# The 2018 Economic Impacts of Honda Manufacturing of Alabama, LLC and its Key Tier-I Alabama Suppliers

HONDA

*Commissioned by the*

Economic Development Partnership of Alabama

August 2019

THE UNIVERSITY OF ALABAMA® | Culverhouse College of Business
Center for Business and Economic Research

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*Prepared for the*
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*August 2019*

*by*

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**Disclaimer and Acknowledgments:** This report reflects the analysis and opinions of the authors, but not necessarily those of the faculty and staff of the Culverhouse College of Business (Culverhouse) or the administrative officials of The University of Alabama (UA). We are very grateful to the officers and staff of the Economic Development Partnership of Alabama (EDPA), Honda Manufacturing of Alabama, LLC (HMA), and HMA's Tier-I suppliers in Alabama who directly or indirectly provided key data or were involved in the data gathering effort. Many thanks also to our colleagues at the Center for Business and Economic Research (CBER) for their help on various phases of this research project.

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# Executive Summary

- This study presents the calendar year 2018 economic and fiscal impacts of Honda Manufacturing of Alabama, LLC (HMA) and its key Tier-I Alabama suppliers on the State of Alabama and on Calhoun, Etowah, Jefferson, St. Clair, and Talladega counties. The economic impacts presented in this report focus on output, value-added, earnings (wages and salaries), and employment. Output refers to total or gross business sales and contains value-added, which is the contribution to gross domestic product (GDP) or the value of goods and services produced on a value-added basis. Earnings impacts are part of value-added and are the wages and salaries of the workers recognized by the employment impact. Due to data limitations, just workers' earnings-based fiscal impacts are presented and only income, sales, and property taxes are considered. The fiscal impacts are therefore conservative and local taxes presented are combined for counties and municipalities.

- HMA has invested $2.6 billion to date in Alabama, provides skilled high-paying jobs, generates business for its suppliers and others, and pays taxes and other impositions. In 2018 the company employed 5,321 Alabama workers with a $421.4 million payroll for an average of $79,202 per HMA employee which is 75 percent higher than the year 2017 average earnings of $45,308 for all Alabama workers. The five counties accounted for 97 percent of the company's Alabama employment and payroll. In addition, the company made about $3.3 billion in nonpayroll expenditures in Alabama.

- In 2018, the company alone had economic and fiscal impacts on the Alabama economy of $8.6 billion in output (3.9 percent of the $221.1 billion Alabama GDP), including $3.0 billion in value-added of which about $1.3 billion is earnings for 19,223 direct and indirect jobs. The earnings impact generated $120.7 million in state ($67.4 million) and local ($53.3 million) taxes that does not include any company paid taxes. County impacts range from 1,236 jobs and $84.4 million in earnings for Etowah to 2,933 jobs and $202.2 million in earnings for Calhoun.

- HMA's key Tier-I Alabama suppliers were conservatively estimated to have had 7,322 workers with a $286.9 million payroll and made $1.2 billion nonpayroll expenses in the state in 2018. The associated impacts on the state are $3.5 billion in output (about 1.6 percent of state GDP), $1.2 billion value-added, $865.9 million earnings, 26,451 jobs, and $82.2 million in state ($45.9 million) and local ($36.3 million) taxes. For the five counties, the Tier-I suppliers impacts range from 100 jobs and $4.3 million earnings for Jefferson to 1,271 jobs for Talladega and $38.6 million earnings for Calhoun.

- The combined economic and fiscal impacts for HMA and its Tier-I suppliers on the Alabama economy in 2018 are about $12.0 billion in output (5.4 percent of state GDP), $4.3 billion value-added, $2.1 billion earnings, 45,674 jobs, and $202.9 million state ($113.4 million) and local ($89.6 million) taxes.

- These impacts clearly show that HMA had significant impacts on the economies of Alabama and the five counties, especially if its full network of suppliers is taken into consideration; the full network was not considered in this report. In addition, socioeconomic trends for the five counties indicate that the presence of HMA has been very positive for the region.

# The 2018 Economic Impacts of Honda Manufacturing of Alabama, LLC and its Key Tier-I Alabama Suppliers

## Introduction

This report presents the calendar year 2018 economic and fiscal impacts of Honda Manufacturing of Alabama, LLC (HMA), located in Lincoln, Talladega County, Alabama, and its key Tier-I Alabama suppliers on the State of Alabama and each of the following five Alabama counties: Calhoun, Etowah, Jefferson, St. Clair, and Talladega. Socioeconomic trends in these five counties are also presented. The economic impacts focus on output, value-added, earnings (wages and salaries), and employment. Output refers to total or gross business activity often measured by revenues or sales. Value-added, which is the contribution to gross domestic product (GDP) or the value of goods and services produced on a value-added basis, is part of output. The contribution to GDP, also technically referred to as final demand, is defined as overall business activity less business-to-business (or intermediate) transactions. Earnings impacts are part of value-added and are the wages and salaries (no benefits or load included) of the workers recognized by the employment impact.

Due to data limitations, output and value-added impacts for the counties are not reported and just workers' earnings-based fiscal impacts are presented with only income, sales, and property taxes considered. The fiscal impacts are therefore conservative and local taxes presented are combined for counties and municipalities. Company paid taxes and other taxes and fees (e.g., utility taxes, car tags and fees, rental/leasing, alcoholic beverages, cigarettes and tobacco, insurance premiums, lodgings, driver's license, and auto title) are not included.

HMA started production in 2001 and has a capital investment of $2.6 billion in Alabama to date. The company is Honda's largest light truck production facility in the world and sole producer of the Honda Odyssey, Passport, Pilot, and Ridgeline with an annual capacity of 340,000 vehicles and V-6 engines. Cars.com included the Odyssey (#2), Ridgeline (#3), Passport (#4), and Pilot (#7) on its 2019 American-Made Index, which ranks the U.S.-built vehicles that have the most domestic content. This production has contributed significantly to Alabama's ranking of fifth nationally among the states in car and light truck production. With its activities, the company provides skilled high-paying jobs, business for its suppliers and others, tax revenues, and other impositions.

