CENTER FOR
AUTOMOTIVE RESEARCH

# Economic Contribution Study of Hyundai Motor America's U.S. Operations 

Yen Chen
Julia Bush
Tina Nguyen
Tyler Harp
Narges Lahiji

## ABOUT THE AUTHORS

The Center for Automotive Research (CAR) is an independent nonprofit that produces industry-driven research and fosters dialogue on critical issues facing the automotive industry and its impact on the US economy and society. CAR researchers closely track current and future global automotive industry and technology trends and assess their impacts. CAR researchers also study international collaborations and stay abreast of changes in international trade and regulatory environments, the development of technology standards, and the deployment of new vehicle technologies.

For citations and reference to this publication, please use the following:

Chen, Y., Bush, J., Nguyen, T., Harp, T., Lahiji, N. (2023). Economic Contribution Study of Hyundai Motor America's U.S. Operations. Center for Automotive Research, Ann Arbor, MI.

CENTER FOR
AUTOMOTIVE RESEARCH

880 Technology Drive, Suite C | Ann Arbor, MI 48108 | www.cargroup.org

CAR's mission is to produce independent research, convene stakeholders, and analyze critical issues facing the mobility industry and its impact on the economy and society

## Acknowledgments

This study was made possible through support from Hyundai Motor America (HMA). The Center for Automotive Research (CAR) thanks the company for their support. The authors would like to thank Patrick Manzi, the Chief Economist of the National Automobile Dealers Association (NADA), for his invaluable input. Additional assistance was provided by Alex Kulicki; Jane Michalek for the coordination of the project; and Carolyn Mozheev for the production of this document.

## Executive Summary

The purpose of this study is to estimate Hyundai Motor America's (HMA's) and its independent dealer network's employment and economic contribution to the United States and the economies of the seven states in which HMA and HMA dealer networks have significant automotive footprints. This study also estimates the economic contribution of Hyundai's new electric vehicle and battery manufacturing investment to the United States economy.

In 2021, Hyundai Motor America (HMA) and Hyundai America Technical Center, Inc. (HATCI) hired 7,050 workers in Alabama, California, Texas, Georgia, Michigan, and other states in the U.S. In addition, HMA's independent dealer network employed 54,100 workers across all fifty states. CAR estimates HMA, HATCI, and HMA's independent dealers in 2021 contributed 190,950 jobs in the U.S. economy. Of these, HMA and HATCI's U.S. automotive operations support 58,250 jobs, and 132,700 jobs are associated with HMA's 835 dealers in fifty states. HMA and its dealerships added USD 20.1 billion in private earnings to the U.S. economy, including USD 3.0 billion in social welfare contribution and USD 2.8 billion in federal and state income tax revenue.

HMA's employment multiplier is 8.3-implying 7.3 additional jobs for every employee in HMA's U.S. automotive operations. HMA's independent dealers have an employment multiplier of 2.5 , indicating 1.5 other jobs created for every HMA dealership worker.

In 2022, Hyundai Motor Group (HMG), a multinational conglomerate that owns Hyundai Motor Company (HMC), the parent company of HMA, announced that HMG, Hyundai Mobis, and SK On will invest an additional USD 10.6 billion into new electric vehicle facilities in Georgia and Alabama, which is expected to hire 13,500 jobs in those states. CAR estimates these jobs
will create or retain a total of 62,800 jobs in the United States by 2025. These jobs will generate USD 8.3 billion in private earnings, including USD 1.3 billion in government social welfare funds and USD 1.2 billion in federal and state personal income tax.

## TABLE OF CONTENTS

About the Authors
Acknowledgments
Executive Summary
Table of Contents
List of Tables
List of Figures
A Brief History of Hyundai in the United States
Hyundai Motor America \& Genesis Motor America Social Impact

HMA Corporate Social Responsibility
Hyundai Hope On Wheels
GMA Corporate Social Responsibility
Genesis Inspiration Foundation
Hyundai U.S. Automotive Manufacturing Facilities and Research Centers

HMA's Current Manufacturing Operations and
Production Volumes
Hyundai U.S. Research, Development, and Technical
Centers
HMA's U.S. Dealers Network
Sales by Region, HMA
HMA's New Investment in the United States
HMA's Environmental Sustainability
HMA's Economic Impact Analysis in the United States
Hyundai Motor America (HMA), Hyundai Motor
Company (HMC), and Hyundai Motor Group (HMG)

## TABLE OF CONTENTS

| 30 | Methodology - Macroeconomic Modeling |
| :---: | :---: |
| 31 | HMA's Current Economic Contribution to the |
|  | U.S. Economy |
| 33 | HMA's Dealer Network Contribution to the U.S. |
|  | Economy |
| 35 | HMA's Investment and Future Contribution to the |
|  | U.S. Economy |
| 38 | HMA's Economic Contribution to Key Operating |
|  | States |
| 39 | Alabama |
| 41 | Arizona |
| 43 | California |
| 45 | Florida |
| 47 | Georgia |
| 49 | Michigan |
| 50 | New York |
| 52 | Rest of the U.S. |
| 54 | Summary and Conclusion |
| 56 | Appendix A: A History of Hyundai in the United States |
| 56 | Hyundai Motor America |
| 57 | Genesis Motor |
| 58 | A Brief History of Hyundai in the United States |
| 59 | Appendix B: HMA U.S. Sales |
| 59 | Hyundai U.S. Sales |
| 60 | Genesis U.S. Sales |
| 62 | References |

## LIST OF TABLES

Table 1: Hyundai Motor Company (HMC) Manufacturing Plants in the United States, 2022
Table 2: HMA's U.S. Research, Development, and Technical Centers
Table 3: Hyundai's New Manufacturing Investments in the United States
Table 4: HMA's Environmental Objectives
Table 5: HMA's Employment Contribution
Table 6: HMA's Income Contribution
Table 7: HMA's Dealer Network Employment Contribution
Table 8: HMA's Dealer Network Income Contribution Table 9: Hyundai's EV Investment Employment Contribution Table 10: Hyundai's EV Investment Income Contribution Table 11: HMA's State Economic Contribution - Alabama Table 12: HMA's State Economic Contribution - Arizona Table 13: HMA's State Economic Contribution California
Table 14: HMA's State Economic Contribution - Florida Table 15: HMA's State Economic Contribution - Georgia Table 16: HMA's State Economic Contribution - Michigan Table 17: HMA's State Economic Contribution - New York Table 18: HMA's State Economic Contribution - Rest of U.S.

## LIST OF FIGURES

Figure 1: A Timeline of Hyundai Operations in the United States, 1986-2025
Figure 2: A Timeline of Genesis Operations in the United States, 2003-2022
Figure 3: Hyundai U.S. Vehicle Production, 2005-2022
Figure 4: Hyundai U.S. Engine Production, 2017-2022
Figure 5: Hyundai U.S. Transmission Production, 20172022

Figure 6: HMA's U.S. Research, Development, and Technical Centers
21 Figure 7: Map of HMA Dealership Franchise Sales by Region, 2021
Figure 8: HMC EV Sales in Top Ten Countries, 2022
Figure 9: Number of Suppliers by State
Figure 10: Hyundai Vehicle Sales in the United States, 2009-2022
Figure 11: Vehicle Market Share by Brand Origins in the United States, 2000-March 2023
Figure 12: Genesis Vehicle Sales in the United States, 2016-2022

## A Brief History of Hyundai in the United States

Hyundai's presence in the United States began in 1986 when Hyundai Motor America (HMA) established its headquarters in Fountain Valley, California. In February 1986, Hyundai launched its subcompact Excel model in the U.S. market, and in just seven months, Hyundai sold 100,000 Excels. Total sales in 1986 for Excel reached 168,882, setting an industry record for a first-year import vehicle distributor. In 2022, HMA's U.S. sales totaled 781,000 vehicles for the year, supported by their domestic production facility in Montgomery, Alabama. HMA currently relies on 61,150 employees to support Hyundai's U.S. research, production, and sales operations.

In 2022, Hyundai announced it would build two new Georgia facilities dedicated to electric vehicle (EV) and battery manufacturing. Hyundai plans to invest USD 5.5 billion in a facility in Savannah, Georgia to produce EVs and EV batteries. Production is expected to start in 2025 with a future capacity to build 300,000 EVs annually and create 8,100 jobs. The other new EV battery manufacturing facility will be located in Atlanta, Georgia, in a Joint-Venture partnership with SK On. The USD 5 billion facilities will begin production in 2025 and are expected to create 3,500 jobs for the communities. Figure 1 shows a timeline of Hyundai Operations in the U.S., and Figure 2 shows the history of Genesis Motors in the U.S. For a more detailed history, please refer to Appendix A: A History of Hyundai in the United States.

