

**Assessment of Tax Revenue Generated
by the
Automotive Sector**



**3005 Boardwalk Drive
Ann Arbor, MI 48108**

April 2012

*All statements, findings, and conclusions in this report are those of the authors
and do not necessarily reflect those of the Alliance of Automobile Manufacturers.*

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Center for Automotive Research

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This project was designed to gain a reasonable assessment of tax revenue generated by the automotive sector and was funded by the Alliance of Automobile Manufacturers.

The mission of the Center for Automotive Research (CAR) is to conduct research on significant issues related to the future direction of the global automotive industry, as well as organize and conduct forums of value to the automotive community. CAR is uniquely positioned to conduct research such as this assessment due to its experience in conducting economic contribution studies on the automotive sector. The Sustainability and Economic Development Strategies Group at CAR has carried out the majority of national level automotive economic contribution studies completed in the United States since 1992. This body of work includes studies performed for the U.S. Department of Commerce, the Alliance of Automobile Manufacturers (AAM), the Association of International Automobile Manufacturers (AIAM), the Motor & Equipment Manufacturers Association (MEMA), and economic impact studies for various automakers.

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INTRODUCTION

The motor vehicle industry is the largest manufacturing industry in the United States. No other single industry is linked as closely to the broader U.S. manufacturing sector or generates as much direct retail business and employment as the motor vehicle industry. This study describes the financial contribution of the automotive sector to state and federal tax revenues.

This study examines multiple instruments of tax revenue generation and focuses primarily on state and federal tax revenues. Taxes are generated at various points in the automotive product lifecycle. For instance, beyond the obvious sales taxes generated when vehicles are purchased, government agencies collect taxes from a variety of sources. These sources include employees working in the automotive sector through income taxes; from drivers who pay taxes on fuels, registrations, and licenses; and from the automotive companies themselves through corporate income taxes and licensing fees. As a result of the depth and breadth of the automotive sector, every state in the nation generates tax revenues related to the automotive industry. Through this analysis, CAR has concluded that the following taxes are supported by operations related to the U.S. auto industry:¹

- The automotive sector is responsible for generating at least \$91.5 billion in state government tax revenue in 2010 (This represents 13 percent of state government tax revenues). Of the total 2010 state tax revenues:
 - \$30 billion was generated from taxes on the sales and service of new and used vehicles.
 - \$860 million was generated from income taxes on direct employment at auto manufacturers, auto parts suppliers, and dealerships (This number increases to over \$4 billion when taxes from intermediate and spinoff jobs are included).
 - \$60 billion was generated from use taxes and fees including fuel taxes, registration fees, and driver licensing fees.
 - \$750 million was generated from business taxes such as corporate income taxes and business license fees.
- State government tax revenues not counted in this report such as corporate income taxes on the non-manufacturing operations of automakers and parts supply companies, vehicle title fees, personal property taxes, and miscellaneous business taxes account for additional revenues above those estimated and are beyond the scope of this report.

¹ All modeled numbers used in the text are rounded.

- The estimates of the federal tax revenues in this study do not exhaust all of the contributions made by the automotive industry, and therefore, the estimates serve as a lower-bound estimate. In 2010, the automotive industry was responsible for generating at least \$43 billion in federal government tax revenue. Of the total 2010 federal tax revenues:
 - \$14 billion was generated from income taxes on direct employment at auto manufacturers, auto parts suppliers, and dealerships (This number increases to nearly \$69 billion when taxes from intermediate and spinoff jobs are included).
 - \$29 billion was generated from federal motor fuel taxes.
- Federal tax revenues that are not estimated, such as corporate income taxes paid, account for additional revenues beyond those estimated in this report.

This study confirms that the U.S. automotive sector has a large impact throughout the nation and provides support to state and federal governments in the form of taxes and fees collected from sales, employees, drivers, and the auto companies themselves. As the economy continues in its recovery, auto sales improve, and companies are able to create and retain jobs at greater rates, tax revenues generated by the sector could increase to even greater levels.

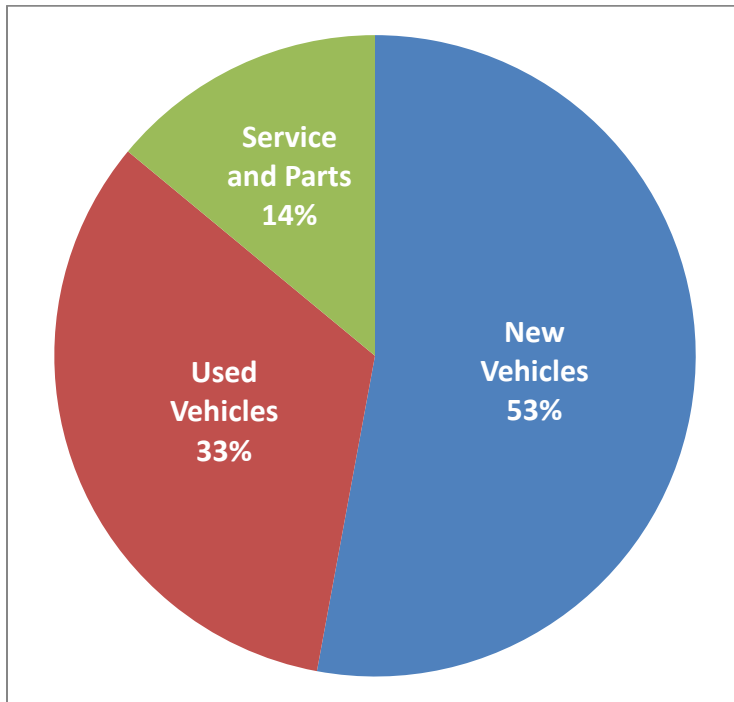
The auto sector's contribution to taxes was analyzed using data from companies, industry associations, and government agencies. A critical component of the analysis used data from a previous CAR report on the contribution to the state and federal economies.² The remaining data on the U.S. economy and the automotive industry were collected by CAR from a wide variety of publicly available sources, which are listed in the References section.

² Hill, Kim; Debbie Maranger Menk; and Adam Cooper. (2010). "Contribution of the Automotive Industry to the Economies of All Fifty States and the United States." The Center for Automotive Research. April 2010. <http://www.cargroup.org/pdfs/association_paper.pdf>.

SECTION 1. SALES TAX FROM NEW MOTOR VEHICLES

Estimates of sales taxes collected from new vehicle dealers were generated using data from the National Automobile Dealers Association (NADA).³ State level data on sales was apportioned to the sales of new vehicles, used vehicles, and service and parts using the national average ratios provided by NADA. The percentages attributed to each category of dealer revenues can be seen in Figure 1. New vehicle purchases constitute over half of the sales dollars spent at dealerships, used vehicles constitute approximately a third of sales dollars, and the remaining 14 percent is spent by consumers for service and parts.

Figure 1: Share of Total Dealership Sales Dollars



Source: NADA 2011

Once sales were apportioned by category, CAR researchers applied state vehicle sales tax rates to new and used vehicle sales and general sales tax rates to service and parts sales. These calculations resulted in sales tax estimates by category and state. The state estimates were aggregated to form national totals by category, which are displayed in Table 1 and Figure 2. The state level estimates can be seen in Table 2.

³ Taylor, Paul. (2011). "NADADATA 2011: State of the Industry Report" National Automotive Dealers Association. 2011. <http://www.nada.org/NR/rdonlyres/0798BE2A-9291-44BF-A126-0D372FC89B8A/0/NADA_DATA_08222011.pdf>.