In 2018, HMA employed 5,321 Alabama workers with a total payroll of $421.4 million and made nonpayroll expenditures of $3.3 billion within the state (Table 1). Nonpayroll expenditures include purchases, employee benefits, taxes, and other charges. The five counties accounted for 97.5 percent of the company's workers and associated payroll. The average earnings for an HMA Alabama employee was $79,202, roughly 1.75 times the year 2017 average earnings of $45,308 for an Alabama worker. The company also paid millions in taxes; nearly $11.9 million in property taxes alone.

The plant had 26 key Tier-I suppliers in 2018, twenty-one of which employed 6,362 Alabama workers with a $248.6 million payroll and had $1.2 billion nonpayroll expenditures in the state. It is conservatively estimated that all 26 suppliers employed 7,322 Alabama workers and had payroll and nonpayroll expenditures of $286.9 million and $1.2 billion, respectively (Table 1). As such, the Tier-I supplier impacts presented in this report are also conservative. Additionally, the exclusion of non-

Tier I suppliers means that the impacts reported here are below what the full HMA and its suppliers impacts in 2018 were.

**Table 1. Alabama Employment and Expenditures in 2018 for HMA and its Key Tier-I Alabama Suppliers**

| | HMA | HMA Tier-I Suppliers* |
|---|---|---|
| Employment | 5,321 | 7,322 |
| Payroll expenditure ($ Millions) | 421.4 | 286.9 |
| Nonpayroll expenditure ($ Millions) | 3,277.3 | 1,205.2 |
| Total expenditure ($ Millions) | 3,698.7 | 1,492.1 |
| Average HMA worker earnings ($, 2018) | 79,202 | |
| Average Alabama worker earnings ($, 2017) | 45,308 | |
| HMA to Alabama worker earnings ratio | 1.75 | |

Note: Rounding errors may be present. Payroll expenditure covers just salaries and wages, not benefits. The 5,321 HMA employment covers separations and new hires as well.

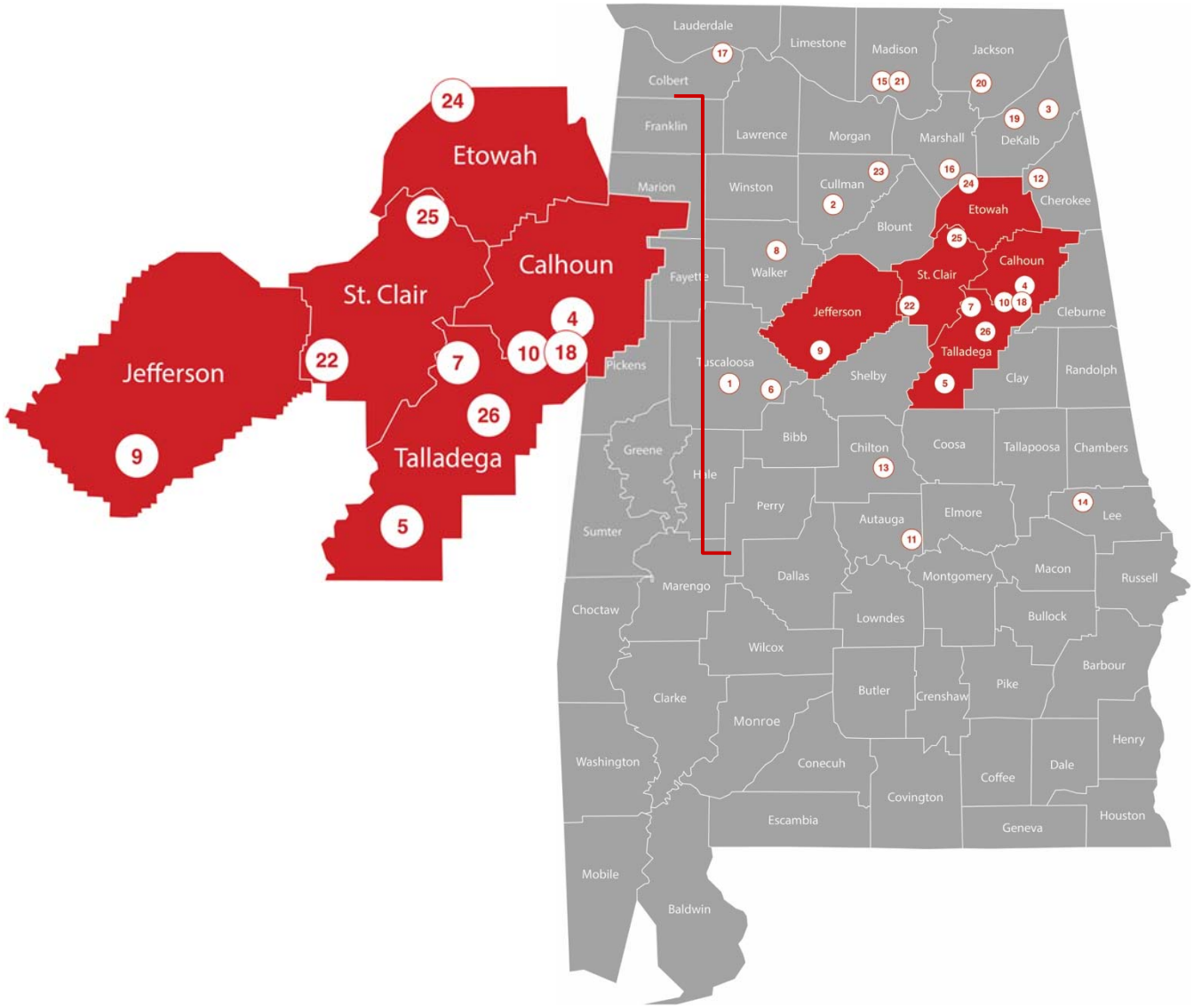
* Conservative estimates based on complete data for 21 of the 26 key HMA Tier-I Alabama suppliers.