Figure 1
A Timeline of Hyundai Operations in the United States, 1986-2025

| 1986 | 1987 | 1988 | 1989 | 1990 |
| :---: | :---: | :---: | :---: | :---: |


|  |  | History of Hyundai in the U.S <br> Hyundai's presence in the United States began when Hyundai Motor America (HMA) was established in 1986. In its first year, Hyundai launched its Excel model in the U.S. market and in just seven months Hyundai sold 100,000 with total sales reaching 168,882 , setting an industry record for a first-year import vehicle distributor. <br> Today, Hyundai services and sells its vehicles through more than 830 dealerships nationwide and the majority sold in the U.S. are built at U.S. manufacturing facilities, including Hyundai Motor Manufacturing Alabama. Hyundai continues to expand its U.S. presence with the planned building of two new facilities in Georgia dedicated to EV and battery manufacturing. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2003 | 2004 | 200 | 201 | 2022 | 2025 |
| Hyundai opened a new Hyundai-Kia Motors Design \& Research Center in Irvine, CA. | Hyundai-Kia America Technical Center, Inc. completed construction of its proving grounds in California City, CA. | Hyundai opened its engine plant at the HMMA facility. | Hyundai expanded and modified its HMMA facility to include a new on-site engine plant to begin production of the Nu engine. | Hyundai announced it would be building two new facilities in Georgia dedicated to EV and battery manufacturing, an investment of USD 10.5 billion | Hyundai to begin production at its new EV and battery facility in Savannah, GA and EV battery facility in Atlanta, GA |

Figure 2
A Timeline of Genesis Operations in the United States, 2003-2022

| 2003 | 2007 | 2008 | 2016 | 2018 | 2020 | 2021 | 2022 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Hyundai conceived of concept Genesis | Hyundai introduced first Genesis model | Hyundai first introduced Genesis model in the U.S. at the North American Auto Show | Genesis launched as a stand alone brand in the U.S. with two models: G80 and G90 | Gensis launched its G70 model in the U.S. market | J.D. Power name Gensis the most dependable automotive brand | Genesis named the most technologically innovative brand in North America | Genesis opened its first U.S. standalone dealer |

## Hyundai Motor America \& Genesis Motor America Social Impact

Hyundai Motor America (HMA) and Genesis Motor America (GMA) have several corporate social responsibility programs and initiatives to further their
stated commitment of fostering progress for humanity. Each company says they seek to enrich the lives of all people, increase the wellbeing of society, and improve the planet through sustainable action. To further these goals, they devote their time, expertise, and other resources to related causes, including community development, early education, environmental efforts, and cultural enrichment.

## HMA Corporate Social Responsibility

In 2022, HMA launched Hyundai Hope, a corporate initiative focused on providing time and resources to nonprofit organizations that support the health and safety of individuals and foster positive growth in communities. Hyundai Hope focuses on the pillars of health, communal safety, and food security, and has donated over $\$ 1$ million towards these causes since its inception.

HMA also supports a range of programs aimed at recognizing the positive impact and achievements of diverse artists, entertainers, and actors. HMA has donated $\$ 648,000$ to support organizations that provide communities an enriching cultural experience.

## Hyundai Hope On Wheels

Hyundai Hope On Wheels (HHOW) was founded in 1998 as a 501(c)(3) nonprofit organization to fund research and create awareness for childhood cancer. HMA and its more than 830 dealers and customers support the cause with a donation from every new vehicle sold. In 2022, HHOW surpassed $\$ 200$ million in life-time donations to pediatric cancer research in the United States. In 2023, HHOW awarded $\$ 25$ million to such research to commemorate the non-profit's 25th anniversary. To date, HHOW has
supported the advancement of 1,300 research studies at over 175 medical institutions.

## GMA Corporate Social Responsibility

Genesis Gives is a corporate social responsibility initiative launched in 2022 that supports non-profit organizations focused on improving access to, and performance in, youth sports as well as technology, engineering, art, and mathematics education in under-resourced communities. The program has donated $\$ 7.5$ million to date.

## Genesis Inspiration Foundation

Founded in 2018, the Genesis Inspiration Foundation (GIF) is a 501(c)(3) nonprofit organization that seeks to improve educational outcomes by providing access to arts programs that engage children in under-resourced communities. GIF has donated nearly $\$ 8$ million through over 100 grants to nearly 80 organizations since its inception through the support of Genesis as well as its dealer network and customers.

## Hyundai U.S. Automotive Manufacturing Facilities and Research Centers

## HMA's Current Manufacturing Operations and Production Volumes

HMA has operated one assembly plant—Hyundai Motor Manufacturing Alabama (HMMA)—in the United States since 2005. HMMA is in Montgomery, Alabama, about 150 miles southwest of Atlanta. Sonata was the first model HMA built in the United States, followed a year later by the Santa Fe. From

2010 to 2018, Santa Fe was also assembled at Kia Motors Manufacturing Georgia (KMMG), the only Kia Motors America (KMA) U.S. assembly plant in West Point, Georgia. HMA and KMA are both owned by Hyundai Motor Group (HMG). The engines that go into Hyundai Sonata and Santa Fe are made at HMMA, and the transmissions are produced at KMMG. In 2022, HMMA produced 332,832 motor vehicles in its U.S. light-vehicle assembly plant, which includes the Hyundai Elantra, Sonata, Santa Cruz, Tucson, and Santa Fe. HMA's U.S. annual production volume is shown in Figure 3.

Figure 3
Hyundai U.S. Vehicle Production, 2005-2022


Sources: Ward's Auto and IHS Markit

Figure 3 above depicts HMA's total vehicle production in the U.S. between 2005 and 2022. The decline in vehicle production which begins in 2016 coincides with transition of Santa Fe Sport production from the West Point Plant in Georgia to the Montgomery Plant in Alabama. Furthermore, the Montgomery Plant underwent line improvements, tooling installation, and
employee training to accommodate production of the redesigned Santa Fe , Sonata, and Elantra.

In addition to HMMA, Hyundai Motor Company (HMC), the parent company of HMA, owns and operates Hyundai Transys, HMC's automotive parts and powertrain producer. Hyundai Transys operates five manufacturing facilities in the United States. Table 1 lists the manufacturing facilities HMC owns and operates in the United States. In 2022, HMA vehicles assembled in the U.S. comprised roughly $43 \%$ of HMA's total U.S. sales. This is projected to grow to 49\% in 2030' due to the investments detailed in Table 3 and future production of battery electric vehicles. Please refer to Appendix B for more detail on HMA U.S. sales.

## Table 1

Hyundai Motor Company (HMC) Manufacturing Plants in the United States, 2022

| Facility | Operations | City | State |
| :--- | :--- | :--- | :--- |
| Hyundai Motor Manufacturing |  |  |  |
| Alabama (HMMA) | Manufacturing | Montgomery | AL |
| Hyundai Motor America (HMA) | Headquarters | Fountain |  |
| Valley | CA |  |  |
| Hyundai Transys Georgia Seating | Manufacturing | West Point | GA |
| System |  | Wanufacturing | West Point |


| Hyundai Transys Georgia Seating | Manufacturing |
| :--- | :--- | :--- | :--- |
| System, LLC (Alabama) |  |$\quad$ Prattville | AL |
| :--- |
| Hyundai Transys Illinois Seat Plant | Manufacturing | Champaign |
| :--- | IL | IL |
| :--- |
| Hyundai Transys Arizona Seating <br> System |

Figure 4 provides a history of Hyundai U.S. engine production from 2017 through 2022 in HMMA. HMMA is HMA's sole U.S. engine facility, and the plant has produced engines at an annual volume exceeding 400,000 units in the last two years.

Figure 4
Hyundai U.S. Engine Production, 2017-2022


Sources: LMC Automotive

Figure 5 provides a history of Hyundai U.S. transmission production from 2017 through 2022. Hyundai Transys Georgia Powertrain is an HMC subsidiary in West Point, Georgia. The facility is HMC's sole U.S. transmission facility. The plant has produced transmissions at an annual output exceeding 350,000 units in the last two years and supplied transmissions for both HMA and KMA assembly plants in Alabama and Georgia.

Figure 5
Hyundai U.S. Transmission Production, 2017-2022


Sources: LMC Automotive

## Hyundai U.S. Research, Development, and Technical Centers

Hyundai Motor Group (HMG) has seven global centers focused on research and development (R\&D). In the United States, Hyundai's R\&D facilities consist of Hyundai America Technical Center, Inc. (HATCI), established in 1986 in Ann Arbor, Michigan; Hyundai Design and Technical Center in Irvine, California, and HATCI's 17.52 million square meter proving grounds in the Mojave Desert,
where USD 60 million was invested for a total of 116 km road length for a top speed of $250 \mathrm{~km} / \mathrm{h}$. HATCI has grown to include a robust network of engineering disciplines and increased business-focused activities to support Hyundai's North American operations. In 2022, Hyundai announced it broke ground on a new Safety Test and Investigation Laboratory (STIL) at its HATCI facility - a USD 51.6 million investment which is expected to create more than 150 jobs in the Ann Arbor area. The new facility will feature a field crash investigation lab, high voltage battery lab, forensics lab, 500m track and a Vehicle Dynamics Area pad where high-speed maneuvers, low-speed maneuvers, steering failures, brake failures, system failures, and electrical issues can be observed². In May 2022, Hyundai announced it will locate its New Horizons Studio (NHS) headquarters in Bozeman, MT. This facility will be located on Montana State University's campus and will focus on the development of Ultimate Mobility Vehicles (UMVs). Figure 6 shows Hyundai's research, development, and technical centers in the U.S.

Figure 6
HMA's U.S. Research, Development, and Technical Centers


Sources: Book of Deals, Center for Automotive Research

Table 2 lists Hyundai's research and development facility locations in the United States and their primary automotive research focuses.

