# Assessment of Tax Revenue Generated by the Automotive Sector 

3005 Boardwalk Drive
Ann Arbor, MI 48108

April 2012

# Assessment of Tax Revenue Generated by the Automotive Sector 

## Center for Automotive Research

Report Prepared by:<br>Kim Hill, Director, Sustainability \& Economic Development Strategies Group Director, Automotive Communities Partnership<br>Associate Director, Research<br>Debbie Maranger Menk, Senior Project Manager, CAR<br>Joshua Cregger, Industry Analyst, CAR<br>Report Prepared for:<br>Alliance of Automobile Manufacturers<br>1401 I Street, N.W., Suite 900<br>Washington, DC 20005

## April 2012

## TABLE OF CONTENTS

LIST OF TABLES ..... IV
LIST OF FIGURES ..... IV
ACKNOWLEDGEMENTS ..... v
INTRODUCTION ..... 1
SECTION 1. SALES TAX FROM NEW MOTOR VEHICLES ..... 3
SECTION 2: PERSONAL INCOME TAX OF AUTOMOTIVE EMPLOYEES ..... 6
SECTION 3: VEHICLE USE TAXES, LICENSES, AND FEES ..... 9
SECTION 4: BUSINESS TAXES ..... 13
SECTION 5: TOTAL ESTIMATED TAX CONTRIBUTION ..... 17
REFERENCES ..... 20
APPENDICES ..... 21
APPENDIX A: ACRONYMS AND ABBREVIATIONS ..... 22
APPENDIX B: ADDITIONAL DATA ON AUTOMOTIVE INCOME TAX REVENUES ..... 23
LIST OF TABLES
TABLE 1: TOTAL SALES TAXES COLLECTED BY STATES ON MOTOR VEHICLES, PARTS, AND SERVICE, 2010 ..... 4
TABLE 2: STATE SALES TAXES COLLECTED ON MOTOR VEHICLES, PARTS, AND SERVICE, 2010 ..... 5
TABLE 3: ESTIMATED DIRECT WORKER INCOME TAXES PAID IN THE UNITED STATES, 2010 ..... 6
TABLE 4: ESTIMATED DIRECT WORKER INCOME TAXES BY STATE, 2010 ..... 8
TABLE 5: USE TAX REVENUES, 2010 ..... 9
TABLE 6: USE TAX REVENUES BY STATE, 2010 ..... 10
TABLE 7: ESTIMATED ANNUAL TITLE FEES FOR SELECTED STATES, 2010 ..... 12
TABLE 8: ESTIMATED STATE CORPORATE INCOME TAX AND LICENSE FEES PAID BY AUTOMAKER MANUFACTURING OPERATIONS, PARTS SUPPLY MANUFACTURING, AND AUTOMOTIVE DEALERSHIPS, 2010 ..... 13
TABLE 9: ESTIMATED ANNUAL STATE CORPORATE INCOME TAXES AND LICENSE FEES PAID BY AUTOMAKER MANUFACTURING OPERATIONS, PARTS SUPPLY MANUFACTURING, AND AUTOMOTIVE DEALERSHIPS ..... 14
TABLE 10: TOTAL OF ALL ESTIMATED TAXES AND FEES BY STATE ..... 19
LIST OF FIGURES
FIGURE 1: SHARE OF TOTAL DEALERSHIP SALES DOLLARS ..... 3
FIGURE 2: TOTAL SALES TAXES COLLECTED BY STATES ON MOTOR VEHICLES, PARTS, AND SERVICE, 2010 ..... 4
FIGURE 3: ESTIMATED DIRECT WORKER INCOME TAXES PAID IN THE UNITED STATES, 2010 ..... 7
FIGURE 4: USE TAX REVENUES, 2010 ..... 9
FIGURE 5: STATE TAX REVENUES FROM BUSINESSES BY TYPE OF TAX, 2010 ..... 13
FIGURE 6: EXAMPLE OF CALCULATIONS FOR CORPORATE TAXES AND LICENSE FEES ..... 15
FIGURE 7: PORTION OF STATE REVENUES CONSTITUTED BY PROPERTY TAX REVENUES ..... 16

## ACKNOWLEDGEMENTS

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.

Kim Hill, MPP<br>Director, Sustainability \& Economic Development Strategies Group<br>Director, Automotive Communities Partnership<br>Associate Director, Research<br>Debbie Maranger Menk<br>Senior Project Manager<br>Joshua Cregger<br>Industry Analyst

[^0]
## 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.
- $\mathbf{7 5 0}$ 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]- 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]
## 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]Table 1: Total Sales Taxes Collected by States on Motor Vehicles, Parts, and Service, 2010

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

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


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, interindustry model developed by Regional Economic Models, Inc. (REMI) for industry- and regionspecific 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, 169industry 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 | $\mathbf{\$ 1 4 , 3 3 7 . 2}$ |
|  | State and Local | $\$ 860.1$ |
|  | Total | $\mathbf{\$ 1 5 , 1 9 7 . 2}$ |

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]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]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]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 |
| lowa | \$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 Legislatures ${ }^{8}$ 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]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 |
| lowa | \$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]Table 9: Estimated Annual State Corporate Income Taxes and License Fees Paid by Automaker Manufacturing Operations, Parts Supply Manufacturing, and Automotive Dealerships