Source: Economic Development Partnership of Alabama; Honda Manufacturing of Alabama, LLC; U.S. Bureau of Economic Analysis; and Center for Business and Economic Research, The University of Alabama.

The spending by HMA and its key Tier-I Alabama suppliers and their workers provides jobs and stimulates business activity in various sectors of the economies of Alabama and the five counties. This spending also generates significant taxes for the state and other local taxing jurisdictions. Combined payroll and nonpayroll expenditures made in the state in 2018 totaled $3.7 billion for HMA and nearly $1.5 billion for the key Tier-I Alabama suppliers. Such large cash infusions have significant impacts on state output and GDP and generate earnings and employment beyond those of the company and its suppliers. The economic and fiscal impacts presented following indicate the influence that HMA and its suppliers have on Alabama and on the five-county economies, except for any stipulations noted. The impact methodology is detailed in the Appendix.

## HMA Study Area Map and its Key Tier-I Alabama Suppliers Locations

1. Adient Us, LLC
2. Alabama Cullman Yutaka Technol
3. Ap Plasman Inc.
4. Bridgewater Interiors, LLC
5. Fleetwood Metal Industries
6. Grupo Antolin North America
7. Gulf Shore Assemblies, LLC
8. Hayashi Telempu North America
9. Inoac Interior Systems
10. International Automotive Comp
11. Kasai North America Inc.
12. Kth Leesburg Products, LLC
13. Kumi Manufacturing Alabama, LLC
14. Mando America Corporation
15. Matsu Alabama Inc
16. Newman Technology Of Alabama
17. North American Lighting
18. Rainbow Omega Inc.
19. Rainsville Technology Inc.
20. Sanoh America Inc.
21. Shape Corp
22. Sumitomo Elec Wiring Systems
23. Topre America Corporation
24. Ts Tech Alabama, LLC
25. Unipres Alabama Inc.
26. Zf Suspension Technology Guad



## Economic and Fiscal Impacts

To determine the total economic and fiscal impacts, two types of impacts are estimated. The first, household impacts, deals with impacts of the spending behavior of workers of HMA and its key Tier-I Alabama suppliers and determines employment and earnings impacts. Direct effect multipliers are used to determine the household impacts. Expenditure impacts, the second type, use final demand multipliers to calculate output and value-added impacts. Multipliers from the Regional Input-Output software, RIMS II, developed by the U.S. Department of Commerce's Bureau of Economic Analysis are used. The impact model developed for the analysis combines RIMS II multipliers for the motor vehicle, body, trailer, and parts manufacturing sector for Alabama and the five counties with economic structure and fiscal impact components that are specific to those geographies. Impacts of HMA only, the suppliers, and a combination of the two are presented in that order. Table 2 shows some key input data that were used. Table 3 shows the separate economic and fiscal impacts of HMA and its key Tier-I Alabama suppliers on the state and five counties and Table 4 shows the combined impacts.

### Table 2. Key Input Data

| **HMA** | **Alabama** | **Calhoun** | **Etowah** | **Jefferson** | **St. Clair** | **Talladega** |
|---|---|---|---|---|---|---|
| Employment | 5,321 | 1,458 | 694 | 784 | 895 | 1,355 |
| Payroll Amount | $421,433,560 | $115,476,439 | $54,966,151 | $62,094,326 | $70,885,743 | $107,318,638 |
| Expenditures | $3,277,306,863 | | | | | |
| **TIER-I Suppliers** | **Alabama** | **Calhoun** | **Etowah** | **Jefferson** | **St. Clair** | **Talladega** |
| Employment | 7,322 | 600 | 312 | 32 | 57 | 737 |
| Payroll Amount | $286,873,870 | $22,046,969 | $13,634,734 | $1,639,008 | $2,563,148 | $22,704,992 |
| Expenditures | $1,205,212,938 | | | | | |

Note: Rounding errors may be present. Payroll expenditure covers just salaries and wages, not benefits.

Source: Economic Development Partnership of Alabama; Honda Manufacturing of Alabama, LLC; U.S. Bureau of Economic Analysis; and Center for Business and Economic Research, The University of Alabama.

### HMA Impacts

The 2018 HMA statewide economic impacts are $8.6 billion in output (3.9 percent of the $221.1 billion 2018 Alabama GDP), of which $3.0 billion is value-added (or contribution to GDP) that includes about $1.3 billion in earnings to Alabama households for 19,223 direct and indirect jobs. The employment impact includes 13,902 indirect jobs with average earnings of $61,189. Of the five counties, Etowah had the lowest earnings impacts and Calhoun had the highest, ranging from $84.4 million to $202.2 million. The separate county employment impacts range from 1,236 jobs

