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With a history stretching back more than 115 years, General Motors (GM) has deep-seated roots in Detroit, Michigan, with operations and a supply chain integrated into the United States and global economies. GM was the largest automotive manufacturer in the US in 2022, and the US remains among the firm’s top target markets going forwards.

This report explores the jobs, GDP, and payments to government that GM supported in 2022 in the US, looking at the company’s own operations, its spending with suppliers, its investment programs, and its payment of wages to employees.

GM makes up an integral part of the national and local economies across the country. Our key findings of GM’s economic impact in Fiscal Year 2022 include:

The total impact of GM’s activities amounts to $116.5 billion worth of GDP and 709,100 jobs across the US. GM’s total GDP footprint is larger than that of 13 US states and its total employment footprint is larger than the entire labor force of 10 US states.

- GM directly created $39.2 billion worth of GDP for the American economy in 2022, nearly one quarter of all the GDP generated by US car manufacturers.\(^1\)
- For every $1 billion of value directly created by GM, an additional $1.97 billion of GDP was supported in industries and locales spread throughout the entire US economy, a GDP multiplier of 2.97.
- GM employed over 97,000 hourly and salaried workers, accounting for nearly 10% of the US’s automotive manufacturing labor force.\(^2\)
- GM offers average total compensation approximately 39% higher than the average for transportation manufacturing workers,\(^3\) and 69% higher than the compensation of the average American worker.
- For every individual GM directly employs, 6.3 additional jobs are supported across the United States—a jobs multiplier of 7.3.
- Among all jobs supported throughout GM’s footprint, a total of $60.2 billion of labor income was paid to households across the country.

\(^1\) Motor Vehicles, Bodies and Trailers, and Parts Manufacturing industry, NAICS 3361-3363
\(^2\) Ibid.
\(^3\) Transportation Equipment Manufacturing, NAICS 336
• GM financed more than 1.6 million hours of training for its employees in 2022, at a total value to the firm of $140 million.

• GM’s impact on tax revenues for federal, state, and local governments in the United States comes to approximately $21.5 billion, enough to pay the salaries of nearly one in 10 teachers currently employed in school districts across the US.

The total GDP footprint of GM is made up of three channels of impact. The direct impact reflects the work undertaken by GM’s own workforce, and the profits generated as a result. This was $39.2 billion in 2022, supporting 97,000 direct jobs in the firm.

The indirect GDP impact of $44.1 billion relates to the economic activity supported throughout GM’s US-based supply chain, as a result of its purchases of inputs of all kinds. This was associated with 324,000 jobs and an estimated $27.7 billion in labor income in 2022.

Finally, the induced GDP impact of $33.2 billion reflects the activity supported across the wider US consumer-facing economy, as a result of GM and its suppliers paying wages to their staff, who then spend the proceeds in retail, leisure, and other outlets. This supported a further 288,100 jobs and an estimated $18.8 billion in labor income in 2022.

This report also provides a state level analysis for nine states where GM has major operations: Michigan, Texas, Indiana, Missouri, Tennessee, Ohio, New York, Kentucky, and Kansas. GM supports a significant number of jobs in Michigan, due to a large direct workforce and its vast supply chain and capital spending in the state. In this state, the tax impact of GM’s activities could fund the entirety of the State of Michigan’s planned FY2023 budget for their road and bridges program with nearly $3 billion left over. The company also supports significant employment in Ohio and Texas, mainly as a result of the supply chain and capital spending undertaken in those states, as well as a strong presence in all other states included in our analysis.
GM is the largest auto manufacturer in the US and has a major impact on the economy through the generation of jobs, economic activity, and tax revenues in communities across the country.

GM's activities supported 709,100 jobs in the US, including 237,100 manufacturing jobs.

- **97,000** jobs created
- **709,100** total jobs supported

GM invested $5.6 billion into capital improvements, manufacturing production capacity, and cutting-edge R&D in the US.

- **$5.6 billion** invested

GM's activities supported a $116.5 billion GDP impact.