Table 2
HMA's U.S. Research, Development, and Technical Centers

| Facility Name | Focus | Location |
| :--- | :--- | :--- |
| Hyundai America <br> Technical <br> Center, Inc. | Center dedicated to the <br> design, plan and <br> development of <br> Hyundai vehicles <br> intended for the North <br> American market |  |
| Safety Test and | Field crash |  |
| Investigation |  |  |
| Laboratory - HATCI | Cestigation lab |  |
| Hyundai America | Center focuses on the | Chino, CA |
| Technical Center, Inc. | development of <br> alternative fuel vehicles |  |
| Hyundai-Kia Motors | Vehicle design center | Irvine, CA |
| Design \& Research | Vehicle test track |  |
| Center | California City, CA |  |


| New Horizons Studio | Development of <br> Ultimate Mobility <br> Vehicles | Bozeman, MT |
| :--- | :--- | :--- |

## HMA's U.S. Dealers Network

Hyundai has over 830 dealerships located throughout the United States. CAR researchers estimate that these dealers have more than 54,000 employees. More than half, or 29,000, are sales representatives and supervisors. A quarter, or 14,000, are automotive mechanics and technicians. Most Hyundai vehicles sold in the U.S. are built at U.S. manufacturing facilities, including Hyundai Motor Manufacturing Alabama.

## Sales by Region, HMA

Hyundai sold a total of 693,560 vehicles at 835 franchise locations in the U.S. in 2021. Figure 7 depicts Hyundai sales across seven regions in the U.S. and the number of franchise locations by region. The region that saw the most sales in 2021 with 151,480 units sold includes the states Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

Figure 7
Map of HMA Dealership Franchise Sales by Region, 2021


Sources: Hyundai Motor America

The EV market experienced substantial growth in 2022 as the global market share of EVs ticked up to $12.3 \%$ of the light vehicle market, ${ }^{3}$ demonstrating a clear acceleration of EV adoption. In 2022, Hyundai Motor Company sold 238,000 Battery Electric Vehicles (BEVs) and Plug-In Hybrid Vehicles (PHEVs) globally, up 72 percent year-over-year and representing a 6.0 percent share of HMC's vehicles sold in 2022. These sales include 223,000 BEVs and 15,000 PHEVs. The top ten countries HMC's EVs were sold are South Korea, Germany, U.S.A., U.K., France, Norway, Spain, Canada, Netherlands, and Italy, as shown in Figure 8. Except for South Korea, most of HMC EV sales were in European
countries and North America. In fact, European countries account for 48 percent of HMC EV sales, South Korea accounts for 33 percent, and North America accounts for 17 percent.

Figure 8
HMC EV Sales in Top Ten Countries, 2022


Sources: Marklines 2022 Global Sales of Major Automakers and Groups

## Hyundai's New Investment in the United States

U.S. automakers announced to invest USD 122.4 billion in electric vehicles from 2010 through 2022, with a total of USD 50.9 billion worth of investment announcements in 2022 alone ${ }^{4}$. In 2022, HMG and Hyundai Mobis announced they would invest USD 10.6 billion into new electric vehicle facilities. Two investments are in Bryan County, Georgia, one in Bartow County, Georgia, and the last in Montgomery, Alabama. Table 3 details the 2022 investment announcement on the production of battery electric vehicles and battery manufacturing facilities.

Table 3
Hyundai's New Manufacturing Investments in the United States

| Company | Focus | Location | Investment <br> Amount | Expected Completion |
| :---: | :---: | :---: | :---: | :---: |
| Hyundai Motor <br> Group <br> Metaplant <br> America <br> (HMGMA) | EV and battery manufacturing | Bryan County, <br> GA | \$ 5 Billion ${ }^{5}$ | 2025 |
| Hyundai Motor <br> Group (HMG) and SK On | EV battery manufacturing | Bartow County, GA | \$ 4-5 Billion ${ }^{6}$ | 2025 |
| Hyundai <br> Mobis | EV Power electric <br> system plant | Bryan County, GA | \$ 926 Million ${ }^{7}$ | 2024 |
| Hyundai <br> Mobis | EV battery modules | Montgomery, <br> AL | \$ 205 Million ${ }^{8}$ | 2024 |

By 2025, HMG will invest over USD 10 billion in new electric vehicle and battery manufacturing in the U.S. At the Megasite located in Bryan County, Hyundai announced a USD 5 billion investment in opening its first state-of-the-art U.S. smart factory, Hyundai Motor Group Metaplant America
(HMGMA). Located close to ports, rails, and workforce, the 2,967-acre Megasite is adjacent to Interstate 16 with direct access to 250 major metro areas, including Atlanta, Birmingham, Charlotte, Memphis, and Orlando. Located 28 miles from the site, the Port of Savannah is the nation's largest and fastestgrowing container terminal. The site was purchased in 2021 through a partnership between the State of Georgia and the Savannah HarborInterstate 16 Corridor Joint Development Authority, which includes the counties of Bryan, Bulloch, Chatham, and Effingham. This facility will help HMG lead the U.S. auto industry's EV transition and strive toward its goal of becoming one of the top EV providers in the U.S. by 2026.

HMG and SK On, a lithium-ion battery subsidiary of S.K. Innovation, have selected Bartow County, Georgia, to build a new EV battery manufacturing facility. HMG will use the new facility to supply its U.S. factories. It is one of the largest economic development projects in the state's history. Operations are expected to begin in 2025.

Hyundai Mobis, HMG's largest automotive parts supplier, is investing USD 926 million in a Bryan County plant to produce electric vehicle power systems. The EV Power Electric system plant will expand Hyundai Mobis' current footprint in Georgia. Hyundai Mobis operates a manufacturing facility with almost 1,200 employees in West Point as Kia Georgia's largest Tier 1 supplier since 2009. The plant supplies chassis modules, cockpit modules, and bumper assemblies to automotive manufacturers. At full production, the 1,200,000-square-foot facility will supply more than 900,000 electric vehicle power units and 450,000 integrated charging control units annually to Hyundai Motor Group Metaplant America (HMGMA) in Bryan County, Hyundai Motor Manufacturing Alabama (HMMA) in Montgomery, and Kia Georgia. Hyundai Mobis also plans to invest USD 205 million in constructing a new EV battery module plant in Montgomery, Alabama. When the 450,000-square-foot
facility reaches full production capabilities, it will supply over 200,000 EV batteries annually to the Kia Georgia plant and the Hyundai Motor Manufacturing Alabama (HMMA) factory in Montgomery. The new facility will be built on the HMAA campus off Interstate 65 in Montgomery. Hyundai Mobis will expand its existing presence in Montgomery by establishing the EV battery module plant. Please refer to Figure 9 for the number of suppliers per state supporting HMA.

Figure 9
Number of Suppliers by State ${ }^{9}$


Sources: Marklines Supplier Database

## HMA's Environmental Sustainability

As a company, Hyundai is dedicated to minimizing the negative environmental impact of their operations throughout the entire value chain. The company plans to reduce the carbon footprint of their vehicles and
operations while also reducing waste through recycling and upcycling, including more recycled and eco-friendly materials in their products, executing a robust EV strategy, reducing air and water pollutants, and utilizing raw materials more efficiently. Hyundai released an environmental report in 2021 that details its environmental sustainability goals, summarized in Table 4.

Table 4
HMA's Environmental Objectives

|  | Objective |
| :---: | :---: |
| Carbon | - Hyundai plans to increase electric vehicle sales to reduce the average carbon emissions of all its vehicles, with the goal to achieve zero carbon emissions for product usage over the long term. <br> - Sold 140 K EVs in 2021, a year-on-year increase of $44 \%$ in the proportion of EVs against total vehicle sales. |
|  | - Set target to be carbon neutral by 2045 <br> - Received RE100 designation from The Climate Group for efforts to transition to $100 \%$ renewable energy by 2045. <br> - Set target to achieve $100 \%$ electrification in major markets by 2040 . |
| Materials | - Hyundai recycles plastic materials to make wheel guards, undercover parts, battery trays, and parts for fan shrouds. |
|  | - Biomaterials are utilized to produce interior materials in the newly launched G80 and IONIQ 5. <br> - The IONIQ 5's production incorporates vegetable oil and eco-friendly paints in the pre-treatment process of leather seats. |


|  | - Hyundai's vehicles are $85 \%$ recyclable and |
| :--- | :--- |
| reusable. |  |$|$| Biodiversity |
| :--- |
| - Hyundai assesses and protects biodiversity related |
| Waste business activities, with a focus on ecosystem |
| restoration, resource circulation, climate change |
| response, and biodiversity conservation. |

In addition to Hyundai's plan for reduced emissions throughout its business sites, the company is also committed to accelerating its technology development for eco-friendly vehicles and increasing sales of its EVs and FuelCell Electric Vehicles (FCEVs) in line with the expansion of EV markets. Hyundai sold 140K EVs in 2021, a year-on-year increase of 44\% in the proportion of EVs against total vehicle sales. The company has set its EV sales target to 840,000 units by 2026 (17\% of total vehicle sales). By 2030, Hyundai aims to sell 1.87 million EV units worldwide ( $36 \%$ of total vehicle sales), with 530,000 units sold in the U.S. alone (58\% of total U.S. vehicle sales). To expand its global EV sales and market share, Hyundai plans to launch 17 EV lineups including 11 Hyundai brands and 6 Genesis brands by 2030. The company released the IONIQ 6 in 2022 and will release the IONIQ 7 in 2024, while launching EV lineups for six types of SUVs, three passenger vehicles, one small commercial vehicle, and another new vehicle by 2030. All new models of the Genesis brand will be launched as EVs starting from 2025. Aside from battery electric vehicles, Hyundai is reaching many milestones in other
vehicle technologies such as the world's first mass production of FCEVs, including sales of 20,000 NEXOs.