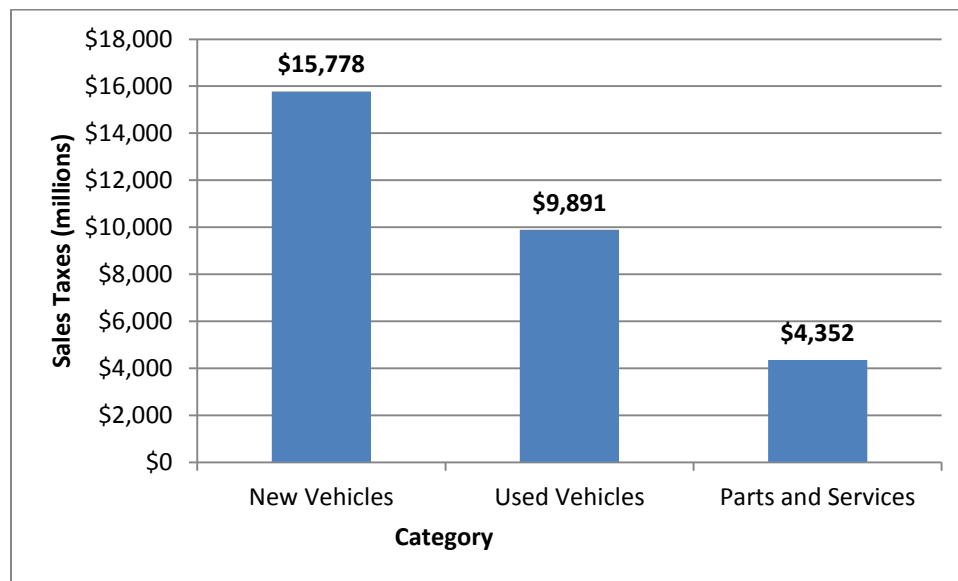
Table 1: Total Sales Taxes Collected by States on Motor Vehicles, Parts, and Service, 2010

Type of Sale	Sales Taxes Paid (millions \$)
New Vehicles	\$15,778
Used Vehicles	\$9,891
Parts and Services	\$4,352
Total	\$30,021

Source: NADA 2011, CAR Research 2012

Total state sales taxes paid on vehicles, parts, and service contribute about \$30 billion to the revenues of states. Taxes on new vehicles totaled nearly \$15.8 billion, while used vehicles generated nearly \$9.9 billion. Taxes from parts and services were estimated at \$4.3 billion. The parts and service tax revenue estimate may be slightly overstated because some states do not tax labor. However, while not every state collects taxes on the labor portion of parts and service, nearly 60 percent of the value spent on parts and service is spent on parts.⁴ In addition, many states do collect taxes on labor, and only around six percent of the average dealership’s total revenue is associated with vehicle service labor.

Figure 2: Total Sales Taxes Collected by States on Motor Vehicles, Parts, and Service, 2010



Source: NADA 2011, Center for Automotive Research 2012

⁴ Ibid. Taylor 2011.

Table 2: State Sales Taxes Collected on Motor Vehicles, Parts, and Service, 2010

State	Sales Tax Revenues (millions)		
	New Vehicles	Used Vehicles	Parts and Services
Alabama	\$81	\$51	\$43
Alaska	\$0	\$0	\$0
Arizona	\$382	\$240	\$101
Arkansas	\$151	\$95	\$40
California	\$2,207	\$1,384	\$585
Colorado	\$153	\$96	\$40
Connecticut	\$264	\$166	\$70
Delaware	\$39	\$24	\$0
Florida	\$1,233	\$773	\$327
Georgia	\$361	\$226	\$96
Hawaii	\$36	\$22	\$9
Idaho	\$69	\$43	\$18
Illinois	\$772	\$484	\$205
Indiana	\$383	\$240	\$102
Iowa	\$166	\$104	\$53
Kansas	\$165	\$104	\$44
Kentucky	\$191	\$120	\$51
Louisiana	\$162	\$102	\$43
Maine	\$73	\$46	\$19
Maryland	\$371	\$232	\$98
Massachusetts	\$457	\$287	\$121
Michigan	\$390	\$245	\$103
Minnesota	\$235	\$147	\$66
Mississippi	\$97	\$61	\$36
Missouri	\$241	\$151	\$64
Montana	\$0	\$0	\$0
Nebraska	\$120	\$75	\$32
Nevada	\$131	\$82	\$35
New Hampshire	\$0	\$0	\$0
New Jersey	\$776	\$487	\$206
New Mexico	\$45	\$28	\$20
New York	\$735	\$461	\$195
North Carolina	\$263	\$165	\$110
North Dakota	\$55	\$35	\$15
Ohio	\$610	\$383	\$162
Oklahoma	\$305	\$191	\$112
Oregon	\$0	\$0	\$0
Pennsylvania	\$749	\$469	\$199
Rhode Island	\$64	\$40	\$17
South Carolina	\$173	\$108	\$55
South Dakota	\$31	\$20	\$11
Tennessee	\$378	\$237	\$100
Texas	\$1,540	\$966	\$408
Utah	\$140	\$88	\$37
Vermont	\$46	\$29	\$12
Virginia	\$236	\$148	\$104
Washington	\$338	\$212	\$86
West Virginia	\$83	\$52	\$26
Wisconsin	\$257	\$161	\$68
Wyoming	\$22	\$14	\$6
Total	\$15,778	\$9,891	\$4,352

Source: NADA 2011, CAR Research 2012

SECTION 2: PERSONAL INCOME TAX OF AUTOMOTIVE EMPLOYEES

To calculate an estimate for personal income taxes paid by employees of automaker manufacturing facilities, parts supplier manufacturing facilities, and new vehicle dealerships, CAR researchers relied on a recently-published CAR report.⁵ This report used a dynamic, inter-industry model developed by Regional Economic Models, Inc. (REMI) for industry- and region-specific impact analysis.

In the earlier study, CAR estimated the total employment and compensation provided by the automotive industry across the United States. The research team at CAR used a 51-region, 169-industry sector model developed by REMI to capture effects in all fifty U.S. state economies, the District of Columbia, and the U.S. national economy.

Using the calculations of income and tax revenues generated for the earlier study, CAR researchers were able to apportion the tax revenues by the jurisdiction collecting them, as well as by the industry sector responsible for generating the tax revenue. Table 3 and Figure 3 below display the amount of income taxes generated as a result of direct employment in the automotive industry.

Table 3: Estimated Direct Worker Income Taxes Paid in the United States, 2010

Industry Sector	Collecting Jurisdiction	Tax Revenue (millions)
Automaker	Federal	\$2,661.1
	State and Local	\$148.4
Parts Supplier	Federal	\$5,819.3
	State and Local	\$342.8
Dealer	Federal	\$5,856.7
	State and Local	\$368.9
Total	Federal	\$14,337.2
	State and Local	\$860.1
	Total	\$15,197.2

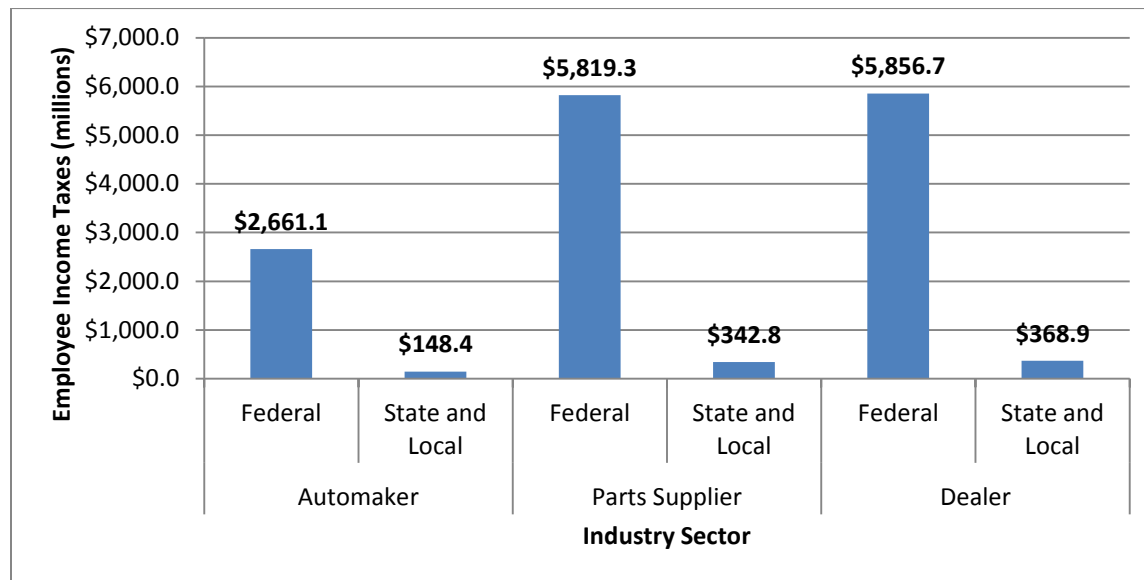
Source: Hill et al. 2010

For this analysis, great consideration was paid to the potential of double-counting between supplier, dealership, and assemblers. By avoiding double counting between segments of the industry (automaker, parts supply, and dealerships), the results for each of these segments can be added together to arrive at the total economic contribution of the industry. These results