## Table 3. Separate 2018 Economic and Fiscal Impacts for HMA and its Key Tier-I Alabama Suppliers

| **HMA IMPACT** | | | | | | |
|---|---|---|---|---|---|---|
| **Economic Impacts (Millions, except for jobs)** | **Alabama** | **Calhoun** | **Etowah** | **Jefferson** | **St. Clair** | **Talladega** |
| Output (Gross Business Sales) | $8,564.1 | | | | | |
| Contribution to GDP | $3,040.4 | | | | | |
| Earnings (Wages and Salaries) | $1,272.1 | $202.2 | $84.4 | $164.5 | $140.3 | $169.6 |
| Employment (Jobs) | 19,223 | 2,933 | 1,236 | 2,429 | 1,946 | 2,338 |
| **Fiscal Impacts (Millions)** | | | | | | |
| State taxes | | | | | | |
| Individual income (II) | $41.8 | $6.6 | $2.8 | $5.4 | $4.6 | $5.6 |
| Sales | $21.6 | $3.4 | $1.4 | $2.8 | $2.4 | $2.9 |
| Property | $4.0 | $0.6 | $0.3 | $0.5 | $0.4 | $0.5 |
| Combined state II, sales, and property | $67.4 | $10.7 | $4.5 | $8.7 | $7.4 | $9.0 |
| Local (city and county) taxes -- statewide | | | | | | |
| Sales | $27.0 | $3.9 | $1.6 | $3.1 | $2.7 | $3.2 |
| Property | $26.3 | $4.0 | $1.6 | $5.4 | $2.1 | $2.7 |
| Combined local sales and property | $53.3 | $7.9 | $3.3 | $8.5 | $4.8 | $6.0 |
| | | | | | | |
| **HMA TIER-I SUPPLIERS IMPACT** | | | | | | |
| **Economic Impacts (Millions, except for jobs)** | **Alabama** | **Calhoun** | **Etowah** | **Jefferson** | **St. Clair** | **Talladega** |
| Output (Gross Business Sales) | $3,454.8 | | | | | |
| Contribution to GDP | $1,226.5 | | | | | |
| Earnings (Wages and Salaries) | $865.9 | $38.6 | $20.9 | $4.3 | $5.1 | $35.9 |
| Employment (Jobs) | 26,451 | 1,208 | 555 | 100 | 123 | 1,271 |
| **Fiscal Impacts (Millions)** | | | | | | |
| State taxes | | | | | | |
| Individual income (II) | $28.5 | $1.3 | $0.7 | $0.1 | $0.2 | $1.2 |
| Sales | $14.7 | $0.7 | $0.4 | $0.1 | $0.1 | $0.6 |
| Property | $2.8 | $0.1 | $0.1 | $0.0 | $0.0 | $0.1 |
| Combined state II, sales, and property | $45.9 | $2.0 | $1.1 | $0.2 | $0.3 | $1.9 |
| Local (city and county) taxes | | | | | | |
| Sales | $18.4 | $0.7 | $0.4 | $0.1 | $0.1 | $0.7 |
| Property | $17.9 | $0.8 | $0.4 | $0.1 | $0.1 | $0.6 |
| Combined local sales and property | $36.3 | $1.5 | $0.8 | $0.2 | $0.2 | $1.3 |

Note: Rounding errors may be present. Therefore $0.0 million indicates amounts that are less than $50,000 but not equal to zero.

Source: U.S. Department of Commerce, Bureau of Economic Analysis; EDPA; HMA; Alabama Department of Revenue; and Center for Business and Economic Research, The University of Alabama.

## Table 4. Combined HMA and its Key Tier-I Alabama Suppliers 2018 Economic and Fiscal Impacts

| HMA & TIER-I SUPPLIERS IMPACT<br>Economic Impacts (Millions, except for jobs) | Alabama | Calhoun | Etowah | Jefferson | St. Clair | Talladega |
|---|---|---|---|---|---|---|
| Output (Gross Business Sales) | $12,018.8 | | | | | |
| Contribution to GDP | $4,266.9 | | | | | |
| Earnings (Wages and Salaries) | $2,138.0 | $240.9 | $105.4 | $168.9 | $145.3 | $205.4 |
| Employment (Jobs) | 45,674 | 4,141 | 1,791 | 2,529 | 2,069 | 3,609 |
| **Fiscal Impacts (Millions)** | | | | | | |
| State taxes | | | | | | |
| Individual income (II) | $70.3 | $7.9 | $3.5 | $5.6 | $4.8 | $6.8 |
| Sales | $36.3 | $4.1 | $1.8 | $2.9 | $2.5 | $3.5 |
| Property | $6.8 | $0.8 | $0.3 | $0.5 | $0.5 | $0.7 |
| Combined state II, sales, and property | $113.4 | $12.8 | $5.6 | $9.0 | $7.7 | $10.9 |
| Local (city and county) taxes | | | | | | |
| Sales | $45.3 | $4.6 | $2.0 | $3.2 | $2.8 | $3.9 |
| Property | $44.2 | $4.8 | $2.1 | $5.6 | $2.2 | $3.3 |
| Combined local sales and property | $89.6 | $9.4 | $4.1 | $8.8 | $4.9 | $7.2 |

Note: Rounding errors may be present.

Source: U.S. Department of Commerce, Bureau of Economic Analysis; EDPA; HMA; Alabama Department of Revenue; and Center for Business and Economic Research, The University of Alabama.

for Etowah to 2,933 for Calhoun. The roughly $1.3 billion 2018 HMA statewide earnings impact generated a total of $120.7 million in state and local taxes. The state received $67.4 million made up of $41.8 million in income taxes, $21.6 million in sales taxes and $4.0 million in property taxes. Local (county and municipality) tax receipts totaled $53.3 million and comprised $27.0 million sales taxes and $26.3 million property taxes. Etowah County had the lowest sales tax receipts ($1.6 million) while Calhoun County collected $3.9 million. Property tax receipts were also the lowest in Etowah County, but highest in Jefferson County.

**HMA Key Tier-I Alabama Suppliers Impacts**

The 2018 HMA key Tier-I Alabama suppliers' statewide economic and fiscal impacts are $3.5 billion in output (about 1.6 percent of the $221.1 billion 2018 Alabama GDP), which includes $1.2 billion in value-added of which $865.9 million is earnings for 26,451 jobs (of which 19,129 are indirect jobs), and $82.2 million in state and local taxes. The state received $45.9 million made up of $28.5 million in income taxes, $14.7 million in sales taxes, and $2.8 million in property taxes. Local tax receipts of $36.3 million comprised $18.4 million sales taxes and $17.9 million property taxes. Among the five counties, impacts range from 100 jobs for Jefferson to 1,271 jobs for Talladega and $4.3 million earnings for Jefferson to $38.6 million earnings for Calhoun. Local tax impacts were lowest for St. Clair County and highest for Calhoun.