## HMA's Economic Impact Analysis in the United States

CAR researchers estimated HMA's economic contribution by using proprietary employment data provided by the company, and a commercially available and peer-reviewed, dynamic input-output general equilibrium model of the U.S. economy produced by Regional Economic Models, Inc. (REMI). CAR's analysis focuses on several aspects of HMA's United States operations: manufacturing and related supporting operations, research and development, future EV and battery investment, and dealership network. CAR also provides details of the company's economic contribution in seven states in which HMA has significant footprints in motor vehicle manufacturing, motor vehicle design and technology centers, regional sales offices, regional headquarters, and dealer network operations.

The REMI model produces estimates based on model inputs of HMA's direct employment, income, and compensation data. Direct employment represents all HMA's U.S. hourly and salaried workers who directly work in the company's manufacturing facilities, research and technology centers, regional offices, and headquarters. The model estimates intermediate employment, or the number of supplier jobs related to HMA across all sectors of the U.S. economy-in other words, there are indirect jobs supported by HMA operations in the United States. The model also estimates spin-off or expenditure-induced employment-the jobs supported by the HMA employees and suppliers' workers who spend their earnings in the economy. Additionally, the model generates estimates of the amount of U.S. personal
income and tax revenues generated by HMA's total economic contribution in the United States.

## Hyundai Motor America (HMA), Hyundai Motor Company (HMC), and Hyundai Motor Group (HMG)

Hyundai Motor Group (HMG) is a multinational conglomerate, also known as chaebol, with a series of affiliated companies cross-holding each other's ownership with complex shareholding arrangements. HMG was formed in 1998 by Hyundai Motor Company (HMC) acquiring a majority share of Kia Motor Corporation. Today, HMG's business value chains include motor vehicle manufacturing, steelmaking, construction, finance, logistics, information technology, and services. In addition to HMC and Kia, HMG's automotive affiliates include Hyundai Mobis, Hyundai IHL, and Hyundai WIA.

Hyundai Motor America (HMA) is one of HMC's fully-owned subsidiaries in the United States. HMC directly owns the following companies in the United States:

- Hyundai Motor America (HMA), HMC's U.S. sales and manufacturing operations,
- Hyundai Translead, HMC's logistics and parts distribution operations,
- Hyundai Transys, HMC's auto parts system manufacturer,
- Hyundai America Technical Center, Inc. (HATCI), a R\&D center for HMG,
- Hyundai Rotem USA (through Hyundai Rotem), a heavy industry equipment manufacturing company,
- MoceanLab, and
- Hyundai Motor Investment

Through HMA's ownership, HMC indirectly owns the following companies in the U.S.:

- Hyundai Capital America - the financial arm in the United States for HMC,
- Hyundai Motor Manufacturing Alabama - automotive manufacturing,
- Stamped Metal American Research Technology - metalworking manufacturing, and
- Genesis Motor America - the U.S. sales operations for Genesis Motor, a division of HMC

Beginning in 2021, HMG's Hyundai, Kia, and Genesis global sales rank third place in the world, only behind Toyota and Volkswagen. In North America, HMG is in fifth place, following General Motors, Toyota, Ford, and Stellantis ${ }^{10}$.

This economic contribution study focuses on HMA's current U.S. automotive operations (including HMA's wholly-owned U.S. subsidiaries"), Hyundai's automotive technical and research center HATCI, Hyundai's new electric vehicle and battery investment in Georgia and Alabama, and HMA's independent dealer network operations. Except for Hyundai's new EV and battery investment, this economic contribution study does not include the other wholly owned subsidiaries that HMC, HMA's parent company, owns or operates in the United States.

## Methodology - Macroeconomic Modeling

CAR researchers produced the estimates presented in this study using a specially constructed - inter-industry and inter-region - dynamic economic model developed by Regional Economic Models, Inc. (REMI). The REMI model is designed to simulate dynamic year-over-year regional economic effects of policies or actions, including investment, employment, and wage rates. Government agencies, consulting firms, and universities have long relied on the highly regarded REMI model for analyzing economic policy impacts and industry contributions. CAR has used REMI for multiple economic impact studies in the past ${ }^{12}$.

CAR researchers used a 7-region, 160-sector REMI model to estimate the economic contribution of HMA's operations in the United States—including manufacturing and related supporting operations, research and development, future EV and battery investment, and dealership network. The approach permitted simulation of the interactions among the economies of the seven selected states and the rest of the United States. The simulation inputs include, but are not limited to, the proprietary hourly and salaried worker headcounts, and U.S. payroll statistics.

## HMA's Current Economic Contribution to the U.S. Economy

In 2021, HMA directly hired 7,050 hourly and salaried workers in the United States. HMA's U.S. automotive operations generated 21,200 indirect (supplier) jobs and supported an additional 30,000 spin-off (expenditure-induced) jobs in the United States. The total U.S. employment contribution for HMA's U.S. operations was 58,250 or, $0.03 \%$ of total U.S. private non-farm employment. These jobs generated USD 5.2 billion in disposable personal income and USD 2.2 billion in social welfare and income tax contribution (Table 5 and Table 6).

Table 5
HMA's Employment Contribution

| Employment |  |
| :---: | :--- |
| Direct Employment (Hourly and Salaried) | 7,050 |
| Intermediate Employment | 21,200 |
| Spin-Off Employment (Expenditure-Induced) | 30,000 |


| Total Employment (Direct + Intermediate + Spin-Off) | 58,250 |
| :--- | :--- |
| Multiplier: (Total Employment/Direct Employment) | 8.3 |

The ratio of total employment to direct employment produces an overall job multiplier 8.3-meaning there were 7.3 additional jobs in the U.S. economy for every direct job at HMA. The total earning by place of work in the private sector for all 58,250 jobs was USD 7.3 billion, which represents 0.04 percent of the private non-farm sector compensation in the U.S. economy. Based on this compensation, CAR estimates that USD 1.0 billion was paid for personal income taxes, USD 0.8 billion was paid for contributions to the government, and personal current transfer receipts (social welfare payments) were reduced by USD 0.3 billion.

Table 6
HMA's Income Contribution

Income (\$Billion)

Total Earnings by Place of Work, Private Non-Farm \$7.3B

| Less: Contributions for Government Social Insurance and Personal Current Transfer Receipts | \$1.1B |
| :---: | :---: |
| Less: Personal Income Taxes | \$1.0B |
| Equals: Private Disposable Personal Income | \$5.2B |

Contribution as Percent of U.S. Economy

| Employment | $0.03 \%$ |
| :--- | :--- |
| Compensation | $0.04 \%$ |

## HMA's Dealer Network Contribution to the U.S. Economy

HMA's dealer network has more than 830 new vehicle dealerships across all fifty states, and these independent businesses and entrepreneurs directly employ 54,100 workers in their new and used car sales and service operations. In 2022, about 43 percent of motor vehicles HMA sold in the United States were assembled in HMA's U.S. manufacturing plant.

Of these 54,100 workers HMA dealers hire, CAR estimates that about 29,000 employees are new and used car sales personnel and supervisors; 13,500 are mechanics and technicians; and the remaining workers support business operations. HMA's U.S. dealer network is estimated to generate 32,000 indirect (intermediate) jobs. The direct and indirect employees then generate an additional 46,600 jobs in the U.S. economy through their personal consumption expenditure. Combined, a total of 132,700 jobs are supported by HMA's dealer network in the United States. The ratio of total jobs per direct hire (job multiplier) is 2.5. In other words, for every job HMA dealers hire, about 1.5 more jobs were added to the U.S. economy (Table 7).

Table 7<br>HMA's Dealer Network Employment Contribution

| Direct Employment (Hourly and Salaried) | 54,100 |
| :--- | :--- |
| Intermediate Employment | 32,000 |
| Spin-Off Employment (Expenditure-Induced) | 46,600 |
| Total Employment (Direct + Intermediate + Spin-Off) | 132,700 |
| Multiplier: (Total Employment/Direct Employment) | 2.5 |

HMA's independent dealership businesses contribute a total of 132,700 jobs to the U.S. economy and generate a total of USD 12.8 billion in private non-farm earnings, of which USD 1.9 billion is contributed to the government's social welfare funds and the reduction of social welfare expenditure. A total of USD 1.8 billion in income tax revenue can be traced to the economic contribution of HMA's dealer network operations (Table 8).

Table 8
HMA's Dealer Network Income Contribution

Income (\$Billion)

Total Earnings by Place of Work, Private Non-Farm \$12.8B

Less: Contributions for Government Social
Insurance and Personal Current Transfer Receipts

Less: Personal Income Taxes
\$1.8B

| Equals: Private Disposable Personal Income | $\$ 9.1 \mathrm{~B}$ |
| :--- | :--- |
| Contribution as Percent of U.S. Economy |  |
| Employment | $0.07 \%$ |
| Compensation | $0.08 \%$ |

## HMA's Investment and Future Contribution to the U.S.

## Economy

Hyundai has announced nearly USD 19 billion in investment towards electrification since 2010. In 2022, HMG and Hyundai Mobis announced they will invest USD 10.6 billion in new electric vehicle and battery manufacturing facilities in the next three years. In Bryan County, Georgia, Hyundai announced a USD 5 billion investment in Hyundai Motor Group Metaplant America (HMGMA). This facility is expected to hire up to 8,100 workers in vehicle manufacturing and battery manufacturing facilities.

HMG and SK On have selected Bartow County, Georgia, to build a new EV battery cell manufacturing facility by investing up to USD 5 billion. Operations are expected to hire 3,500 workers beginning in 2025.