⁵ Hill et al. 2011.

fairly represent the size of the industry and its impact on the U.S. and individual state economies.⁶

Figure 3: Estimated Direct Worker Income Taxes Paid in the United States, 2010



Source: Hill et al. 2010

As can be seen in the table and figure above, income taxes paid as a result of direct employment in the manufacturing and sales of automobiles total \$15.2 billion, with 94 percent of the tax dollars going to the federal government. Even so, over \$860 million in income taxes went to state and local governments. For a breakdown of these income tax revenues by state, see Table 4.

When one takes into account the intermediate employment (jobs at suppliers not involved in manufacturing, such as financial, marketing, and management operations) and spinoff employment (expenditure-induced jobs created as a result of direct employees spending their paychecks) that is supported by automotive manufacturing and sales, even greater income tax revenues can be attributed to the automotive industry. While this section does not cover tax impacts from intermediate and spinoff jobs, the material contained in Appendix B contains estimates of income tax revenues from direct, intermediate, and spinoff employment.

⁶ For further information regarding the methodology used by CAR, read "Contribution of the Automotive Industry to the Economies of All Fifty States and the United States." The full citation for the paper can be found in the References section of this paper.

Table 4: Estimated Direct Worker Income Taxes by State, 2010

State	Automaker (millions)		Parts Supplier (millions)		Dealer (millions)	
	Federal	State and	Federal	State and	Federal	State and
Alabama	\$85.7	\$3.5	\$154.5	\$7.9	\$67.6	\$3.0
Alaska	\$0.2	\$0.0	\$0.0	\$0.0	\$10.1	\$0.0
Arizona	\$12.4	\$0.5	\$26.4	\$1.4	\$130.3	\$8.0
Arkansas	\$3.3	\$0.2	\$55.1	\$2.7	\$34.0	\$1.6
California	\$200.6	\$14.7	\$253.3	\$15.7	\$827.6	\$71.8
Colorado	\$11.2	\$0.6	\$17.1	\$0.9	\$88.7	\$5.4
Connecticut	\$7.3	\$1.0	\$85.3	\$10.8	\$125.4	\$17.0
Delaware	\$10.0	\$0.5	\$3.4	\$0.2	\$24.1	\$1.5
Florida	\$14.8	\$0.0	\$52.8	\$0.0	\$397.4	\$0.0
Georgia	\$20.6	\$1.2	\$128.0	\$8.0	\$165.5	\$9.8
Hawaii	\$0.1	\$0.0	\$0.4	\$0.0	\$21.5	\$1.4
Idaho	\$0.0	\$0.0	\$4.6	\$0.1	\$22.7	\$1.1
Illinois	\$70.7	\$4.9	\$350.8	\$24.1	\$253.3	\$16.6
Indiana	\$167.4	\$9.0	\$540.0	\$26.8	\$98.4	\$5.4
Iowa	\$4.6	\$0.2	\$74.3	\$3.1	\$44.0	\$1.8
Kansas	\$10.0	\$0.5	\$31.3	\$1.7	\$42.6	\$2.1
Kentucky	\$109.7	\$6.6	\$264.8	\$20.4	\$56.0	\$3.2
Louisiana	\$11.1	\$0.6	\$9.6	\$0.6	\$68.0	\$3.7
Maine	\$0.1	\$0.0	\$4.6	\$0.3	\$25.0	\$1.8
Maryland	\$18.3	\$2.2	\$23.6	\$2.9	\$162.3	\$18.7
Massachusetts	\$9.3	\$0.9	\$42.5	\$4.1	\$167.7	\$17.3
Michigan	\$1,021.3	\$49.6	\$1,006.3	\$44.9	\$175.5	\$9.2
Minnesota	\$5.2	\$0.4	\$46.8	\$3.3	\$100.5	\$7.3
Mississippi	\$24.9	\$1.0	\$41.4	\$1.7	\$30.7	\$1.1
Missouri	\$77.7	\$3.7	\$132.1	\$6.9	\$96.5	\$4.8
Montana	\$0.1	\$0.0	\$0.8	\$0.0	\$14.3	\$0.7
Nebraska	\$1.8	\$0.1	\$35.7	\$1.3	\$26.2	\$1.1
Nevada	\$6.1	\$0.0	\$5.6	\$0.0	\$59.7	\$0.0
New Hampshire	\$0.5	\$0.0	\$6.4	\$0.0	\$35.1	\$0.0
New Jersey	\$62.6	\$5.7	\$42.6	\$4.8	\$240.6	\$22.8
New Mexico	\$0.1	\$0.0	\$1.1	\$0.0	\$28.3	\$1.1
New York	\$60.9	\$6.6	\$292.7	\$30.2	\$412.2	\$47.7
North Carolina	\$11.0	\$0.7	\$201.1	\$13.8	\$158.8	\$10.1
North Dakota	\$0.0	\$0.0	\$5.5	\$0.1	\$10.0	\$0.2
Ohio	\$347.2	\$26.8	\$735.8	\$53.4	\$211.0	\$15.9
Oklahoma	\$8.1	\$0.3	\$75.0	\$3.6	\$54.0	\$2.5
Oregon	\$6.5	\$0.3	\$28.7	\$1.3	\$68.3	\$4.7
Pennsylvania	\$10.1	\$0.7	\$142.2	\$9.2	\$262.4	\$18.7
Rhode Island	\$0.8	\$0.1	\$0.4	\$0.0	\$18.8	\$1.6
South Carolina	\$49.9	\$2.4	\$135.0	\$13.1	\$64.9	\$3.4
South Dakota	\$0.0	\$0.0	\$5.3	\$0.0	\$10.2	\$0.0
Tennessee	\$88.2	\$0.0	\$285.8	\$0.0	\$88.4	\$0.0
Texas	\$62.8	\$0.0	\$187.6	\$0.0	\$380.1	\$0.0
Utah	\$0.9	\$0.0	\$27.7	\$1.0	\$35.8	\$1.8
Vermont	\$0.0	\$0.0	\$0.0	\$0.0	\$12.3	\$0.8
Virginia	\$7.1	\$0.6	\$77.5	\$7.4	\$178.6	\$14.0
Washington	\$2.9	\$0.0	\$29.4	\$0.0	\$115.2	\$0.0
West Virginia	\$9.9	\$0.5	\$4.3	\$0.3	\$23.8	\$1.3
Wisconsin	\$26.9	\$1.9	\$142.6	\$14.7	\$102.2	\$7.1
Wyoming	\$0.0	\$0.0	\$1.1	\$0.0	\$10.0	\$0.0
Total	\$2,661.1	\$148.4	\$5,819.3	\$342.8	\$5,856.7	\$368.9