**Combined HMA and its Key Tier-I Alabama Suppliers Impacts**

Statewide combined HMA and its Tier-I suppliers 2018 economic impacts are $12.0 billion in output (5.4 percent of the $221.1 billion 2018 Alabama GDP), $4.3 billion value-added, $2.1 billion in earnings, and 45,674 jobs of which 33,031 are indirect. Of the five counties, Etowah had the smallest jobs and earnings impacts while Calhoun had the largest. The separate county impacts range from 1,791 to 4,141 jobs and $105.4 million to $240.9 million in earnings. The $2.1 billion statewide earnings impact generated a total of $202.9 million in state and local taxes. The state received $113.4 million consisting of $70.3 million in income taxes, $36.3 million in sales taxes and $6.8 million in property taxes. Local tax receipts totaled $89.6 million and comprised $45.3 million sales taxes and $44.2 million property taxes. Of the five counties, Calhoun had the highest sales tax receipts with $4.6 million and Etowah had the lowest at $2.0 million. Property tax receipts were lowest in Etowah County ($2.1 million) and highest in Jefferson County ($5.6 million). The combined impacts show clearly that the presence of HMA has significant impacts on the Alabama economy.

## Socioeconomic Trends in the Honda Study Area

### Population

HMA's employment of 5,321 workers in 2018 at its plant in Lincoln, Alabama, is astounding given that the city had an estimated population of 6,704 that year. Talladega County, home to the city, was Alabama's 19th most populous county in 2018 with an estimated 79,828 residents. U.S. Census Bureau data indicate that Talladega County lost 2,272 residents—a 2.8 percent decline—between 2010 and 2018, a period in which the State of Alabama population rose by 2.1 percent. Population fell in all cities and towns in Talladega County, except for Lincoln. The two largest cities in the county had the largest losses in population; Talladega (15,291) by 752 and Sylacauga (12,186) by 641. The city of Oxford, which is largely in Calhoun County but spills over into Talladega County, had almost no change in population for its Talladega County portion. Lincoln's population gain of 453 new residents (7.2 percent) from 2010 to 2018 was most likely due to expanding production and job growth at the Honda plant.

Among the five counties in the region where HMA largely drew its workforce (i.e. Talladega, Calhoun, Etowah, Jefferson, and St. Clair), St. Clair's population continues to grow the most (Table 5). The county, which is a part of the Birmingham-Hoover metro area, gained 6.1 percent (5,124 residents) from 2010 to 2018. Growth was rapid in the county's largest cities of Moody and Pell City with 11.0 and 8.4 percent, respectively. Jefferson County, which is the center of the Birmingham-Hoover metro area, had mixed population growth; registering some growth in the mid-2010s, but inching downward again in the last couple of years. Hoover and Trussville had rapid increases, Birmingham and Bessemer experienced significant declines. Overall, the county gained 1,142 residents between 2010 and 2018, an increase of 0.2 percent.

Calhoun County, hit hard by the last recession, saw the largest population decline in the HMA region. Its population shrank by 4,200 residents or 3.5 percent from 2010 to 2018. Much of that loss was in the city of Anniston, followed by Jacksonville and Piedmont. Etowah County, which comprises the Gadsden metro area, also saw its population decline by 1,954 (1.9 percent) in the same period. The cities of Gadsden and Attalla had the largest decreases, while Southside grew.

### Civilian Labor Force and Employment

Alabama and its counties were negatively affected by the 2007 national recession with statewide employment declining by 164,380 between 2007 and 2009, a drop of about 8.0 percent. The state's employment began growing again in 2010, but very slowly and reached an annual average of 2,112,347 in 2018. Although the civilian labor force declined as well, it did not drop as fast as employment. For the first five months of 2019, Alabama's civilian labor force roughly averaged

2,232,000. The statewide unemployment rate stood at 4.0 percent in 2007, increased to 5.7 percent in 2008, and peaked at 11.0 percent in 2009, but fell to 3.9 percent in 2018 and registered 3.7percent for May 2019.

Talladega County employment declined by 6,509 (18.7 percent) between 2007 and 2010 from 36,898. Employment in the county began to rebound in 2011, but is still recovering and reached 35,182 in May 2019 with an accompanying 3.3 percent unemployment rate. The unemployment rate for the county peaked at 14.4 percent in 2009 and dropped to 4.3 percent in 2018. Its civilian labor force which has been generally declining since 2007 reached 36,383 in May 2019. Similarly, Calhoun County employment, which was growing before the 2007 recession, fell by more than 7,000 jobs from 2007 to 2010. Job growth resumed in 2011 and enabled the unemployment rate which had climbed to 11.4 percent in 2010 to fall to 3.4 percent in May 2019 with a labor force of 46,639.

Etowah County also saw a turnaround begin in 2011 with employment climbing by 1,045 (2.7 percent) that year, but the county labor force has continued contracting as employment grows slowly. County employment rose by 5.4 percent between 2010 and 2018 while civilian labor force decreased by 904. The unemployment rate ranged from 5.9 to 11.5 percent between 2008 and 2016, but declined to 4.6 and 4.1 percent in 2017 and 2018 respectively. The county unemployment rate was 3.1 percent in May 2019 with its civilian labor force at 44,368. Employment in St. Clair County was impacted by hiring at Honda and related suppliers as well as activities in Jefferson County as the county provides a lot of workers for Jefferson County employers and its civilian labor force continues to increase. Employment in the county fell by 1,886 in 2009, but grew by 3,899 (10.7

percent) between 2010 and 2018. In May 2019, the county had an unemployment rate of 2.6 percent (the lowest of the five study area counties), 39,787 workers, and a labor force of 40,838.