Hyundai Mobis, HMG's largest automotive parts supplier, is investing USD 926 million in a Bryan County plant to produce electric vehicle power systems. The plant is expected to hire as many as 1,500 workers. Hyundai Mobis also plans to invest USD 205 million in constructing a new EV battery module plant in

Montgomery, Alabama. This battery module plant is expected to hire 400 workers by as early as 2024.

Together, Hyundai's new USD 10.6 billion investment in Georgia and Alabama will directly hire 13,500 workers. CAR estimates that about 8,000 workers would be directly hired to work in battery manufacturing facilities; up to 4,000 workers in electric vehicle manufacturing assembly, and 1,500 workers in electrical equipment manufacturing facilities. They will support nearly 21,100 supplier jobs in the United States; and generate additional 28,200 jobs in other industries. The overall employment contribution by Hyundai's new EV and battery investment will be 62,800 jobs, as shown in Table 9. The Job Multiplier is 4.7, which indicates that for every Hyundai direct hire, there are 3.7 additional jobs created in the U.S. economy. The multiplier is lower than that of HMA's current automotive operations because the investment focuses on EV and battery manufacturing, and battery and electric equipment manufacturing sectors have lower job multipliers than that of the motor vehicle manufacturing sector.

Near 90 percent of Hyundai's new hires $(13,100$ of 13,500$)$ for the EV investment would be in Georgia. These jobs in Georgia would generate 24,800 other jobs in Georgia, and the job multiplier in Georgia is 2.9.

According to Hyundai's announcement, there would be 400 new hires in Alabama. Because inter-state commerce also contributes to job creation in Alabama, Alabama would see a higher job multiplier than Georgia. Overall, Alabama would see a total of 2,900 jobs added to the state economy due to Hyundai's EV investment in Georgia and Alabama.

Table 9
Hyundai's EV Investment Employment Contribution

| Employment |  |  |  |
| :--- | ---: | ---: | ---: |
|  | US Total | GA | AL |
| Direct Employment (Hourly and <br> Salaried) | 13,500 | 13,100 | 400 |
| Intermediate Employment | 21,100 | 11,100 | 900 |
| Spin-Off Employment (Expenditure- <br> Induced) |  | 28,200 | 13,700 |

Hyundai's EV and battery investment will bring the U.S. economy USD 8.3 billion in personal earnings per annum, of which USD 5.8 billion in personal disposable income and USD 2.5 billion in social welfare and tax contribution, as shown in Table 10. Georgia and Alabama would see a USD $\$ 4.6$ billion and USD $\$ 0.3$ billion increase in personal earnings, and \$USD 3.5 billion and \$USD 0.2 billion in personal disposable income, respectively. Georgia would see USD $\$ 1.3$ billion of social welfare and tax revenue increase; and Alabama would have USD $\$ 0.09$ billion increase in the same categories.

Table 10
Hyundai's EV Investment Income Contribution

| Income (\$Billion) |  |  |  |
| :---: | :---: | :---: | :---: |
|  | US Total | GA | AL |
| Total Earnings by Place of Work, Private Non-Farm | \$8.3B | \$4.6B | \$0.3B |
| Less: Contributions for Government Social Insurance and Personal Current Transfer Receipts | \$1.3B | \$0.4B | \$0.04B |
| Less: Personal Income Taxes | \$1.2B | \$0.7B | \$0.05B |
| Equals: Private Disposable Personal Income | \$5.8B | \$3.5B | \$0.2B |
| Contribution as Percent of U.S. Economy |  |  |  |
| Employment | 0.03\% | N/A | N/A |
| Compensation | 0.04\% | N/A | N/A |

## HMA's Economic Contribution to Key Operating States

In 2021, HMA's new capital investment in the United States exceeded USD 3.2 billion. Alabama, California, and Georgia received the majority of HMA capital investment, accounting for more than 97 percent of the total investment of that year. HMA's directly hired 6,500 workers in the United States, and 94 percent of them live in Alabama, California, Georgia, and Texas. HATCI, a wholly-owned subsidiary of HMC, employs about 550 researchers, engineers, and other white-collar staff in the United States. The majority of them work from the states of California and Michigan.

HMA dealer network has 835 independent dealers across all fifty states. The top ten states with the highest number of HMA new vehicle retail stores are California, Texas, Florida, New York, Pennsylvania, Illinois, Ohio, North Carolina, Georgia, and Virginia. These ten state account for more than half of all HMA dealers in the United States. CAR estimated about 55 percent of HMA dealer network employment reside in these ten states.


#### Abstract

Alabama

Alabama is home to HMA's sole motor vehicle assembly plant in the United States, Hyundai Motor Manufacturing Alabama (HMMA). It opened in 2005 and now employs about 3,500 hourly and salaried workers. Since 2005, HMMA has been home to U.S.-made Elantra (Avante), Sonata, and Santa Fe. The production of Santa Cruz and Tucson began in 2021 and gradually replaced the compact and mid-size passenger cars production in HMMA. Besides motor vehicles, HMMA also produces over half a million engines that go to HMMA and KMMG, Kia's sole assembly plant in West Point, Georgia. In 2021, Alabama received USD 2.3 billion in new capital investment to support HMA's continuous operations in Alabama.


In 2023, HMMA begins the production of Genesis GV70 EV to qualify for the IRA 30D Clean Vehicle Credit; the new Federal income tax credit for electric vehicles made in North America.

HMA employs 3,600 in the state of Alabama. In addition, HMA's Alabama dealer network operates 16 stores and directly hires 900 local employees. The total employment contribution from HMA auto operation and dealers in the state of Alabama is 22,200 . The ratio of total employment to direct employment produces an employment multiplier of 4.9-meaning there are 3.9 additional jobs in Alabama for every worker hired by HMA and HMA dealer network in Alabama. The total earning by place of work in the Alabama
private sector increased by USD 3.1 billion, which represents USD 2.4 billion of private disposable income and USD 654 million of government social welfare funds and income tax.

Table 11
HMA's State Economic Contribution - Alabama

HMA's State Economic Contribution - Alabama

| Employment | Auto <br> Operations | Dealer <br> Network | Total |
| :---: | :--- | :--- | :--- |
| Direct Employment (Hourly | 3,600 | 900 | 4,500 |
| and Salaried) |  |  |  |
| Intermediate Employment | 6,950 | 300 | 7,250 |
| Spin-Off Employment | 9,750 | 700 | 10,450 |
| Total Employment (Direct + |  |  |  |
| Intermediate + Spin-Off) | 20,300 | 1,900 | 22,200 |
| Multiplier: (Total |  |  |  |
| Employment/Direct Employment) | 5.6 | 2.1 | 4.9 |
| Income |  | Auto | Dealer |


| Less: Contributions for <br> Government Social Insurance and <br> Personal Current Transfer Receipts <br> (\$Million) | $\$ 241$ | $\$ 31$ | $\$ 272$ |
| :--- | :--- | :--- | :--- |
| Less: Personal Income Taxes <br> (\$Million) | $\$ 363$ | $\$ 19$ | $\$ 382$ |
| Equals: Private Disposable Personal | $\$ 2,301$ | $\$ 101$ | $\$ 2,402$ |
| Income (\$Million) |  |  |  |

## Arizona

HMA does not have an automotive presence in the state of Arizona. However, HMA has 16 independent dealers and directly employs 1,800 employees. HMA's retail business in Arizona contributes a total of 4,400 workers and USD 397 million in total earnings. The employment multiplier is 2.4 -meaning there are 1.4 additional jobs in Arizona for every job at HMA's Arizona dealer network. These jobs add USD 59 million to government social welfare funds and USD 50 million to federal and local income tax.

Table 12
HMA's State Economic Contribution - Arizona

HMA's State Economic Contribution - Arizona

Employment
Auto Dealer

Operations Network
Total

| Direct Employment (Hourly and Salaried) | - | 1,800 | 1,800 |
| :---: | :---: | :---: | :---: |
| Intermediate Employment | 20 | 950 | 970 |
| Spin-Off Employment (Expenditure-Induced) | 30 | 1,600 | 1,630 |
| Total Employment (Direct + Intermediate + Spin-Off) | 50 | 4,350 | 4,400 |
| Multiplier: (Total <br> Employment/Direct Employment) | N/A* | 2.4 | 2.4 |
| Income | Auto Operations | Dealer <br> Network | Total |
| Total Earnings by Place of Work, Private Non-Farm (\$Million) | \$15 | \$382 | \$397 |
| Less: Contributions for Government Social Insurance and Personal Current Transfer Receipts (\$Million) | \$12 | \$47 | \$59 |
| Less: Personal Income Taxes (\$Million) | \$1 | \$49 | \$50 |
| Equals: Private Disposable Personal Income (\$Million) | \$3 | \$286 | \$289 |

*Employment contribution was largely derived from other states.

## California

California is home to HMA's headquarters, Hyundai America Technical Center, Hyundai-Kia Design and Research Center, and HATCI proving ground. These facilities employ 1,850 researchers, engineers, and other non-manufacturing staff. In 2021, California received USD 700 million in new capital investment to support HMA's automotive operations. It was HMA's second-highest state investment, compared to Alabama. In addition, HMA's dealer network in California operates the largest dealer count of any state, 70 new vehicle dealerships, and directly employs 5,700 salespersons, technicians, and business-supporting staff. HMA's total direct employment in California, including dealers, was 7,550. The total employment contribution to the state was 19,200. The job multiplier is 2.5—meaning in California, there are 1.5 additional jobs for every HMA worker. The total earnings by place of work are estimated to be USD 2.4 billion, including USD 371 million of government social welfare contribution and USD 397 million of state and federal income tax.