- **$39.2 bn** direct
- **$44.1 bn** indirect
- **$33.2 bn** induced

GM's $21.5 billion tax footprint supported through all channels of GM's activities in 2022 for US federal, state, and local governments.

- **$21.5 billion** tax footprint

That's enough money in public funds to pay the salaries of nearly one in 10 public-school teachers in the US.

Source: Oxford Economics, GM
1. INTRODUCTION

1.1 GENERAL MOTORS OVERVIEW

Headquartered in Detroit, Michigan, General Motors has leadership positions in the world’s largest and fastest growing automotive markets, producing vehicles in 30 countries. GM’s primary business in automobile manufacturing includes designing, building, and marketing automobiles and automobile parts globally, as well as cutting edge research into electric and net zero technologies of the future. Oxford Economics was commissioned by GM to conduct this analysis of its US-based operations, and the impacts felt therein across the economy.4 GM’s US facilities include assembly plants; stamping, propulsion, component, and battery plants; parts distribution centers; engineering campuses; as well as corporate offices and their employees. Having invested more than $36.8 billion into its US facilities since 2013, GM’s commitment to American automotive manufacturing jobs is clear.5

1.2 PRESENT DAY AUTOMOTIVE MARKET

The automotive industry in recent years has faced numerous headwinds, including supply chain disruptions, high inflation, and more recently, rising costs of capital. Adapting to constantly shifting economic conditions and recognizing industry trends have been critical to GM’s success. For example, the global industry-wide shift towards electric vehicles (EV) is reflected in GM’s broader strategy as the company makes historic investments in EV manufacturing and supply chains in the US. With nearly 2.3 million vehicles produced and sold by GM in the US in 2022, GM regained the top slot as the US’s largest automotive manufacturer.6

1.3 GM’S GLOBAL AND LOCAL PRODUCTION

GM’s operations span nearly every community in the United States. With 120 facilities across 27 states, including 12 vehicle assembly plants and four IT innovation centers, GM’s contributions to the US economy are extensive.7 GM’s comprehensive impact on the national economy is much broader than its direct operations, however. The wider impact is manifested through its operational, capital expenditures, including payments to its US suppliers, as well as the company’s payroll spending. Oxford Economics utilized an input-output modeling approach to enumerate and quantify the knock-on and multiplier effects associated with this spending.

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4 GM also operates under segments GM Financial and Cruise, which are not included as part of the automotive operations business that is the focus of this economic impact study.
5 USA operations: General Motors. https://www.gm.com/company/usa-operations
7 USA operations: Our company: General Motors. https://www.gm.com/company/usa-operations
INTRODUCTION TO ECONOMIC IMPACT ANALYSIS

In this economic impact assessment, we calculate the flow of GM’s economic activity across the following three channels:

- **Direct impacts** measure the economic footprint of GM’s operations and activities either at the national or state level.
- **Indirect impacts** are a calculation of the economic activity occurring within GM’s supply chain as a result of the company’s procurement of goods and services from its suppliers.
- **Induced impacts** are a measure of the economic activity driven by the consumer spending sourced from the wages paid to GM’s employees, as well as the wages paid to employees supported throughout its supply chain.

We quantify these channels using several metrics of economic activity, including:

- **GDP**: This measure of economic activity quantifies the total gross value-added contribution to the economy.
- **Employment**: This is the headcount number of jobs supported.
- **Labor compensation**: The wages and benefits paid to workers.
- **Taxes**: Gross tax receipts paid to local, state, and federal governments.