Many who work in Jefferson County commute in from other counties, but more people have started living and working in the county. Between 2009 and 2018, employment in the county grew by 28,348 while unemployment fell from a peak of 10.8 percent in 2009 to 3.7 percent. The civilian labor force increased by 12,634 between 2009 and 2011, but has been slowly declining since. In May 2019, the county had an unemployment rate of 2.7 percent, employment of 313,993, and a labor force of 322,849.

**Jobs and Earnings**

The Census Bureau's Local Employment Dynamics (LED) database provides quarterly data on jobs and earnings by sector in the state and each county. Jobs in the state fell to 1,726,517 in the first quarter of 2010 (Q1 2010) after the recession. From Q4 2010 to Q3 2018 (the most recent quarter for job creation series), 136,483 jobs were created. Average monthly earnings across all sectors rose to $3,817 in Q2 2018 (the most recent quarter for the earnings series), an increase of about $340 from Q4 2010. The manufacturing sector gained 28,028 jobs (11.1 percent) in that period with its average monthly earnings rising $430 or 12.4 percent from Q4 2010 to Q2 2018.


Growth of HMA and related manufacturing provides a more positive picture for Talladega County during the period. Jobs in the county grew slowly but steadily to 29,599 in Q3 2018, up by 3,543

from Q4 2010, after falling to its lowest level of 25,035 in Q1 2010. Average monthly earnings across all sectors climbed more rapidly in the county than in the state, rising by $381 (21.6 percent) to $4,049 in Q2 2018, $232 above the state average. For the comparable periods, Talladega County's manufacturing sector added 1,909 jobs (an increase of 21.8 percent) while the sector's average monthly rose by $164 during the period between Q4 2010 and Q2 2018, an increase of 36.5 percent that is more than double Alabama's growth rate. The county's average monthly manufacturing wage of $5,713 in Q2 2018 amounted to 120.7 percent of the state average.

**Income**

Total wage and salary income in Alabama rose by 21.5 percent from 2010 to 2017 (the year with the latest available data at the county level). Among the counties in the HMA region, only Calhoun County saw a decline, and only of 0.1 percent. Etowah County saw a smaller gain than the state average; 16.9 percent. Wages and salaries in Jefferson, St. Clair, and Talladega counties rose higher than the state average by 21.6, 41.2, and 29.0 percent, respectively. The state and most study area counties saw wage and salary income fall to the lowest levels after the last recession, in 2009 (2010 for Jefferson County). From 2009 to 2017, however, wages and salaries rose steadily in all the counties except Calhoun, which saw its lowest levels in 2013 and a steady increase after that. In the same period, per capita income gains for three study area counties—Jefferson, St. Clair, and Talladega—beat the state gain; personal income gains in Jefferson and St. Clair counties were also above the state average gain.

**Real GDP**

The real GDP in Alabama grew by 7.8 percent between 2010 and 2018 reaching about 196.8 billion dollars in 2018 from 182.2 billion dollars in 2010. Primarily due to strong growth in the state's automotive industry, manufacturing sector real output rose by about 16 percent within the period to reach 34 billion dollars in 2018. Real GDP of durable goods manufacturers, which includes automotive firms, grew to about 21.2 billion dollars in 2018. Among the five study area counties, Talladega recorded the highest real GDP increase; 11.1 percent from 2012 to 2015. Its private goods-producing industries' real GDP grew by 16.6 percent within the four-year period to about $1.3 billion in 2015. St Clair County recorded the second highest increase in real GDP; its private goods-producing industries' real GDP grew by 1 percent from about $474 million in 2012 to $478 million in 2015.

**Table 5. Selected Socioeconomic Data for Honda Study Area**

| | Alabama | Calhoun | Etowah | Jefferson | St.Clair | Talladega |
|---|---|---|---|---|---|---|
| Population, 7/1/2018 | 4,887,871 | 114,277 | 102,501 | 659,300 | 88,690 | 79,828 |
| Labor Force, May 2019 | 2,257,466 | 46,639 | 44,368 | 322,849 | 40,838 | 36,383 |
| Employment, May 2019 | 2,192,516 | 45,037 | 42,989 | 313,993 | 39,787 | 35,182 |
| Unemployment Rate, May 2019 | 2.9 | 3.4 | 3.1 | 2.7 | 2.6 | 3.3 |
| GDP ($ millions)* | $196,876 | $3,750 | $2,537 | $40,267 | $1,586 | $2,686 |
| Wage & Salaries, 2017 ($ millions) | $93,889 | $1,853 | $1,412 | $20,436 | $810 | $1,406 |
| Per Capita Income, 2017 | $40,805 | $36,255 | $36,069 | $52,003 | $36,941 | $33,909 |

* Alabama GDP is for 2018 and county GDP data are for 2015 (the latest available).

Source: U.S. Census Bureau, Population Division, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis.

## Conclusions

This report determined that the 2018 economic and fiscal impacts of HMA and its key Tier-I Alabama suppliers on the economies of the State of Alabama and on Calhoun, Etowah, Jefferson, St. Clair, and Talladega counties are very significant. HMA has invested $2.6 billion to date in its Lincoln, Alabama plant, provides skilled and high-paying jobs, generates business for its suppliers, and pays taxes and other impositions. In addition, HMA's presence has been generally positive for the state and five counties as is evidenced by socioeconomic trends involving population, civilian labor force and employment, jobs and earnings, income, and real GDP.

In 2018 HMA employed 5,321 Alabama workers with a $421.4 million payroll for an average of $79,202 per employee—which is 1.75 times the year 2017 average earnings of $45,308 for an Alabama worker—and spent about $3.3 billion in nonpayroll expenditure. The company's 26 key Tier-I Alabama suppliers are estimated to have employed an additional 7,322 Alabama workers with a $286.9 million payroll and made $1.2 billion nonpayroll expenses in the state.