Table 13
HMA's State Economic Contribution - California

HMA's State Economic Contribution - California

| Employment | Auto <br> Operations | Dealer <br> Network | Total |
| :---: | :--- | :--- | :--- |
| Direct Employment (Hourly <br> and Salaried) | 1,850 | 5,700 | 7,550 |


| Intermediate Employment | 1,950 | 3,100 | 5,050 |
| :---: | :---: | :---: | :---: |
| Spin-Off Employment (Expenditure-Induced) | 2,300 | 4,300 | 6,600 |
| Total Employment (Direct + Intermediate + Spin-Off) | 6,100 | 13,100 | 19,200 |
| Multiplier: (Total <br> Employment/Direct Employment) | 3.3 | 2.3 | 2.5 |
| Income | Auto Operations | Dealer <br> Network | Total |
| Total Earnings by Place of Work, Private Non-Farm (\$Million) | \$864 | \$1,495 | \$2,359 |
| Less: Contributions for Government Social Insurance and Personal Current Transfer Receipts (\$Million) | \$132 | \$239 | \$371 |
| Less: Personal Income Taxes (\$Million) | \$145 | \$252 | \$397 |
| Equals: Private Disposable Personal Income (\$Million) | \$587 | \$1,003 | \$1,590 |

## Florida

Florida received USD 17 million in capital investment from HMA in 2021 to support its automotive operations. HMA has a limited number of employees in the state but has a large footprint in the HMA dealer network. Florida has 51 HMA independent dealerships, which directly employ 4,600 workers. It is HMA's third largest state in terms of dealer network, next to California and Texas. The total employment contribution in the state is 12,400 , and the job multiplier is 2.7 -meaning there are 1.7 additional jobs for every direct job at HMA Florida. HMA's income contribution will add USD 1.1 billion to the total earnings, including USD 195 million in government social welfare funds and USD 135 million in personal income tax.

Table 14
HMA's State Economic Contribution - Florida

| HMA's State Economic Contribution - Florida |  |  |  |
| :--- | :--- | :--- | :--- |
|  | Auto |  |  |
| Omployment | Operations | Dealer <br> Network | Total |
| Direct Employment (Hourly <br> and Salaried) | - | 4,600 | 4,600 |
| Intermediate Employment | 600 | 2,300 | 2,900 |
| Spin-Off Employment | 1,500 | 3,400 | 4,900 |
| (Expenditure-Induced) | 2,100 | 10,300 | 12,400 |
| Total Employment (Direct + <br> Intermediate + Spin-Off) |  |  |  |


| Multiplier: (Total <br> Employment/Direct Employment) | N/A* | 2.2 | 2.7 |
| :---: | :---: | :---: | :---: |
| Income | Auto Operations | Dealer <br> Network | Total |
| Total Earnings by Place of Work, Private Non-Farm (\$Million) | \$203 | \$848 | \$1,051 |
| Less: Contributions for Government Social Insurance and Personal Current Transfer Receipts (\$Million) | \$52 | \$143 | \$195 |
| Less: Personal Income Taxes (\$Million) | \$25 | \$110 | \$135 |
| Equals: Private Disposable Personal Income (\$Million) | \$126 | \$595 | \$721 |

*Employment contribution was largely derived from other states.

## Georgia

Hyundai's automotive operations in Georgia include a powertrain plant, a seating plant, and a part distribution center. HMA does not own these plants. Instead, they are wholly or partially owned by HMC, the parent company of HMA. HMA has 450 direct employees across these locations and invested USD 42 million in 2021. On top of it, HMA dealer network hires 1,900 workers in 27 new vehicle dealers' stores. Together, HMA is responsible for hiring 2,350 workers in Georgia, contributing a total employment of 9,600, a job multiplier
of 4.1-meaning there are 3.1 additional jobs for every one job at HMA. The total earnings by place of work in the private sector are USD 868 million, including USD 121 million in government social welfare funds and USD 115 million in personal income tax.

Table 15
HMA's State Economic Contribution - Georgia

| HMA's State Economic Contribution - Georgia |  |  |  |
| :---: | :---: | :---: | :---: |
| Employment | Auto Operations | Dealer <br> Network | Total |
| Direct Employment (Hourly and Salaried) | 450 | 1,900 | 2,350 |
| Intermediate Employment | 1,600 | 1,050 | 2,650 |
| Spin-Off Employment (Expenditure-Induced) | 2,800 | 1,800 | 4,600 |
| Total Employment (Direct + Intermediate + Spin-Off) | 4,850 | 4,750 | 9,600 |
| Multiplier: (Total <br> Employment/Direct Employment) | 10.8 | 2.5 | 4.1 |
| Income | Auto Operations | Dealer <br> Network | Total |


| Total Earnings by Place of Work, <br> Private Non-Farm (\$Million) | $\$ 453$ | $\$ 415$ | $\$ 868$ |
| :--- | :--- | :--- | :--- |
| Less: Contributions for <br> Government Social Insurance and <br> Personal Current Transfer Receipts <br> (\$Million) | $\$ 56$ | $\$ 65$ | $\$ 121$ |
| Less: Personal Income Taxes | $\$ 62$ | $\$ 53$ | $\$ 115$ |
| (\$Million) | $\$ 335$ | $\$ 294$ | $\$ 629$ |
| Equals: Private Disposable Personal <br> Income (\$Million) | $\$ 0$ |  |  |

## Michigan

Michigan is home to Hyundai's technical and research center HATCI. HATCI mainly operates in two states-Michigan and California. About half of the direct employees locate in Michigan. HATCI-Michigan received USD 11 million in capital investment in 2021. In addition, HMA's independent dealers operate 17 new vehicle dealerships across the state and employ around 950 workers. The total direct employment associated with HMA in Michigan is 1,250 . The economic contribution is 3,990 jobs-a job multiplier of 3.1-meaning there are 2.1 additional Michigan jobs for every job at HMA. The total earnings by place of work in the private sector are USD 385 million, including USD 80 million in government social welfare funds and USD 52 million in personal income tax.

Table 16
HMA's State Economic Contribution - Michigan

| HMA's State Economic Contribution - Michigan |  |  |  |
| :---: | :---: | :---: | :---: |
| Employment | Auto <br> Operations | Dealer <br> Network | Total |
| Direct Employment (Hourly and Salaried) | 300 | 950 | 1,250 |
| Intermediate Employment | 500 | 600 | 1,100 |
| Spin-Off Employment (Expenditure-Induced) | 600 | 950 | 1,550 |
| Total Employment (Direct + Intermediate + Spin-Off) | 1,400 | 2,500 | 3,900 |
| Multiplier: (Total <br> Employment/Direct Employment) | 4.7 | 2.6 | 3.1 |
| Income | Auto <br> Operations | Dealer <br> Network | Total |
| Total Earnings by Place of Work, Private Non-Farm (\$Million) | \$154 | \$231 | \$385 |
| Less: Contributions for Government Social Insurance and | \$29 | \$51 | \$80 |


| Personal Current Transfer Receipts <br> (\$Million) |  |  |  |
| :--- | :--- | :--- | :--- |
| Less: Personal Income Taxes <br> (\$Million) | $\$ 21$ | $\$ 31$ | $\$ 52$ |
| Equals: Private Disposable Personal <br> Income (\$Million) | $\$ 103$ | $\$ 148$ | $\$ 251$ |

## New York

HMA dealer network operates 44 new vehicle dealerships and employs 2,500 workers in the state of New York. There is no HMA automotive facility in New York. However, New York state is HMA's fourth-largest state by dealer count. Total employment is estimated to be 2,500, and the economic contribution to jobs is 7,300—a job multiplier of 2.9—meaning there are 1.9 additional jobs for every HMA job in New York. The total earnings by place of work in the private sector are USD 930 million, including USD 186 million in government social welfare funds and USD 171 million in personal income tax.

Table 17
HMA's State Economic Contribution - New York

HMA's State Economic Contribution - New York

| Employment | Auto <br> Operations | Dealer <br> Network | Total |
| :---: | :--- | :--- | :--- |
| Direct Employment (Hourly | - | 2,500 | 2,500 |
| and Salaried) |  |  |  |


| Intermediate Employment | 300 | 1,300 | 1,600 |
| :---: | :---: | :---: | :---: |
| Spin-Off Employment (Expenditure-Induced) | 800 | 2,400 | 3,200 |
| Total Employment (Direct + Intermediate + Spin-Off) | 1,100 | 6,200 | 7,300 |
| Multiplier: (Total <br> Employment/Direct Employment) | N/A* | 2.5 | 2.9 |
| Income | Auto Operations | Dealer <br> Network | Total |
| Total Earnings by Place of Work, Private Non-Farm (\$Million) | \$180 | \$750 | \$930 |
| Less: Contributions for Government Social Insurance and Personal Current Transfer Receipts (\$Million) | \$52 | \$134 | \$186 |
| Less: Personal Income Taxes (\$Million) | \$31 | \$140 | \$171 |
| Equals: Private Disposable Personal Income (\$Million) | \$97 | \$476 | \$573 |

[^0]
## Rest of the U.S.

Many other automotive operations in the rest of the U.S. are associated with Hyundai, but they are not part of HMA. Instead, most of those operations are HMC's subsidiaries. For example, Hyundai Translead and Hyundai Transys, having significant automotive footprints in the United States and being essential elements in the Hyundai family's United States operations, are excluded from this study. In spite of the fact that there are omissions, HMA still directly employs about 900 in the rest of the U.S. Most of them are nonmanufacturing, business-supporting staff and researchers. HMA dealer network operates 591 new vehicle dealerships in the rest of the U.S. and employs 35,800 workers. Total employment is estimated to be 36,700, and the economic contribution to jobs is 112,200—a job multiplier of 3.1—meaning there are 2.1 additional jobs for every HMA job in the rest of the U.S. The total earnings by place of work in the private sector are USD 11.0 billion, including USD 1.7 billion in government social welfare funds and USD 1.5 billion in personal income tax.