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 <br> State | Column B <br> NAICS | Column C <br> 2010 Value <br> Added <br> $(\$ 1,000)$ | Column D <br> State GSP, 2010, \$ millions | Column E <br> Auto Mfg as \% of GSP | Column F State Tax Revenues from Corporate Income Taxes, $\$ 1,000$ s | Column G <br> State Tax <br> Revenues from <br> Corporate <br> Licenses <br> \$1000 | Column H <br> Calculation of Taxes Paid by Auto Mfg., \$ | Column I <br> Calculation of Licenses Paid by Auto Mfg., \$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alabama Alabama Alabama | $\begin{aligned} & 3361 \\ & 3362 \\ & 3363 \end{aligned}$ | $\begin{array}{r} \hline 3,075,191 \\ 277,931 \\ 2,308,811 \\ \hline \end{array}$ | $\begin{aligned} & \hline 172,567 \\ & 172,567 \\ & 172,567 \end{aligned}$ | $\begin{array}{r} 0.0178 \\ 0.1611 \% \\ 1.3379 \% \end{array}$ | $\begin{aligned} & \hline 428,245 \\ & 428,245 \\ & 428,245 \end{aligned}$ | $\begin{aligned} & 108,682 \\ & 108,682 \\ & 108,682 \end{aligned}$ | $\begin{array}{r} \hline 7,631,443 \\ 689,718 \\ 5,729,582 \\ \hline \end{array}$ | $\begin{array}{r} 1,936,743 \\ 175,040 \\ 1,454,080 \\ \hline \end{array}$ |
| 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 XCol H |

Source: Census 2011, Braybooks 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 $10-\mathrm{K}$ filings with the U.S. Securities and Exchange Commission (SEC), on a company-bycompany 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]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

[^11]
## 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.
- $\quad \$ 750$ 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

|  | Sales Tax Revenues (\$ millions) |  |  | Use Tax Revenues (\$ millions) |  |  | Business <br> Taxes (\$ millions) |  | State and Local Employee Personal Income Taxes (\$ millions) |  |  | TOTAL ALL TAXES PAID TO STATE GOVERNMENTS (\$ millions) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { U } \\ & \stackrel{\rightharpoonup}{\infty} \end{aligned}$ |  |  |  | $\begin{aligned} & \stackrel{T}{\mathbf{D}} \end{aligned}$ |  |  |  |  |  |  | $\begin{aligned} & \text { ס } \\ & \stackrel{\sim}{\mathbb{D}} \\ & \stackrel{1}{0} \end{aligned}$ | $D$ $C$ 0 0 0 9 0 0 0 | $\begin{aligned} & -1 \\ & \text { O1 } \\ & \hline 1 \end{aligned}$ | $\begin{aligned} & \text { ol } \\ & \text { d } \\ & \text { ci } \end{aligned}$ |
| 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

## REFERENCES

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](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/doc12039/0126_fy2011outlook.pdf](http://www.cbo.gov/ftpdocs/120xx/doc12039/0126_fy2011outlook.pdf).

Census. (2011). "Annual Survey of Manufactures, 2010." U. S. Census Bureau. November 2011. <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=A SM_2010_31GS101\&prodType=table>.

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](http://www.cargroup.org/pdfs/association_paper.pdf).

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](http://www.ncsl.org/issues-research/transportation/registration-and-title-fees-by-state.aspx).

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](http://www.cost.org/Page.aspx?id=69654).

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](http://www.nada.org/NR/rdonlyres/0798BE2A-9291-44BF-A126-0D372FC89B8A/0/NADA_DATA_08222011.pdf).

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

|  | Collecting <br> Industry Sector | Tax Revenue <br> (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


[^0]:    Center for Automotive Research
    3005 Boardwalk Drive
    Ann Arbor, Michigan 48108
    www.cargroup.org

[^1]:    ${ }^{1}$ All modeled numbers used in the text are rounded.

[^2]:    ${ }^{2}$ 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](http://www.cargroup.org/pdfs/association_paper.pdf).

[^3]:    ${ }^{3}$ 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](http://www.nada.org/NR/rdonlyres/0798BE2A-9291-44BF-A126-0D372FC89B8A/0/NADA_DATA_08222011.pdf).

[^4]:    ${ }^{4}$ Ibid. Taylor 2011.

[^5]:    ${ }^{5}$ Hill et al. 2011.

[^6]:    ${ }^{6}$ 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.

[^7]:    ${ }^{7}$ 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](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](http://www.cbo.gov/ftpdocs/120xx/doc12039/01-26_fy2011outlook.pdf).

[^8]:    ${ }^{8}$ 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](http://www.ncsl.org/issues-research/transportation/registration-and-title-fees-by-state.aspx).

[^9]:    ${ }^{9}$ 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](http://www.cost.org/Page.aspx?id=69654).

[^10]:    ${ }^{10}$ 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](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ASM_2010_31GS101%5C&prodType=table).
    ${ }^{11}$ Ibid. Braybrooks 2011.

[^11]:    ${ }^{12}$ Note: This estimate does not include property taxes paid by individuals; Ibid. Phillips et al. 2011.
    ${ }^{13}$ Ibid. Phillips et al. 2011.