HMA alone had 2018 economic and fiscal impacts on the Alabama economy of $8.6 billion in output (3.9 percent of the $221.1 billion Alabama GDP), including $3.0 billion in value-added of which roughly $1.3 billion is earnings for 19,223 direct and indirect jobs, and $120.7 million in state and local taxes that does not include any company paid taxes. The combined impacts of HMA and its key Tier-I Alabama suppliers are $12.0 billion in output (about 5.4 percent of GDP), $4.3 billion value-added, $2.1 billion earnings, 45,674 jobs, and $202.9 million state ($113.4 million) and local ($89.6 million) taxes. These impacts clearly show that HMA has significant impacts on the economies of Alabama and the five counties, especially if its full network of suppliers is taken into consideration; the full network was not considered in this report.

# APPENDIX

## Methodology - Model

The economic and fiscal impacts presented in this report are determined using a model that combines specific economic structure and fiscal components for Alabama and five counties (Calhoun, Etowah, Jefferson, St. Clair, and Talladega) with multipliers from the Regional Input-Output Modeling System (RIMS II), an input-output model developed and maintained by the U.S. Department of Commerce's Bureau of Economic Analysis (BEA). The Economic Development Partnership of Alabama (EDPA), Honda Manufacturing of Alabama, LLC (HMA), and HMA's key Tier-I suppliers in Alabama provided key input data or design for the study. The economic impacts focus on output, value-added, earnings (wages and salaries), and employment. Output refers to total or gross business sales and contains value-added, which is the contribution to gross domestic product (GDP) or the value of goods and services produced on a value-added basis. Earnings impacts are part of value-added and are the wages and salaries of the workers recognized by the employment impact. The RIMS II multipliers used in this study are for the motor vehicle, body, trailer, and parts manufacturing sector in Alabama and the five counties and are shown below.

| RIMS II Multipliers | Alabama | Calhoun | Etowah | Jefferson | St. Clair | Talladega |
|---|---|---|---|---|---|---|
| Output | 2.3154 | 1.3865 | 1.3541 | 1.9798 | 1.4461 | 1.3083 |
| Value-Added | 0.8220 | 0.4217 | 0.4206 | 0.7086 | 0.4620 | 0.3531 |
| Direct Earnings | 3.0184 | 1.7514 | 1.5359 | 2.6495 | 1.9789 | 1.5799 |
| Direct Employment | 3.6126 | 2.0120 | 1.7806 | 3.0976 | 2.1743 | 1.7251 |

Note: The earnings and employment multipliers are direct (i.e., not based on output delivered to final demand).
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

The four main types of multipliers—output, value-added, income or earnings, and employment—are defined as follows. Output multipliers represent the total dollar change in output that occurs in all industries for each additional dollar of output delivered to final demand (final consumption) by the industry under study. Value-added multipliers are similarly defined except that they represent the total dollar change in value-added across all industries. Earnings multipliers represent the total dollar change in earnings of households employed by all industries for each additional dollar of payroll expenditure (or each dollar of output delivered to final demand) by the industry whose economic impact is being estimated. Employment multipliers represent the total change in the number of jobs in all industries for each direct job (or for each million dollars of output delivered to final demand) by the industry whose economic impact is being estimated.

Fiscal impacts are derived from the earnings impact and cover worker-related income, sales, and property taxes. Company or corporate taxes paid by HMA and its key Tier-I Alabama suppliers are

not estimated because of data limitations. The fiscal impacts are conservative for this reason and also because several relatively small taxes and fees (e.g., car tags and fees, rental/leasing, cigarettes and tobacco, utility, lodgings, and insurance premiums) are not estimated. For workers' taxes, it is important to note that not all of the earnings impacts are sales or income taxable. Spending on sales taxable items constitute 42.4 percent of total earnings based on U.S. Bureau of Labor Statistics (BLS) data. State taxable income (net income) is about 65.8 percent of earnings and the applicable tax rate is essentially 5.0 percent; the first $500 and the next $2,500 are taxed at 2.0 percent and 4.0 percent, respectively, for single persons, head of family, and married persons filing separately while for married persons filing joint returns the first $1,000 and the next $5,000 are taxed at 2.0 percent and 4.0 percent, respectively, and excess net income is taxed at the 5.0 percent rate. Corporations pay at a 6.5 percent rate and corporate income tax averages about 15 percent of individual income tax. State law in 2006 increased the individual income tax threshold by increasing the standard deduction for taxpayers with adjusted gross income of $30,000 or less and by increasing the dependent exemption for taxpayers with adjusted gross income of $100,000 or less. Sales tax rates used are 4.0 percent for the state and 5.0 percent for local (combined county and city) jurisdictions. Alabama Department of Revenue (ADOR) publications show that local sales tax rates vary between 3.0 to 7.0 percent statewide, but are usually at 5.0 percent. Property taxes are determined using assessment ratios and millage rates published by the ADOR as well as the ratio of state property tax receipts to state individual income tax receipts.

## Methodology - Economic Impact Analysis

Economic impact analysis measures the effects of a specific economic activity or event on a specified geographic area. Examples include impacts of a proposed industrial plant, an existing industry, a proposed real estate development, closing a military installation, or expanding an existing industrial facility. Federal laws and state and local regulations sometimes require economic impact studies prior to the implementation of a particular policy or action (relocation of an economic activity, change in tax policy, changes in zoning ordinance, providing economic incentives, etc.). Impact studies are designed to provide information for taking actions or instituting policies that facilitate positive economic impacts and/or mitigate potential negative impacts. Economic impact analysis is therefore an important decision making tool which can enhance the quality of decisions made, as well as the decision making process in both public and private sectors. The analysis typically focuses on one or more of the major economic indicators; output, value-added, employment, and income. The purpose of an impact study usually determines which socioeconomic variable(s) should be monitored. In this study, the primary focus is on all four major economic indicators and the consequent changes in income, sales, and property tax revenues.