Fig. 1: The channels of economic impact
2. GM’S NATIONAL IMPACT

2.1 GM’S IMPACT ON THE US ECONOMY

With over 5.9 million automobiles produced and sold by GM in 2022 worldwide, GM directly created over $39.2 billion worth of GDP for the American economy in 2022.8 To put that number in context, GM is individually responsible for nearly one quarter of all the GDP generated by US car manufacturers.9

In addition to the direct impacts, GM’s expenditure with its US-based supply chain also generates an enormous amount of economic activity across all sectors and regions of the economy. In 2022, the sum of these supply chain impacts totaled to approximately $44.1 billion. Extended further through the wage-induced spending channels of GM and its suppliers’ employees, the total impact of GM’s activities totals to $116.5 billion. GM’s total footprint is larger than the economies of 13 US states,10 and approximately $10 billion larger than the value of America’s entire crop production in 2021.11

GM’s investment in its electric and internal combustion vehicle manufacturing capacity and supply chain will continue to bring broad economic benefits to the US auto sector in years to come. In 2022 alone, GM invested almost $5.6 billion in capital improvements nationwide; we estimate that this spending supported 39,240 jobs and nearly $4.9 billion in GDP that year.12 The long-term benefits of GM’s continued investments in the US will continue to support American manufacturing jobs through the EV revolution in the auto sector.

GM’s activities—given how entrenched its supply chain is within the broader US economy—exhibit a very strong multiplier effect. In 2022, for $1 billion of value directly created by GM, an additional $1.97 billion of GDP was supported in industries and locales spread throughout the entire US economy, a GDP multiplier of 2.97.

$39.2 billion
GM directly created nearly one quarter of the GDP generated by US auto manufacturers.

$5.6 billion
Invested in 2022 into GM’s US manufacturing operations and R&D including cutting edge EV technology and production.

2.97 ×
GDP multiplier of GM’s US operations in 2022.

Fig. 2: GM’s GDP Impacts in the US

Source: Oxford Economics, GM

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8 General Motors, 10-k Form, page 6
9 Motor Vehicles, Bodies and Trailers, and Parts Manufacturing industry, NAICS 3361-3363
11 IMPLAN. Crop Production, NAICS 111
12 Economic impacts from GM’s capital investment are included within the indirect channel discussed throughout the report.
2.2 GM’S IMPACT ON JOBS AND WAGES

Beginning with GM’s direct contributions—that is the individuals employed and wages paid to individuals working for GM itself—Oxford Economics analyzed GM’s financial and human resource data to quantify its impact.

In the 2022 financial year, GM employed over 97,000 hourly and salaried workers, accounting for nearly 10% of the US’s automotive manufacturing labor force. Our analysis, which includes all hourly and salaried workers, indicates GM’s average total compensation is approximately 39% higher than the average for transportation manufacturing workers, and 69% higher the compensation of the average US worker.

When considering the broader impacts of GM’s manufacturing activities, Oxford Economics estimates that GM spent approximately $47.4 billion within its domestic supply chain and invested an additional $5.6 billion in capital expenditure. This expenditure—along with the wage-based spending through GM’s induced impact channel—supported a further 612,100 jobs throughout the economy via the indirect and induced channels.

Adding all the channels together, we estimate GM supported 709,100 jobs across the US in 2022, a larger footprint than the entire workforce of 10 US states.

Fig. 3: Comparison of average total compensation by industry and firm; includes both hourly and salaried workers

<table>
<thead>
<tr>
<th>Industry/Group</th>
<th>Average Total Compensation ($ per worker)</th>
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<tbody>
<tr>
<td>Computer electronics manuf.</td>
<td>$176k</td>
</tr>
<tr>
<td>All GM employees</td>
<td>$140k</td>
</tr>
<tr>
<td>Transportation equipment manuf.</td>
<td>$101k</td>
</tr>
<tr>
<td>All manuf.</td>
<td>$95k</td>
</tr>
<tr>
<td>All workers</td>
<td>$83k</td>
</tr>
<tr>
<td>All retail</td>
<td>$47k</td>
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Source: Oxford Economics, IMPLAN, GM

https://www.bls.gov/iag/tgs/iagauto.htm
14 NAICS code 336
15 Oxford Economics Databank. The 10 states with labor forces smaller than GM’s total footprint are: Hawaii, Maine, Rhode Island, Montana, Delaware, South Dakota, North Dakota, Alaska, Vermont, and Wyoming
GM’s spending creates jobs in across the US economy. For every individual GM directly employs, 6.3 additional jobs are supported in other industries within the United States—a jobs multiplier of 7.3. This includes an estimated 155,320 US-based auto manufacturing jobs, 53,280 healthcare and social assistance jobs, and jobs for 32,990 restaurant workers.