Source: Hill et al. 2010

SECTION 3: VEHICLE USE TAXES, LICENSES, AND FEES

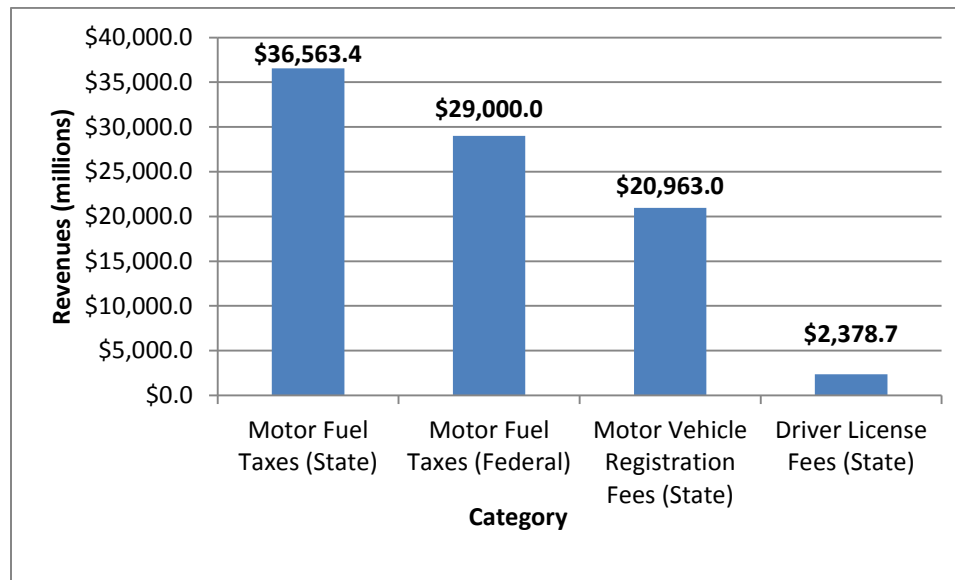
This section employs government sources to document revenues for various use taxes and fees, including motor fuel taxes, motor vehicle registration fees, and driver license fees.⁷ This data was aggregated to the national level and displayed in Table 5 and Figure 4. State level data can be found in Table 6.

Table 5: Use Tax Revenues, 2010

Category	Revenues (millions)
Motor Fuel Taxes (State)	\$36,563.4
Motor Fuel Taxes (Federal)	\$29,000.0
Motor Vehicle Registration Fees (State)	\$20,963.0
Driver License Fees (State)	\$2,378.7
Total State	\$59,905.1
Total Federal	\$29,000.0

Source: Braybrooks et al. 2011, CBO 2011

Figure 4: Use Tax Revenues, 2010



Source: Braybrooks et al. 2011, CBO 2011

The streams of income measured in this section provide combined revenue of nearly \$60 billion. The bulk of the revenue comes from motor vehicle taxes, which bring in almost \$37

⁷ Braybrooks, Melissa; Julio Ruiz; and Elizabeth Accetta. (2011). "State Government Tax Collections: 2010." United States Census Bureau. March 2011. <<http://www2.census.gov/govs/statetax/10staxss.xls>>; CBO. (2011). "The Budget and Economic Outlook: Fiscal Years 2011 to 2021." Congressional Budget Office. January 2011. <http://www.cbo.gov/ftpdocs/120xx/doc12039/01-26_fy2011outlook.pdf>.

billion. Motor vehicle registrations bring in another \$21 billion and driver license fees provide more than \$2 billion to state revenues.

Table 6: Use Tax Revenues by State, 2010

State	Motor Fuel Taxes	Motor Vehicle Registration Fees	Driver License Fees
Alabama	\$558,476,000	\$200,285,000	\$19,148,000
Alaska	\$23,834,000	\$63,692,000	\$1,900,000
Arizona	\$796,560,000	\$176,095,000	\$23,701,000
Arkansas	\$466,482,000	\$139,582,000	\$16,871,000
California	\$3,163,694,000	\$3,108,956,000	\$270,344,000
Colorado	\$602,347,000	\$379,611,000	\$20,937,000
Connecticut	\$498,177,000	\$196,778,000	\$37,251,000
Delaware	\$112,889,000	\$47,375,000	\$4,356,000
Florida	\$2,266,814,000	\$1,282,832,000	\$310,101,000
Georgia	\$854,360,000	\$282,516,000	\$42,648,000
Hawaii	\$86,370,000	\$100,575,000	\$241,000
Idaho	\$230,377,000	\$120,275,000	\$7,676,000
Illinois	\$1,339,228,000	\$1,446,595,000	\$92,484,000
Indiana	\$759,959,000	\$393,350,000	\$214,505,000
Iowa	\$437,763,000	\$466,982,000	\$14,428,000
Kansas	\$424,703,000	\$174,932,000	\$18,222,000
Kentucky	\$655,245,000	\$198,783,000	\$16,537,000
Louisiana	\$587,995,000	\$109,388,000	\$12,758,000
Maine	\$241,687,000	\$94,633,000	\$8,400,000
Maryland	\$722,597,000	\$433,777,000	\$28,554,000
Massachusetts	\$654,649,000	\$362,053,000	\$104,298,000
Michigan	\$967,728,000	\$877,844,000	\$51,712,000
Minnesota	\$832,291,000	\$557,733,000	\$46,189,000
Mississippi	\$393,363,000	\$124,437,000	\$33,255,000
Missouri	\$721,917,000	\$265,623,000	\$17,215,000
Montana	\$204,390,000	\$142,189,000	\$8,500,000
Nebraska	\$298,805,000	\$79,479,000	\$10,858,000
Nevada	\$292,804,000	\$158,987,000	\$20,136,000
New Hampshire	\$147,805,000	\$131,100,000	\$12,122,000
New Jersey	\$535,281,000	\$578,968,000	\$50,345,000
New Mexico	\$227,633,000	\$121,770,000	\$3,705,000
New York	\$1,613,229,000	\$965,000,000	\$136,785,000
North Carolina	\$1,551,660,000	\$548,379,000	\$127,096,000
North Dakota	\$151,050,000	\$87,145,000	\$4,040,000
Ohio	\$1,727,242,000	\$832,589,000	\$89,456,000
Oklahoma	\$431,151,000	\$579,380,000	\$15,916,000
Oregon	\$403,284,000	\$496,097,000	\$28,501,000
Pennsylvania	\$2,020,099,000	\$800,432,000	\$60,995,000
Rhode Island	\$123,805,000	\$53,385,000	\$626,000
South Carolina	\$521,215,000	\$147,405,000	\$51,121,000
South Dakota	\$125,223,000	\$52,822,000	\$3,611,000
Tennessee	\$824,795,000	\$249,577,000	\$45,118,000
Texas	\$3,043,495,000	\$1,542,188,000	\$101,229,000
Utah	\$351,449,000	\$292,359,000	\$13,806,000
Vermont	\$99,278,000	\$72,214,000	\$7,241,000
Virginia	\$882,919,000	\$339,581,000	\$58,743,000
Washington	\$1,196,688,000	\$463,075,000	\$66,666,000
West Virginia	\$391,995,000	\$86,691,000	\$3,900,000
Wisconsin	\$972,979,000	\$471,556,000	\$42,309,000
Wyoming	\$25,617,000	\$65,895,000	\$2,188,000
Total	\$36,563,396,000	\$20,962,965,000	\$2,378,744,000

Source: Census 2011

Excluded Tax and Fee Revenues:

An additional source of revenue is the vehicle title fee, which is incurred in the purchase of a new vehicle. Data on title fees by state from the National Conference of State Legislatures⁸ was used along with vehicle sales by state to estimate title fee revenues for most states. This title fee is not included in the calculation of use taxes above the vehicle title fee because the information cannot be collected for all fifty states. The total vehicle title fees paid to the 44 state governments for which the estimates could readily be estimated is \$270 million. Title revenue estimates by state for selected states can be seen in Table 7 on the following page.

Another type of tax that is not included in the above calculation is the personal property tax. A personal property tax is a tax on the value of property other than real estate. Property that is considered for this type of tax could include, for instance, motor vehicles, boats, recreational vehicles, and motorcycles. Within the United States, personal property taxes for motor vehicles vary widely from state to state and county to county.