Table 18
HMA's State Economic Contribution - Rest of U.S.

HMA's State Economic Contribution - Rest of U.S.

| Employment | Auto <br> Operations | Dealer <br> Network | Total |
| :---: | :--- | :--- | :--- |
| Direct Employment (Hourly <br> and Salaried) | 900 | 35,800 | 36,700 |
| Intermediate Employment | 9,300 | 22,500 | 31,800 |


| Spin-Off Employment (Expenditure-Induced) | 12,300 | 31,400 | 43,700 |
| :---: | :---: | :---: | :---: |
| Total Employment (Direct + Intermediate + Spin-Off) | 22,500 | 89,700 | 112,200 |
| Multiplier: (Total <br> Employment/Direct Employment) | N/A* | 2.5 | 3.1 |
| Income | Auto Operations | Dealer <br> Network | Total |
| Total Earnings by Place of Work, Private Non-Farm (\$Million) | \$2,508 | \$8,516 | \$11,024 |
| Less: Contributions for Government Social Insurance and Personal Current Transfer Receipts (\$Million) | \$497 | \$1,182 | \$1,679 |
| Less: Personal Income Taxes (\$Million) | \$326 | \$1,171 | \$1,497 |
| Equals: Private Disposable Personal Income (\$Million) | \$1,685 | \$6,163 | \$7,848 |

[^1]
## Summary and Conclusion

Hyundai Motor America has been in the U.S. market for 37 years. The sales volume grew from 168,000 units in 1986 to near 800,000 units in 2016. HMA's Alabama plant has been producing U.S.-made vehicles since 2005. The annual production volume increased from 91,000 units in 2005 to shy of 400,000 units in 2013 and 2014. HMA's U.S.-based assembly plant produced about 45 percent of HMA's vehicles sold in the U.S. market. HMA is considered a mid-size automaker by sales volume in the United States. Globally, Hyundai Motor Group ranks third, with more than 6.8 million units sold in 2022. Hyundai Motor Company contributed nearly 4.0 million units of vehicles sold worldwide.

HMA and HATCI hired 7,050 workers in Alabama, California, Texas, Georgia, Michigan, and other states in the U.S. About 15 percent are engineers and researchers. Manufacturing employees account for half of total employment in the U.S. In addition, HMA's dealer network employed a total of 54,100 workers across all fifty states. More than half of these employees are sales personnel and supervisors; about one-quarter of employees are mechanics and technicians; and the rest are business-supporting staff. Combined, HMA U.S. operations and its dealer network employed a total of 61,150 workers in the United States.

CAR estimates HMA and HMA's independent dealers in 2021 contributed a total of 190,950 jobs in the U.S. economy. Of these, 58,250 are supported by HMA's U.S. automotive operations, and 132,700 are associated with HMA's 835 dealers in fifty states. HMA and its dealerships added USD 20.1 billion in private earnings to the U.S. economy, including USD 3.0 billion in social
welfare contribution and USD 2.8 billion in federal and state income tax revenue.

HMA's employment multiplier is 8.3-implying 7.3 additional jobs for every employee in HMA's U.S. automotive operations. HMA's independent dealers have an employment multiplier of 2.5 , indicating 1.5 other jobs created for every HMA dealership worker.

From 2010 to 2022, Hyundai Motor Group (HMG) and its subsidiaries had already invested USD 8.3 billion towards electrification in the United States. By 2025, HMG, Hyundai Mobis, and SK On will invest an additional USD 10.6 billion into new electric vehicle facilities in Georgia and Alabama, which is expected to hire 13,500 jobs in those states. These jobs will generate an additional 49,300 jobs in the U.S. economy, a 4.7 employment multiplier, and create or retain a total of 62,800 jobs in the United States by 2025. These jobs will generate USD 8.3 billion in private earnings, including USD 1.3 billion in government social welfare funds and USD 1.2 billion in federal and state personal income tax.

## Appendix A: A History of Hyundai in the United States

## Hyundai Motor America

Hyundai's presence in the United States began in 1986 when Hyundai Motor America (HMA) established its headquarters in Fountain Valley, California. In February 1986, Hyundai launched its subcompact Excel model in the U.S. market, and in just seven months, Hyundai sold 100,000 Excels. Total sales in 1986 for Excel reached 168,882, setting an industry record for a first-year import vehicle distributor. In 1987, Hyundai expanded its operations into the central United States, opening a regional office near Chicago. The following year, HMA opened a USD 21 million 300,000-square-foot parts distribution center in Ontario, California, to deliver parts to Hyundai's dealerships. In 1989, HMA opened a USD 16.6 million 342,000-square-foot office complex and parts distribution center in Aurora, Illinois. Hyundai established an additional parts distribution center in Lawrenceville, Georgia, and a Warranty Technical Center in Fountain Valley. In 1990, Hyundai opened its Hyundai Design Center in Fountain Valley. In 2003, it moved into a new USD 30 million facility in Irvine, California, and was renamed the Hyundai-Kia Motors Design and Research Center. Along with the design studio, the Design and Technical Center also contained Hyundai America Technical Center, Inc. (HATCI), which was originally established in 1986 in Ann Arbor, Michigan.

In 2002, Hyundai broke ground in Montgomery, Alabama for its first U.S. motor vehicle assembly plant, Hyundai Motor Manufacturing Alabama (HMMA), a USD 1.4 billion investment that opened in 2005 and now employs about 3,500 workers. In 2004, Hyundai America Technical Center completed the construction of its Hyundai/Kia proving ground in California City,

California. In 2009, Hyundai opened its USD 300 million engine plant at HMMA, which was expanded in 2011 to begin production of the 1.8-liter Nu engine.

In 2022, Hyundai announced it would build two new Georgia facilities dedicated to electric vehicle (EV) and battery manufacturing. Hyundai plans to invest USD 5.5 billion in a facility in Savannah, Georgia to produce EVs and EV batteries. Production is expected to start in 2025 with a future capacity to build 300,000 EVs annually and create 8,100 jobs. The other new EV battery manufacturing facility will be located in Atlanta, Georgia, in a Joint-Venture partnership with SK On. The USD 5 billion facilities will begin production in 2025 and are expected to create 3,500 jobs for the communities.

## Genesis Motor

Hyundai conceived the concept of Genesis in 2003 and introduced its first model in 2007. Genesis' first global debut was under the Hyundai brand at the 2008 North American International Auto Show. In late 2016, Genesis launched in the U.S. as a stand-alone brand with two models: the G80 and G90. In September of 2016 a third model, the Genesis G70, was unveiled in South Korea and later introduced to the U.S. market during the 2018 New York Auto Show. Genesis vehicles are sold through a subset of existing Hyundai dealers, with designated space for Genesis within the dealerships' showrooms. In 2022, Genesis opened its first U.S. stand-alone dealer in Lafayette, Louisiana ${ }^{13}$. J.D. Power named Genesis the most dependable automotive brand in 2020 and the following year, the most technologically innovative in North Americalı.

## A Brief History of Hyundai in the United States

Hyundai opened a regional office near Chicago in 1987 to begin a lengthy history of investment in the United States. The following year, HMA opened a USD 21 million 300,000-square-foot parts distribution center in Ontario, California, to deliver parts to Hyundai's dealerships. In 1989, HMA opened a USD 16.6 million 342,000-square-foot office complex and parts distribution center in Aurora, Illinois. Hyundai established an additional parts distribution center in Lawrenceville, Georgia, and a Warranty Technical Center in Fountain Valley. In 1990, Hyundai opened its Hyundai Design Center in Fountain Valley. In 2003, it moved into a new USD 30 million facility in Irvine, California, and was renamed the Hyundai-Kia Motors Design and Research Center. Along with the design studio, the Design and Technical Center also contained Hyundai America Technical Center, Inc. (HATCI), which was originally established in 1986 in Ann Arbor, Michigan.

In 2002, Hyundai broke ground in Montgomery, Alabama for its first U.S. motor vehicle assembly plant, Hyundai Motor Manufacturing Alabama (HMMA), a USD 1.4 billion investment that opened in 2005 and now employs about 3,500 workers. In 2004, Hyundai America Technical Center completed the construction of its Hyundai/Kia proving ground in California City, California. In 2009, Hyundai opened its USD 300 million engine plant at HMMA, which was expanded in 2011 to begin production of the 1.8-liter Nu engine.

## Appendix B: HMA U.S. Sales

## Hyundai U.S. Sales

Hyundai began selling vehicles in North America in 1986, with the launch of its Excel model. In its first year of operation in the U.S., Hyundai sold 168,882 units of the Excel. Hyundai has experienced substantial growth in the U.S. market since 1986. By the end of 2022, the total unit sales of Hyundai vehicles were 724,265 which is $5.3 \%$ of the total U.S. light vehicle sales. Figure 10 shows the growth of Hyundai's market vehicle sales from 2009 through 2022.