Taking the combined activity of GM, as well as the activity it supports through its supply chain, capital investments, and through the induced spending channels, Oxford Economics estimates that GM’s impact on tax revenues for federal, state, and local governments in the United States comes out to approximately $21.5 billion.

To put this figure into context, $21.5 billion could fund approximately 93% of NASA’s 2022 spending, or pay for over 323,000 teachers at the national average salary — nearly one in 10 teachers currently employed in school districts across the US.

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INVESTING IN THE SKILLS OF GM’S LABOR FORCE

GM is committed to re-skilling its workers and recognizes that its employees are crucial to its future. As part of these efforts, GM financed more than 1.6 million hours of training for its employees in 2022, or more than two days of labor per employee on average. Examples of training courses offered range from plant courses, engineering processes, health and safety, to ethics and compliance.

According to the 2022 Training Industry Report, in the US, the average organization invested $1,207 to develop and implement a 62.4 hours of training per year per employee, with an implied hourly cost of training of $19.3. In addition to covering the cost of the training itself, companies also have to sustain the opportunity cost of devoting a productive hour of work to training. For GM, we estimate this cost was $67.3 per hour on average in 2022.

In total, therefore, we estimate that the true cost of the 1.6 million hours for training offered to GM’s employees was $140 million in 2022, $109 million of which were paid in payroll costs and $31 million of which were direct training costs.  

Heather Finfrock, Electrician at GM Toledo Propulsion System

1.6 million hours of training provided by GM to its employees in 2022, at a total value of $140 million.
The Economic Impact of General Motors in the US
3. GM’S STATE-LEVEL IMPACT

In this section, we consider GM’s contributions to nine specific states in 2022—Michigan, Texas, Indiana, Missouri, Tennessee, Ohio, New York, Kansas, and Kentucky. These states cover the majority of the company’s facilities and operations. For each of these states, we have undertaken an analysis similar to that of the overall national results, but also including inter-state trade.

3.1 MICHIGAN

Home to GM’s headquarters and birthplace, Michigan has the largest concentration of GM manufacturing and operations globally.

Oxford Economics’ key findings include:
- A total GDP impact of $49.0 billion dollars, and a GDP multiplier of 2.0
- 264,740 total jobs supported in state, with a jobs multiplier of 4.8
- $4.2 billion invested in Michigan in 2022
- $8.2 billion in tax receipts for all levels of government supported through GM’s activities in Michigan.
With nearly $4.2 billion spent on capital improvements in the state in 2022, GM’s commitment to Michigan is expected to continue to have significant benefits well into the future. GM directly employed 55,450 individuals in Michigan in 2022, and when combined with jobs supported through the indirect and induced channels, supported 264,740 jobs in total—an implied statewide jobs multiplier of 4.8 and more than 5% of the state’s entire labor force.

Through all impact channels, GM supported $49.0 billion of the state’s GDP—equivalent to 8.4% of the state’s entire economy in 2022, or more than $1 in every $12 of value created in Michigan.

The total tax impact for all government levels of GM’s activities in the state totaled nearly $8.2 billion, which could fund the entirety of the State of Michigan’s planned FY2023 budget for their road and bridges program with nearly $3 billion left over, enough to pay for nearly 63% of the state’s public school teachers’ salaries.

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3.2 TEXAS

Home to the Arlington Assembly plant and approximately 9,680 employees state-wide, GM’s footprint in Texas is large.

Oxford Economics’ key findings include:

- A total GDP impact of $8.8 billion dollars, and a GDP multiplier of 2.3
- 49,000 total jobs supported in state, with a jobs multiplier of 5.1
- $72.2 million invested in Texas in 2022
- $1.4 billion in tax receipts for all levels of government supported through GM’s activities in Texas.