Economic impacts comprise direct and indirect types. Direct impacts are those that are most obvious and include the wages and salaries of the employees who work directly for a firm or industry, as well as all other expenditures of the firm or industry, including taxes and distributed profits. Indirect economic impacts, often referred to as the "ripple" or "multiplier" effects, occur because of additional demands arising from new income and expenditures for inputs and products related to the activity under study. New income creates demand for consumer products and services and their associated indirect impacts are often called induced impacts. Indirect and induced impacts may spark demand for the output of the firm or industry under study. All the effects (direct and indirect or induced) result in development of the economy. The total economic impacts of the activity being studied are the combined direct, indirect, and induced impacts. The ratio of the total economic impact to the direct impact is the multiplier that can be used to determine the economic effects of the activity or organization on the region(s) or area(s) of focus.

Economic relationships do not obey strict geographic boundaries; workers, their incomes, and industry purchases flow across these boundaries enabled by transportation, communication, and other technology. Thus, a portion of the indirect effects of purchases or expenditures may occur beyond the boundaries of the specified region. Such occurrences are called *leakages*, as opposed to *linkages* (supplier-purchaser relationships) within the region. In general, small geographic areas have small *absolute* economic impacts because leakage is highly likely. Large regions have larger absolute economic impacts, but smaller *relative* economic impacts. The closure of one plant within a state, for example, may have only a small relative impact even if the plant employs thousands of workers; the absolute impact could be very large. The important point is that the effect or size of the economic impact is influenced by the size of the study area. If the area is too broadly defined, the relative impact will be small. If narrowly defined, the relative impact will be large.

### *Determining the Multiplier*

Several methodological approaches are used in estimating economic impacts. These include the construction of econometric, economic base, computable general equilibrium (CGE), and input-output (I-O) models. Econometric and CGE models can be very costly and time-consuming to build. Economic base models require very detailed information that is sometimes not available. The other methodological approaches generate slightly smaller multipliers than I-O models because of assumptions on factors such as input substitution and optimization behavior by economic agents.

The I-O modeling framework is used in this study. The technique generates multipliers for the economic activity of interest by focusing on economic interactions among all industries and all other economic transactions in the specified region. Interindustry relationships exist in two directions; backward (suppliers and other upstream linkages and leakages), and forward (distributors, retailers,

customers, and other downstream linkages and leakages). The number and strength of these backward and forward linkages and leakages determines the multiplier effects of the industry. In general, products and services that require a small number of inputs and little additional processing (little value addition) will have smaller multiplier effects than complex products that require lots of inputs and extensive processing.

The nature of the product (or service) and technology largely determine the degree of interindustry linkages and leakages (and thus the overall impact), and the specific impact on a region depends upon the degree to which these interindustry relationships are localized. Technology determines inputs and economics determines the geographic source of supply and destination of products or services. Inputs purchased outside the study area constitute leakage of potential impact—activities of local firms that have no economic impact—and provide opportunities for "localizing" such impact. Identifying leakage can provide valuable planning information for economic development. An activity's maximum impact on a specific area is obtained when all interindustry linkages occur within the area. A system-wide view is required because different firms or activities have different linkages and leakages. The I-O technique permits the incorporation of such system-wide perspectives.

To estimate the economic impact of HMA and its key Tier-I Alabama suppliers on the Alabama economy and the specified five counties' economies, linkages between them and the motor vehicle and parts industry and related suppliers and customers must be traced. This task is facilitated by BEA's RIMS II, which provides multipliers for every state, region, county, and metropolitan area in the nation. The RIMS II I-O model provides data on each industry that reflect the value of inputs used per dollar of output in the production of that industry's output and is represented in a tabular format. Since the rows (outputs) are produced by specific industries, they are also columns (inputs). I-O models are based on a table of transaction balances that ensures economy-wide accounting consistency. Total payments equal total receipts for each producing sector and aggregate final demand equals aggregate value-added. Demand for a particular input causes supply from its source industry which in turn creates demand for the materials and services that are used to produce the particular input, and so on. The round-by-round effects converge; I-O methodology captures the total effect of the rounds of spending with the multiplier. RIMS II multipliers for an economy account for all linkages in and leakages from that economy.

Multipliers are determined mathematically from I-O tables that are constructed from observed and reported data for the economic area of interest. The economy is divided into a number of producing industries that sell and purchase goods and services to and from each other with *interindustry* flows that are key data. Sector goods and services are purchased by domestic consumers (households), international customers (exports), government (federal, state, and local), and for

private investment purposes. These external to production purchases are for direct use and termed *final demand*. For an economy with $n$ sectors, if $X_i$ represents total output for sector $i$, $Y_i$ represents final demand for sector $i$ products, and $z_{ij}$ represent interindustry flows (with $j$ representing sectors as well), then

$$X_i = \sum_{j=1}^{n} z_{ij} + Y_i \qquad (1)$$

If $a_{ij}$ represents the I-O technical coefficients where $a_{ij} = z_{ij} / X_j$ so that sectors use inputs in fixed proportions (the constant returns to scale Leontief production function) then the above equation becomes

$$X_i = \sum_{i=1}^{n} a_{ij} X_i + Y_i \qquad (2)$$

The standard formulation of the basic I-O model and its application, in matrix notation is:

Transactions balance: $X = AX + Y$ (3)

Solving for X: $X = (I - A)^{-1}Y$ (4)

For a change in Y: $\Delta X = (I - A)^{-1}\Delta Y$ (5)

where X is the gross output column vector, A is the matrix of fixed I-O coefficients, Y is the final demand column vector, and I is the identity matrix. This model enables determination of the output given changes in final demand levels (consumption, investment, government, or exports). The Leontief inverse, $(I - A)^{-1}$, provides the I-O multipliers used to determine impacts. The elements of the matrix are very useful and important. Each captures in a single number, an entire series of direct and indirect effects. Gross output requirements are translatable into employment coefficients in a diagonal matrix that is used together with the Leontief inverse to generate employment impacts. Similar manipulations generate value-added and income or earnings multipliers.