Some states, such as Kentucky and Louisiana, assess automotive personal property at the state level. A number of other states, including Missouri, New Hampshire, and South Carolina, assess personal property taxes at the county level, or through other local governments. Also, a sizeable number of states, including Delaware, New Mexico and Pennsylvania have no personal property tax for automobiles. Some states choose to assess an excise tax rather than personal property tax. Still other states assess personal property taxes in general, but exempt cars from this tax (for example, Ohio).

Though personal property tax collections do represent a source of income to states and localities, they are outside the scope of this study. This paper does not include personal property taxes because these taxes are frequently imposed at the local level, rather than the state level, and data on personal property taxes generated from motor vehicle ownership are not readily available.

The tax revenues generated by non-dealer auto services or aftermarket retail sales of automotive parts have not been estimated. The retail aftermarket parts and services sector is estimated to be more than \$150 billion in total sales across the U.S. and represents yet another source of tax revenue contribution.

⁸ NCSL. (2011). "Registration and Title Fees by State." National Conference of State Legislatures. September 2011. <<http://www.ncsl.org/issues-research/transportation/registration-and-title-fees-by-state.aspx>>.

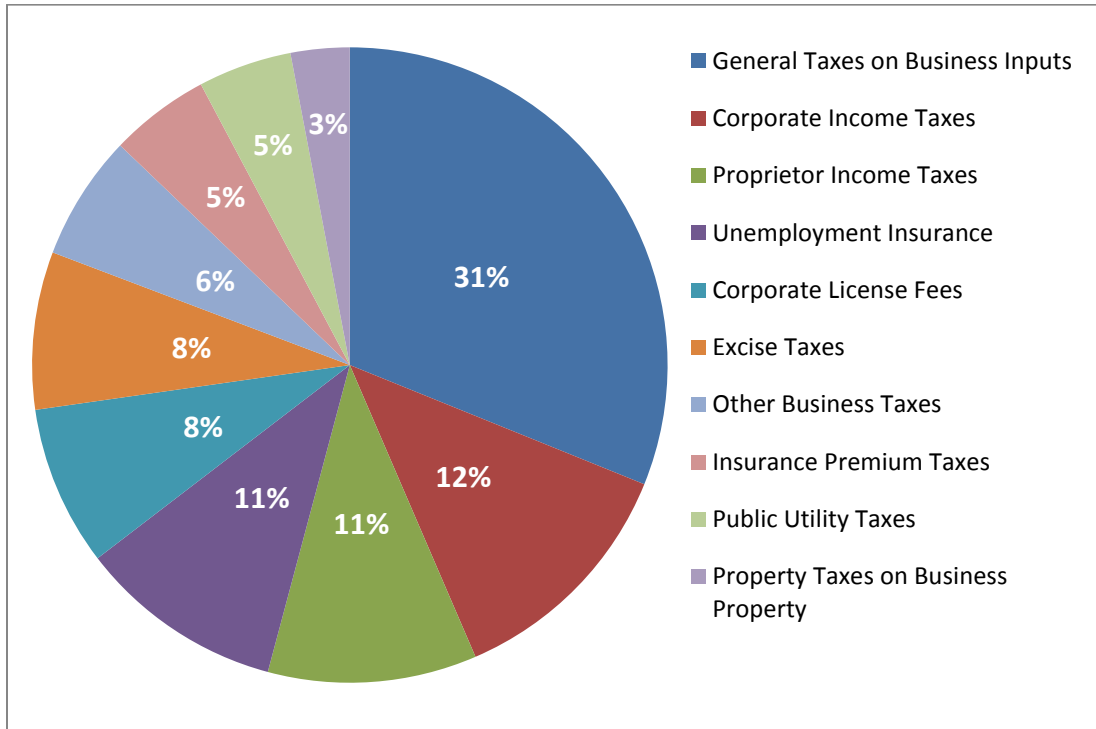
Table 7: Estimated Annual Title Fees for Selected States, 2010

State	Title Fees
Alabama	\$2,647,962
Alaska	\$433,635
Arizona	\$847,616
Arkansas	\$474,905
California	\$19,905,156
Colorado	\$1,274,486
Connecticut	\$2,479,662
Florida	\$60,985,761
Georgia	\$5,898,834
Idaho	\$450,562
Illinois	\$46,686,610
Indiana	\$2,659,815
Iowa	\$2,561,850
Kansas	\$867,980
Kentucky	\$1,009,926
Louisiana	\$3,053,999
Maine	\$1,515,558
Maryland	\$12,968,250
Massachusetts	\$20,168,175
Michigan	\$6,440,355
Minnesota	\$1,281,864
Mississippi	\$576,112
Missouri	\$2,290,992
Montana	\$4,894,396
Nebraska	\$646,380
Nevada	\$2,283,843
New Hampshire	\$1,694,750
New Mexico	\$185,667
North Carolina	\$12,094,200
North Dakota	\$139,080
Oklahoma	\$7,125,602
Oregon	\$7,608,524
Pennsylvania	\$11,339,730
Rhode Island	\$1,994,235
South Carolina	\$2,024,865
South Dakota	\$134,715
Tennessee	\$2,113,331
Utah	\$467,838
Vermont	\$941,966
Virginia	\$3,027,070
Washington	\$1,389,976
West Virginia	\$654,970
Wisconsin	\$11,987,986
Wyoming	\$181,242

Source: NCSL 2011

SECTION 4: BUSINESS TAXES

Figure 5: State Tax Revenues from Businesses by Type of Tax, 2010



Source: Phillips et al. 2011

As outlined by Ernst and Young and shown in Figure 5 above, there are 10 main types of tax revenues that states collect from businesses.⁹ This section of the report provides estimates for two of the categories – corporate income tax and corporate license fees – paid by automaker assembly operations, parts supply manufacturers, and dealerships. These estimates can be seen aggregated in Table 8 and by state in Table 9. Proprietor income taxes were estimated in the personal income tax section. Together, these three categories account for 31 percent of all business taxes paid to states.

Table 8: Estimated State Corporate Income Tax and License Fees Paid by Automaker Manufacturing Operations, Parts Supply Manufacturing, and Automotive Dealerships, 2010

Industry Sector	Corporate Income Taxes and License Fees
Automakers and Suppliers	\$295,506,347
Dealerships	\$458,059,000
Total	\$753,565,347

⁹ Phillips, Andrew; Robert Cline; Thomas Neubig; and Julia Thayne. (2011). "Total State and Local Business Taxes: State-by-State Estimates for Fiscal Year 2010." Ernst & Young LLP. Prepared for the Council on State Taxation. July 2011. <<http://www.cost.org/Page.aspx?id=69654>>.

Source: Phillips et al. 2011

Table 9: Estimated Annual State Corporate Income Taxes and License Fees Paid by Automaker Manufacturing Operations, Parts Supply Manufacturing, and Automotive Dealerships

State	Corporate Income Taxes and License Fees	
	Automakers and Suppliers	Dealerships
Alabama	\$17,616,605	\$6,724,361
Alaska	NA	\$1,167,984
Arizona	\$607,635	\$10,444,179
Arkansas	\$1,850,445	\$3,441,400
California	\$15,642,926	\$64,115,677
Colorado	NA	\$5,393,126
Connecticut	NA	\$7,259,428
Delaware	NA	\$2,749,182
Florida	\$1,858,562	\$26,904,486
Georgia	\$1,945,910	\$13,735,344
Hawaii	NA	\$1,584,920
Idaho	NA	\$2,472,756
Illinois	\$10,648,623	\$22,416,947
Indiana	\$47,660,809	\$12,007,321
Iowa	\$1,550,615	\$10,635,395
Kansas	NA	\$2,060,230
Kentucky	\$25,612,749	\$5,162,100
Louisiana	NA	\$8,141,028
Maine	NA	\$3,405,818
Maryland	NA	\$13,379,606
Massachusetts	\$1,982,397	\$14,010,970
Michigan	\$52,042,501	\$11,131,183
Minnesota	\$3,158,205	\$11,342,308
Mississippi	NA	\$2,502,050
Missouri	NA	\$8,981,989
Montana	NA	\$1,994,137
Nebraska	\$1,205,018	\$4,098,862
Nevada	NA	\$0
New Hampshire	NA	\$4,142,590
New Jersey	NA	\$19,316,453
New Mexico	NA	\$2,672,952
New York	\$5,751,582	\$25,144,294
North Carolina	\$17,386,758	\$15,509,015
North Dakota	NA	\$1,793,921
Ohio	\$39,840,510	\$760,037
Oklahoma	\$732,942	\$7,667,992
Oregon	\$1,085,626	\$6,561,543
Pennsylvania	\$5,600,754	\$33,164,193
Rhode Island	NA	\$1,970,905
South Carolina	\$3,056,829	\$4,872,835
South Dakota	\$233,323	\$0
Tennessee	\$23,748,162	\$9,759,557
Texas	\$5,879,310	\$14,090,842
Utah	NA	\$2,849,824
Vermont	NA	\$1,721,941
Virginia	\$1,574,462	\$12,759,977
Washington	\$15,505	\$0
West Virginia	NA	\$3,859,569
Wisconsin	\$5,923,952	\$12,177,774
Wyoming	NA	\$0
Total	\$295,506,347	\$458,059,000