Figure 10
Hyundai Vehicle Sales in the United States, 2009-2022


Source: Ward's Auto Data; CAR Research

In 2016, HMA sales volume reached 774,900, the highest level HMA ever achieved in the U.S. market. From 2017 to 2019, the number of sales remained steady at 700 thousand. Hyundai-Kia was the fifth best-selling automaker group in the United States in 2022 with 10.7 percent of the market share,
surpassing all European brands combined, and only behind Detroit-Three (Ford, General Motors, and Stellantis) and Japanese brands as shown in Figure 11.

Figure 11
Vehicle Market Share by Brand Origins in the United States, 2000 - March 2023


Source: Ward's Auto Data; CAR Research

## Genesis U.S. Sales

In late 2016, Genesis became a standalone brand and in that same year sold 6,948 units or 0.04 percent of market share in the United States. In 2022, Genesis sales grew eight-fold to 56,410 units and accounted for 0.41 percent of the U.S. market share ${ }^{15}$. Among motor vehicle luxury brands in North America, Genesis ranks ninth place in $2022^{16}$.

Figure 12
Genesis Vehicle Sales in the United States, 2016-2022


Source: Ward's Auto Data; CAR Research

## References

${ }^{1}$ Light Vehicle Sales Import, IHS Markit and CAR analysis
${ }^{2}$ https://www.wxyz.com/news/hyundai-investing-50m-in-new-safety-test-lab-at-site-near-ann-arbor
${ }^{3}$ Marklines 2022 Global Sales of Major Automakers and Groups
${ }^{4}$ CAR's Book of Deals, Center for Automotive Research
${ }^{5}$ Hyundai Motor Group Metaplant America (HMGMA). AJC. 27MAY2022. Documents reveal new details about future Hyundai EV plant in Georgia.
https://www.ajc.com/news/documents-reveal-new-details-about-future-hyundai-ev-plant-ingeorgia/VCW66BDOHBFSXMI3Q2JCBCESYA/
${ }^{6}$ Hyundai Motor Group (HMG) and SK On. Georgia USA. 8DEC2022. Hyundai Motor Group and SK On To Build EV Battery Facility in Bartow County. https://www.georgia.org/press-release/hyundai-motor-group-and-sk-build-ev-battery-facility-bartow-county
${ }^{7}$ Hyundai Mobis (\$926 million). Georgia USA. 23NOV2022. Second Global Automotive Supplier for Hyundai Metaplant To Create 1,500 Jobs. https://www.georgia.org/press-release/second-global-automotive-supplier-hyundai-metaplant-create-1500-jobs
${ }^{8}$ Hyundai Mobis (\$205 million). Area Development. 28OCT2022. South Korea-Based Hyundai Mobis Plans Montgomery, Alabama, EV Battery Plant. https://www.areadevelopment.com/newsltems/10-28-2022/hyundai-mobis-montgomeryalabama.shtml
${ }^{9}$ Marklines Supplier Database
${ }^{10}$ Marklines 2022 Global Sales of Major Automakers and Groups
${ }^{11}$ The following HMA subsidiaries are not included in this study: Hyundai Capital America (HCA), Stamped Metal American Research Technology, Inc. (SMARTI), and SMART Alabama, LLC (SMART), owned by SMARTI.
${ }^{12}$ Dziczek, K., Schultz, M., and Chen, Y. (2019). Contribution of General Motors to the Economies of Nine States and the United States in 2019. Center for Automotive Research, Ann Arbor, Ml; Contribution of Toyota Motor North America to the Economies of Nineteen State and the United States in 2016. Kristin Dziczek, Yen Chen, Bernard Swiecki, Michael Schultz, Deb Maranger Menk, and Juliana Peterson, Center for Automotive Research, Ann

Arbor, MI Septemer 2016; Contribution of General Motors' Manufacturing Plants to the Economies of Ten States and the United States in 2013 and 2014. Kristin Dziczek, Debbie Maranger Menk and Yen Chen, Center for Automotive Research, Ann Arbor, MI, April 2015; Economic Contribution of the Ford Motor Company Michigan Assembly Plant to the Michigan Economy. Kim Hill, Bernard Swiecki, Debbie Maranger Menk, Joshua Cregger, Michael Schultz, Center for Automotive Research, Ann Arbor, MI, March 2013. Economic Impact of Hyundai in the United States. Kim Hill, Debbie Maranger Menk and Joshua Cregger, Center for Automotive Research, Ann Arbor, MI, November 2011.; Contribution of Toyota Motor North America to the Economies of Sixteen States and the United States in 2010. Kim Hill and Debbie Maranger Menk, Center for Automotive Research, Ann Arbor, MI, March 2011.;CAR Research Memorandum: The Impact on the U.S. Economy of the Successful Automaker Bankruptcies. Sean McAlinden, Kristin Dziczek, Debbie Maranger Menk, and Joshua Cregger, Center for Automotive Research, November 2010.; Contribution of the Automotive Industry to the Economies of All Fifty States and the United States. Kim Hill, Adam Cooper and Debbie Maranger Menk. Center for Automotive Research. Prepared for The Alliance of Automobile Manufacturers, The Association of International Automobile Manufacturers, The Motor Equipment Manufacturers Association, The National Automobile Dealers Association and The American International Automobile Dealers Association. April 2010.; CAR Research Memorandum: The Economic and Fiscal Contributions of the "Cash for Clunkers" Program - National and State Effects. Sean P. McAlinden, Yen Chen and Adam Cooper, Center for Automotive Research, Ann Arbor, MI, January 2010.; The Economic and Environmental Impacts of a Corporate Fleet Vehicle Purchase Program. Kim Hill and Debbie Maranger Menk, Center for Automotive Research. Prepared for AT\&T, October 2009.; CAR Research Memorandum: The Impact on the U.S. Economy of Successful versus Unsuccessful Automakers Bankruptcies. Sean P. McAlinden, Adam Cooper and Debbie Maranger Menk, Center for Automotive Research, Ann Arbor, MI, May 2009.; Contribution of Honda to the Economies of Seven States and the United States. Sean P. McAlinden, Kim Hill, David Cole and Debbie Maranger Menk, Center for Automotive Research. Prepared for American Honda Motor Co., Inc., January 2009; CAR Research Memorandum: The Impact on the U.S. Economy of a Major Contraction of the Detroit Three Automakers. Sean P. McAlinden, Kristin Dziczek and Debbie Maranger Menk, Center for Automotive Research, Ann Arbor, MI, November 2008.; Contribution of a Vehicle Infrastructure System to the Economy of Michigan: Economic and Industrial Impacts Update and Benefit-Cost Analysis -- Kim Hill and Debbie Maranger Menk, Center for Automotive Research. Prepared for Michigan Department of Transportation, June 2008; Contribution of Toyota Motor North America to the Economies of Sixteen States and the United States, 2006. Kim Hill and Debbie Maranger Menk, Center for Automotive Research. Prepared for Toyota Motor North America, October 2007.; Evaluation of Economic Impacts of the State of Michigan's Vehicle Infrastructure Integration Program -Kim Hill, Center for Automotive Research. Prepared for Michigan Department of Transportation, September 2007.; Contribution of the Motor Vehicle Supplier Sector to the Economies of the United States and Its 50 States - Kim Hill and Debbie Maranger Menk, Center for Automotive Research. Prepared for the Motor and Equipment Manufacturers Association, January 2007; Contribution of Toyota to the Economics of Fourteen States and the United States in 2003. Kim Hill, Center for Automotive Research, June 2005.;The Contribution of the International Auto Sector to the U.S. Economy: An Update. Sean P. McAlinden and Bernard Swiecki, Center for Automotive Research, March 2005. Prepared for the Association of International Automobile Manufacturers, Inc..; Contribution of the U.S. Motor Vehicle Industry to the Economies of the United States, California, New York, and New Jersey in 2003 - Institute of Labor and Industrial Relations, University of Michigan and the

Center for Automotive Research. Prepared for the Alliance of Automobile Manufacturers, Inc., May 2004; Economic Contribution of the Automotive Industry to the U.S. Economy - An Update - Sean P. McAlinden et al., Center for Automotive Research. Prepared for the Alliance of Automobile Manufacturers, Fall 2003; Contribution of the Automotive Industry to the U.S. Economy in 1998: The Nation and Its Fifty States - Sean McAlinden, Center for Automotive Research. George A. Fulton, Donald R. Grimes and Lucie G. Schmidt, Institute of Labor and Industrial Relations, University of Michigan. Barbara C. Richardson, Transportation Research Institute, University of Michigan. Prepared for the Alliance of Automobile Manufacturers, Inc. and the Association of International Automobile Manufacturers, Inc., Winter 2001; The Contribution of the International Auto Sector to the U.S. Economy. David E. Cole, Sean P. McAlinden and Brett C. Smith, Center for Automotive Research. George A. Fulton, Donald R. Grimes and Lucie G. Schmidt, Institute of Labor and Industrial Relations, University of Michigan. Prepared for the Association of International Automobile Manufacturers, Inc., Ann Arbor, March 1998; Note: The research staff of the Center for Automotive Research performed a number of these studies while located at the University of Michigan's Office for the Study of Automotive Transportation
${ }^{13}$ Automotive News, April 4, 2022. https://www.autonews.com/dealers/genesis-dealers-now-opening-standalone-stores-six-years-after-us-sales-began
${ }^{14}$ Gastelu, Gary (12 February 2020). "J.D. Power names Genesis most dependable automotive brand". FoxNews.com. Fox News. Archived from the original on 2 March 2021.
${ }^{15}$ Wards Auto U.S. Monthly Sales, December 2022.
${ }^{16}$ Ibid.


[^0]:    *Employment contribution was largely derived from other states.

[^1]:    *Employment contribution was largely derived from other states.

