15	9,903
Oklahoma	4.5	3.05	2,849
Oregon	0	0	2,915
Pennsylvania	6	0.25	8,865
Rhode Island	7	0	706
South Carolina	5	0.55	2,847
South Dakota	4	1.1	749
Tennessee	6	2.35	4,376
Texas	6.25	1.55	12,790
Utah	4.75	1.65	1,506
Vermont	5	0	484
Virginia	3.5	1	5,732
Washington	6.5	1.75	4,760
West Virginia	6	0	1,327
Wisconsin	5	0.45	4,140
Wyoming	4	1.25	540
MV # Wtd Avg Rate, %	**State 5.13**	**Local 1.40**	

Ref 1: Sales Tax Clearinghouse, http://thestc.com/STRates.stm
Ref 2: US DOT, "Highway Statistics, 1999", Table MV-1.

Table A2-2 follows

Appendix 3
Excluding Sales Taxes

Some adverse comment has been received on earlier versions of this paper, to the effect that "sales taxes on automotive equipment and supplies" should *not* be considered as user fees, since they are part of a more general tax paid by everyone on every purchase and that to treat them as user fees for automobiles would amount to special favoritism to motor vehicles.

"Sales taxes on automotive equipment and supplies" do constitute a class of taxes paid by automotive users and only automotive users as a direct result of their use of automobiles and roads, and as such fully satisfy the definition of user fee developed earlier. That they may also be a part of another larger class of taxes paid by everyone should be simply irrelevant to the issue. *All* user fees for anything are part of a class that is paid by everyone, namely, the class of all taxes. So to disqualify automotive sales taxes for that reason would be to nullify the entire concept of user fees. For these reasons I am firmly of the opinion that the class of automotive equipment and supplies must be considered as highway user fees.

Nonetheless, since some will persist in that, that erroneous view, it will be of some interest to carry through the rest of the analysis without sales taxes. This is done in table A-3, identical to Table A1-1 except for the exclusion of sales taxes.

We see that the result is a near perfect balance between expenses and user fees. "User fees" still more than pay all government expenses of highway planning, ROW, building, and operation, but only by the slightest amount, $3 billion or 3%. For practical purposes, there is no subsidy, but also no significant profit on roads.

Nonetheless, in my view, it is of the utmost importance to continue to argue that automotive sales taxes *are* user fees and that the very significant profit actually being made on roads, some $70 billion per year should, by logic and need, be directed to road building, where it would go far toward solving our growing problem of inadequate highway capacity.

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Table A-3

Excluding Sales Taxes

	Source of Funds				
Line	**FEDERAL**	**HUR**	**BND**	**INT**	**TOTAL**
1	MV Fuel & Veh Tax	39.8			39.8
2	Imputed HTF Interest			2.1	2.1
3	Federal SubTotal	39.8		2.1	41.9
	STATE:	**HUR**		**INT**	**TOTAL**
4	MV Fuel & Veh Tax and Tolls	56.6			56.6
7	Motor Veh. sales tax				0.0
8	MV Parts & Acc. Sales Tax				0.0
10	Bond Proceeds		8.3		
11	Interest on Funds			2.4	2.4
12	State SubTotal	56.6	8.3	2.4	67.3
	LOCAL:	**HUR**		**INT**	**TOTAL**
13	MV Fuel & Veh Tax and Tolls	2.7		0.0	2.7
15	MV Sales Tax				0.0
16	MV Parts & Acc. Sales Tax				0.0
17	MV Prop Taxes				0.0
18	Bond Preoceeds				
19	Interest on Funds		3.0	4.3	7.3
20	Other Taxes and Fees				0.0
21	Local Sub-total	2.7	3.0	4.3	10.0
22	**Total User Payments**	99.0	11.3	8.9	119.1
23	**Total Hwy Expenditures**				116.0
24	**Net Government Cost** (current disbursements)				-3.1
25	**Net Government Profit**				3.1
26	**Profit as percent of Expenditures**				3%

	Gross cost/ps-mi	cents per ps-mi		2.72
	User fee/ps-mi	cents per ps-mi		2.79
	Net cost/ps-mi	cents per ps-mi		-0.07