Note: Does not include non-manufacturing operations for automakers

Corporate income taxes paid to states by automaker manufacturing operations, parts supply manufacturing operations, and dealerships are estimated to be more than \$750 million. For manufacturing operations, the value added portion of manufacturer shipments for North

American Industry Classification (NAICS) codes 3361 (auto assembly), 3362 (auto body manufacturing and stampings) and 3363 (auto parts manufacturing) by state were obtained from the Annual Survey of Manufactures.¹⁰ This value-added dollar figure was calculated as a percent of each state's gross state product (GSP). The total state revenues collected from corporate income taxes and corporate license fees were next multiplied by the percent of value-added by auto manufacturing relative to the GSP for each state. Figure 6 provides an example of these calculations for greater clarification.

Figure 6: Example of Calculations for Corporate Taxes and License Fees

Column A	Column B	Column C	Column D	Column E	Column F	Column G	Column H	Column I
State	NAICS	2010 Value Added (\$1,000)	State GSP, 2010, \$ millions	Auto Mfg as % of GSP	State Tax Revenues from Corporate Income Taxes, \$ 1,000s	State Tax Revenues from Corporate Licenses \$1000	Calculation of Taxes Paid by Auto Mfg., \$	Calculation of Licenses Paid by Auto Mfg., \$
Alabama	3361	3,075,191	172,567	0.0178	428,245	108,682	7,631,443	1,936,743
Alabama	3362	277,931	172,567	0.1611%	428,245	108,682	689,718	175,040
Alabama	3363	2,308,811	172,567	1.3379%	428,245	108,682	5,729,582	1,454,080
Total		5,661,933					14,050,743	3,565,863
Calculation or Source of Data	ASM	ASM	Census	Col D / Col E	Census	Census	Col F X Col G	Col F X Col H

Source: Census 2011, Braybrooks et al. 2011, Center for Automotive Research 2012

The estimate of \$750 million in corporate taxes paid to states is understated. To obtain a more complete picture of corporate state income taxes, one would have to examine company filings, such as 10-K filings with the U.S. Securities and Exchange Commission (SEC), on a company-by-company basis. The 10-K filings for Ford and General Motors were used to sample automaker state taxes paid, and these two companies alone paid more than \$600 million in state and local taxes in 2010. In regards to the difference between the \$750 million estimate and record of the \$600 million in payments, the estimate of \$750 million does not include the non-manufacturing operations for automakers and suppliers. Furthermore, automaker and supplier, automaker and supplier data is not available for several states where the size of the industry does not meet government disclosure requirements.

Business property taxes paid by auto industry companies are not estimated in this study. The revenues to states from property taxes are only 2 percent of all state government tax revenues.¹¹ In addition, not all states collect property taxes, and property taxes account for

¹⁰ Census. (2011). "Annual Survey of Manufactures, 2010." U. S. Census Bureau. November 2011.

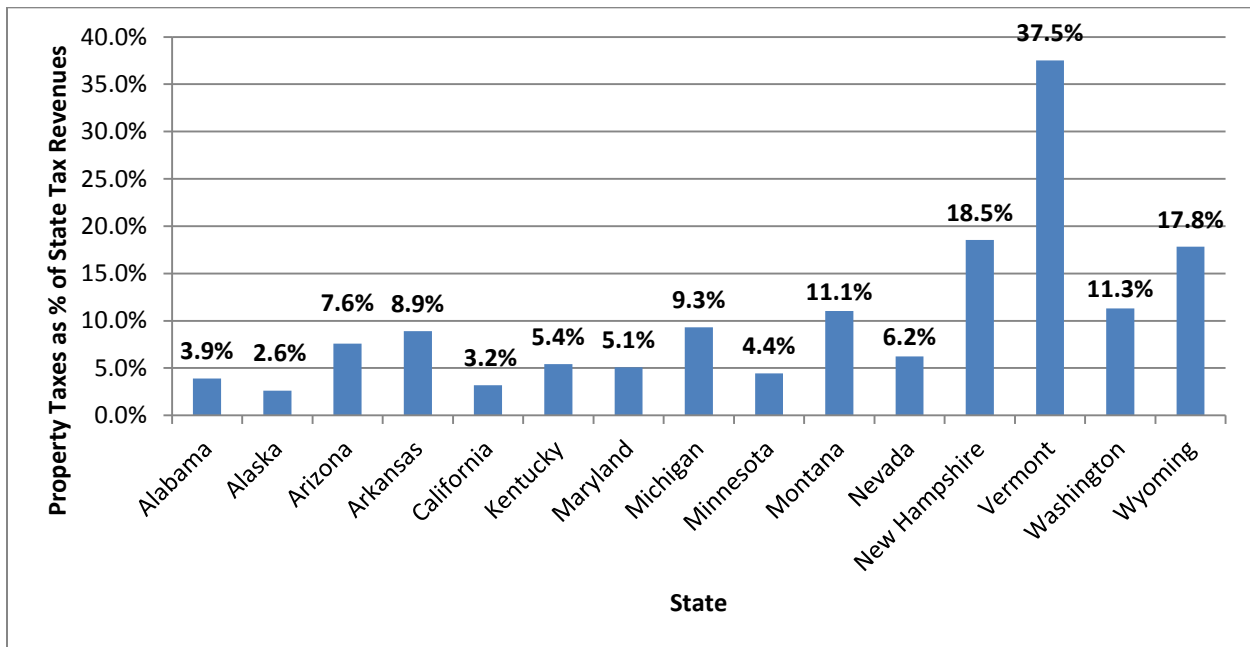
<http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ASM_2010_31GS101&prodType=table>.

¹¹ Ibid. Braybrooks 2011.

more than 2 percent of state tax revenues in only 15 states. See Figure 7 below. Property taxes paid by all businesses to state governments in 2010 totaled \$9.3 billion.¹²

Property taxes are a significant expense for any business because these taxes are the major source of local government tax revenue, accounting for 80 percent of all local tax revenues. In 2010, local governments collected \$250 billion in property taxes from businesses and corporations.¹³ This study does not estimate local property taxes paid by auto industry companies.

Figure 7: Portion of State Revenues Constituted by Property Tax Revenues



Source: Census 2011

¹² Note: This estimate does not include property taxes paid by individuals; Ibid. Phillips et al. 2011.

¹³ Ibid. Phillips et al. 2011.

SECTION 5: TOTAL ESTIMATED TAX CONTRIBUTION

After estimating the tax revenue provided by the automotive industry across a variety of sources, CAR researchers have calculated that the tax revenue contribution of the automotive sector in 2010 was at least \$91.5 billion in state government tax revenue and \$43 billion in federal government tax revenue. As a result of the pervasive nature of the automotive sector, the industry generates tax revenues for every state government in the nation. CAR researchers found that state tax revenues from the automotive sector constituted a significant portion of total state revenues, as they averaged 13 percent of total state tax revenues nationally. A state level account of all of the estimates used in this report can be seen in Table 10 at the end of this section.

At the state level, the figures produced in this report can be considered a lower-bound estimate for the automotive sector's contribution to state government tax revenues. The lower-bound nature of this estimate is due to the fact that some types of revenue were not counted in this report, such as corporate income taxes on the non-manufacturing operations of automakers and parts supply companies, vehicle title fees, personal property taxes, and miscellaneous business taxes. These various taxes and fees account for additional revenues above those estimated and are beyond the scope of this report. The \$91.5 billion in state government tax revenue that was estimated in this report breaks down into the following categories:

- \$30 billion was generated from taxes on the sales and service of new and used vehicles.
- \$860 million was generated from income taxes on direct employment at auto manufacturers, auto parts suppliers, and dealerships (This number increases to over \$4 billion when taxes from intermediate and spinoff jobs are included).
- \$60 billion was generated from use taxes and fees including fuel taxes, registration fees, and driver licensing fees.
- \$750 million was generated from business taxes such as corporate income taxes and business license fees.

Similarly, the scope of this work limited the types of federal tax revenues provided by the automotive industry that could be estimated in this study. Of the at least \$43 billion in federal government tax revenue that the automotive industry was responsible for generating in 2010:

- \$14 billion was generated from income taxes on direct employment at auto manufacturers, auto parts suppliers, and dealerships (This number increases to nearly \$69 billion when taxes from intermediate and spinoff jobs are included).
- \$29 billion was generated from federal motor fuel taxes.

This study confirms that the United States automotive sector has a large impact throughout the nation and provides support to state and federal governments in the form of taxes and fees collected from sales, employees, drivers, and the auto companies themselves. As the economy and automotive industry continue to recover, tax revenues generated by the automotive sector could increase to even greater levels than those calculated in this report.

Table 10: Total of All Estimated Taxes and Fees by State

State	Sales Tax Revenues (\$ millions)			Use Tax Revenues (\$ millions)			Business Taxes (\$ millions)		State and Local Employee Personal Income Taxes (\$ millions)			TOTAL ALL TAXES PAID TO STATE GOVERNMENTS (\$ millions)		
	New Vehicles	Used Vehicles	Parts/ Services	Fuel	Registration	License	Manufacturers	Dealerships	Automaker	Supplier	Dealer	AUTO SECTOR	TOTAL	% AUTO
Alabama	81	51	43	558	200	19	18	7	4	8	3	992	8,186	12
Alaska	0	0	0	24	64	2	NA	1	0	0	0	91	4,518	2
Arizona	382	240	101	797	176	24	1	10	0	1	8	1,740	10,199	17
Arkansas	151	95	40	466	140	17	2	3	0	3	2	919	7,279	13
California	2,207	1,384	585	3,164	3,109	270	16	64	15	16	72	10,901	104,841	10
Colorado	153	96	40	602	380	21	NA	5	1	1	5	1,304	8,586	15
Connecticut	264	166	70	498	197	37	NA	7	1	11	17	1,268	12,286	10
Delaware	39	24	0	113	47	4	NA	3	1	0	2	233	2,770	8
Florida	1,233	773	327	2,267	1,283	310	2	27	0	0	0	6,222	31,499	20
Georgia	361	226	96	854	283	43	2	14	1	8	10	1,898	14,783	13
Hawaii	36	22	9	86	101	0	NA	2	0	0	1	257	4,838	5
Idaho	69	43	18	230	120	8	NA	2	0	0	1	492	2,952	17
Illinois	772	484	205	1,339	1,447	92	11	22	5	24	17	4,417	27,512	16
Indiana	383	240	102	760	393	215	48	12	9	27	5	2,194	13,796	16
Iowa	166	104	53	438	467	14	2	11	0	3	2	1,260	6,809	18
Kansas	165	104	44	425	175	18	NA	2	1	2	2	937	6,493	14
Kentucky	191	120	51	655	199	17	26	5	7	20	3	1,293	9,531	14
Louisiana	162	102	43	588	109	13	NA	8	1	1	4	1,030	8,758	12
Maine	73	46	19	242	95	8	NA	3	0	0	2	489	3,490	14
Maryland	371	232	98	723	434	29	NA	13	2	3	19	1,924	15,224	13
Massachusetts	457	287	121	655	362	104	2	14	1	4	17	2,025	20,050	10
Michigan	390	245	103	968	878	52	52	11	50	45	9	2,802	22,206	13
Minnesota	235	147	66	832	558	46	3	11	0	3	7	1,909	17,209	11
Mississippi	97	61	36	393	124	33	NA	3	1	2	1	751	6,269	12
Missouri	241	151	64	722	266	17	NA	9	4	7	5	1,486	9,708	15
Montana	0	0	0	204	142	9	NA	2	0	0	1	358	2,143	17
Nebraska	120	75	32	299	79	11	1	4	0	1	1	624	3,809	16
Nevada	131	82	35	293	159	20	NA	0	0	0	0	720	5,836	12
New Hampshire	0	0	0	148	131	12	NA	4	0	0	0	295	2,125	14
New Jersey	776	487	206	535	579	50	NA	19	6	5	23	2,686	25,928	10
New Mexico	45	28	20	228	122	4	NA	3	0	0	1	450	4,414	10
New York	735	461	195	1,613	965	137	6	25	7	30	48	4,222	63,529	7
North Carolina	263	165	110	1,552	548	127	17	16	1	14	10	2,822	21,517	13
North Dakota	55	35	15	151	87	4	NA	2	0	0	0	349	2,646	13
Ohio	610	383	162	1,727	833	89	40	1	27	53	16	3,941	23,584	17
Oklahoma	305	191	112	431	579	16	1	8	0	4	3	1,648	7,080	23
Oregon	0	0	0	403	496	29	1	7	0	1	5	942	7,289	13
Pennsylvania	749	469	199	2,020	800	61	6	33	1	9	19	4,366	30,169	14
Rhode Island	64	40	17	124	53	1	NA	2	0	0	2	302	2,569	12
South Carolina	173	108	55	521	147	51	3	5	2	13	3	1,083	7,313	15
South Dakota	31	20	11	125	53	4	0	0	0	0	0	244	1,304	19
Tennessee	378	237	100	825	250	45	24	10	0	0	0	1,868	10,514	18
Texas	1,540	966	408	3,043	1,542	101	6	14	0	0	0	7,621	39,399	19
Utah	140	88	37	351	292	14	NA	3	0	1	2	929	5,092	18
Vermont	46	29	12	99	72	7	NA	2	0	0	1	267	2,511	11
Virginia	236	148	104	883	340	59	2	13	1	7	14	1,807	16,411	11
Washington	338	212	86	1,197	463	67	0	0	0	0	0	2,362	16,106	15
West Virginia	83	52	26	392	87	4	NA	4	0	0	1	649	4,655	14
Wisconsin	257	161	68	973	472	42	6	12	2	15	7	2,016	14,369	14
Wyoming	22	14	6	26	66	2	NA	0	0	0	0	136	2,117	6
Total	15,778	9,891	4,352	36,563	20,963	2,377	294	458	148	343	369	91,538	702,221	13

Source: CAR Research 2012

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APPENDICES

APPENDIX A: ACRONYMS AND ABBREVIATIONS

AAM – Alliance of Automobile Manufacturers

CAR – Center for Automotive Research

I-O – Input-Output

NADA – National Automotive Dealers Association

NAICS – North American Industry Classification

REMI – Regional Economic Models, Inc.

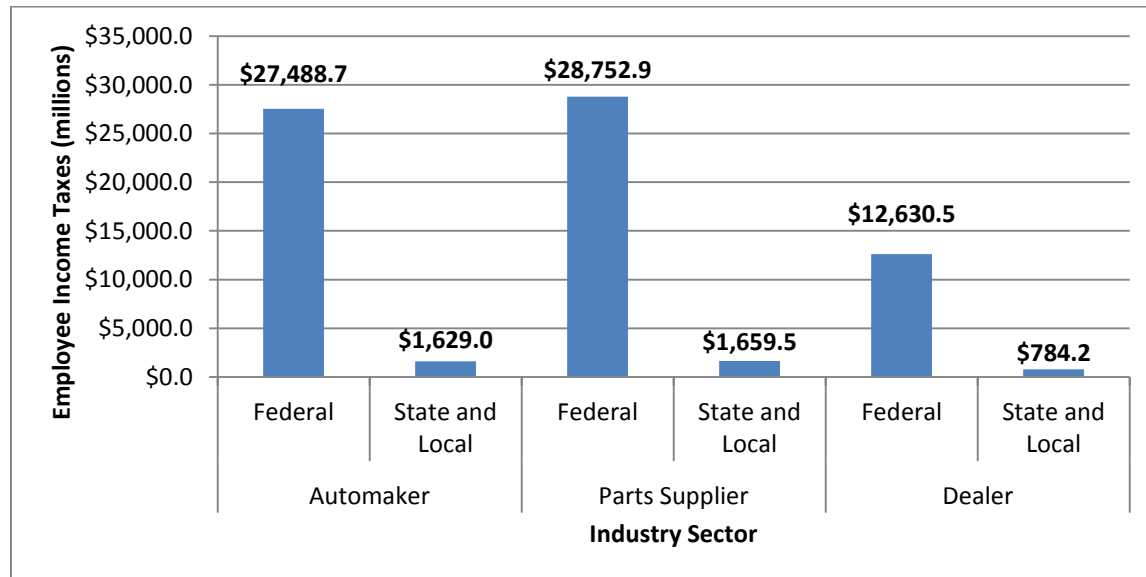
APPENDIX B: ADDITIONAL DATA ON AUTOMOTIVE INCOME TAX REVENUES

Estimated Total (Direct, Intermediate, and Spinoff) Worker Income Taxes, 2010

Industry Sector	Collecting Jurisdiction	Tax Revenue (millions)
Automaker	Federal	\$27,488.7
	State and Local	\$1,629.0
Parts Supplier	Federal	\$28,752.9
	State and Local	\$1,659.5
Dealer	Federal	\$12,630.5
	State and Local	\$784.2
Total	Federal	\$68,872.1
	State and Local	\$4,072.7
	Total	\$72,944.8

Source: Hill et al. 2010

Estimated Total (Direct, Intermediate, and Spinoff) Worker Income Taxes, 2010



Source: Hill et al. 2010

Estimated Total (Direct, Intermediate, and Spinoff) Worker Income Taxes by State, 2010

State	Automaker (millions)		Parts Supplier (millions)		Dealer (millions)	
	Federal	State and Local	Federal	State and Local	Federal	State and Local
Alabama	\$515.7	\$20.6	\$593.8	\$27.6	\$134.2	\$5.7
Alaska	\$10.1	\$0.0	\$10.8	\$0.0	\$20.6	\$0.0
Arizona	\$89.0	\$3.2	\$127.4	\$6.1	\$304.2	\$18.4
Arkansas	\$117.4	\$5.4	\$196.3	\$8.8	\$73.0	\$3.3
California	\$1,200.2	\$79.2	\$1,240.0	\$71.4	\$1,889.4	\$161.7
Colorado	\$145.5	\$7.5	\$171.2	\$8.0	\$222.6	\$13.4
Connecticut	\$312.7	\$41.2	\$434.7	\$52.8	\$259.3	\$34.8
Delaware	\$87.6	\$4.7	\$57.4	\$3.4	\$47.3	\$2.9
Florida	\$543.5	\$0.0	\$625.0	\$0.0	\$872.8	\$0.0
Georgia	\$614.3	\$36.3	\$800.6	\$46.4	\$364.3	\$21.1
Hawaii	\$9.2	\$0.1	\$10.7	\$0.2	\$46.1	\$2.9
Idaho	\$10.9	\$0.1	\$21.6	\$0.5	\$49.6	\$2.3
Illinois	\$1,799.8	\$123.0	\$2,096.6	\$134.5	\$544.0	\$35.1
Indiana	\$1,793.2	\$95.0	\$2,058.5	\$93.2	\$199.9	\$10.7
Iowa	\$138.7	\$5.1	\$211.6	\$7.9	\$88.6	\$3.5
Kansas	\$175.7	\$9.3	\$155.1	\$7.5	\$85.0	\$4.1
Kentucky	\$861.9	\$51.5	\$844.4	\$61.2	\$114.0	\$6.5
Louisiana	\$192.0	\$10.3	\$178.9	\$9.5	\$141.4	\$7.5
Maine	\$31.1	\$1.8	\$45.3	\$2.6	\$50.2	\$3.5
Maryland	\$351.7	\$41.4	\$367.9	\$43.4	\$318.5	\$36.3
Massachusetts	\$386.7	\$37.2	\$471.3	\$43.6	\$373.4	\$38.0
Michigan	\$5,969.6	\$284.5	\$3,957.2	\$159.5	\$346.9	\$17.7
Minnesota	\$300.9	\$20.1	\$401.0	\$26.1	\$218.5	\$15.6
Mississippi	\$162.6	\$6.3	\$165.4	\$6.2	\$62.5	\$2.3
Missouri	\$650.0	\$30.5	\$561.1	\$26.8	\$203.2	\$9.9
Montana	\$12.7	\$0.3	\$15.9	\$0.4	\$29.9	\$1.4
Nebraska	\$64.5	\$2.1	\$122.3	\$3.9	\$53.7	\$2.1
Nevada	\$86.6	\$0.0	\$100.6	\$0.0	\$160.8	\$0.0
New Hampshire	\$52.9	\$0.0	\$70.2	\$0.0	\$70.8	\$0.0
New Jersey	\$663.8	\$65.4	\$688.9	\$73.6	\$505.1	\$47.3
New Mexico	\$16.6	\$0.3	\$24.6	\$0.6	\$56.0	\$2.2
New York	\$1,538.5	\$167.2	\$1,879.4	\$184.6	\$964.3	\$110.4
North Carolina	\$464.4	\$26.8	\$864.5	\$55.5	\$329.1	\$20.5
North Dakota	\$12.3	\$0.1	\$17.8	\$0.2	\$18.9	\$0.3
Ohio	\$3,754.9	\$286.2	\$3,337.5	\$227.0	\$424.0	\$31.4
Oklahoma	\$118.3	\$4.9	\$208.1	\$9.0	\$107.8	\$4.9
Oregon	\$53.0	\$2.0	\$107.6	\$4.5	\$142.8	\$9.7
Pennsylvania	\$769.5	\$52.1	\$1,008.5	\$60.9	\$520.8	\$36.6
Rhode Island	\$33.2	\$2.6	\$38.8	\$3.1	\$40.2	\$3.4
South Carolina	\$330.0	\$15.4	\$473.0	\$43.6	\$133.6	\$6.9
South Dakota	\$12.2	\$0.0	\$20.8	\$0.0	\$19.9	\$0.0
Tennessee	\$810.1	\$0.0	\$970.4	\$0.0	\$194.1	\$0.0
Texas	\$868.8	\$0.0	\$1,203.7	\$0.0	\$846.3	\$0.0
Utah	\$39.6	\$1.1	\$115.0	\$3.8	\$91.9	\$4.5
Vermont	\$19.2	\$1.0	\$20.9	\$1.3	\$25.2	\$1.5
Virginia	\$483.3	\$37.9	\$576.9	\$52.6	\$360.1	\$27.8
Washington	\$57.0	\$0.0	\$120.0	\$0.0	\$236.5	\$0.0
West Virginia	\$119.5	\$6.0	\$119.0	\$7.0	\$43.8	\$2.3
Wisconsin	\$622.5	\$43.1	\$825.0	\$80.9	\$203.3	\$13.9
Wyoming	\$15.1	\$0.0	\$19.7	\$0.0	\$21.9	\$0.0
Total	\$27,488.7	\$1,629.0	\$28,752.9	\$1,659.5	\$12,630.5	\$784.2

Source: Hill et al. 2010