In total, GM’s impact in Texas summed to nearly $8.8 billion of GDP supported, with its operations directly contributing $3.8 billion of value to that total—an implied GDP multiplier of 2.3. The GM system’s support of the broader Texas workforce was stronger still. With 9,680 individuals directly employed by GM, the firm’s supply chain, capital investments, and wage-induced spending channels accounted for an additional 39,330 jobs for Texans in 2022.

The tax revenue produced by all of the activity supported by GM in Texas amounted to nearly $1.4 billion in 2022, enough to fund the salaries for more than one in 15 Texas public school teachers.
3.3 OHIO

Ohio is home to an aluminum foundry and machining center in Defiance, a diesel engines manufacturing plan in Moraine, the Toledo Propulsion facility, the Parma Metal Center in Cleveland, and the Cincinnati Distribution Center, which all together employ a total of 4,570 workers.

Oxford Economics’ key findings include:

- A total GDP impact of $6.8 billion, and a GDP multiplier of 5.5
- 51,760 total jobs supported in state, with a jobs multiplier of 11.3
- $390.3 million invested in Ohio in 2022
- $1.3 billion in tax receipts for all levels of government supported through GM’s activities in Ohio.

GM spent more than $4.6 billion with Ohio-based suppliers and invested some $390 million locally in 2022. Taken together, the company’s operations in the state supported some 51,760 jobs, 31,590 of which were indirectly supported through GM’s supply chain and 15,600 of which were supported through the consumer spending of direct and indirect workers. In total, GM supported a $6.8 billion contribution to Ohio’s GDP in 2022.

The tax revenue produced by all of the activity supported by GM in Ohio amounted to $1.3 million in 2022, enough to fund the salaries for 21% of the state’s public school teachers.

Fig. 8: GM’s GDP and jobs impact by channel in Ohio

![Chart showing GM’s GDP and jobs impact by channel in Ohio](chart.png)
3.4 NEW YORK

GM has three sites in New York: the Tonawanda Engine Plant, as well as their Rochester, and Lockport facilities.

Oxford Economics’ key findings include:

- A total GDP impact of $4.9 billion, and a GDP multiplier of 4.6
- 25,560 total jobs supported in state, with a jobs multiplier of 6.9
- $21.9 million invested in New York in 2022
- $991 million in tax receipts for all levels of government supported through GM’s activities in New York.

In total, the company’s operations in New York supported 25,560 jobs and a $4.9 billion GDP contribution. Some 14,160 jobs and a $2.7 billion GDP contribution are indirectly supported, while another 7,700 jobs and a $1.1 billion contribution to GDP were sustained through the induced channel.

The tax revenue produced by all of the activity supported by GM in New York amounted to $991 million in 2022, enough to fund the salaries for 5% of the state’s public school teachers.
3.5 INDIANA

Home to the Fort Wayne Assembly plant, the Bedford Casting Operations, the Marion Metal Center, and the Kokomo Components Holding facility, Indiana counts approximately 6,160 GM employees state-wide.

Oxford Economics’ key findings include:

- A total GDP impact of $4.6 billion, and a GDP multiplier of 2.5
- 29,820 total jobs supported in state, with a jobs multiplier of 4.8
- $115 million invested in Indiana in 2022
- $791 million in tax receipts for all levels of government supported through GM’s activities in Indiana.

In total, GM’s impact in Indiana summed to $4.6 billion of GDP supported, with its operations directly contributing $1.9 billion of value to that total—an implied GDP multiplier of 2.5. Over and above the individuals directly employed by GM, the firm’s supply chain and capital investments accounted for an additional 15,050 jobs, while wage-induced spending channels supported a further 8,610 jobs across Indiana in 2022.

The tax revenue produced by all of the activity supported by GM in Indiana amounted to over $791 million in 2022, enough to fund the salaries for 25% of the state’s public school teachers.
3.6 TENNESSEE

Tennessee is home to GM’s Spring Hill Manufacturing site and the Memphis Distribution Center, with some 3,840 workers employed across the state.

Oxford Economics’ key findings include:

- A total GDP impact of $3.3 billion, and a GDP multiplier of 2.6
- 21,200 total jobs supported in state, with a jobs multiplier of 5.5
- $116 million invested in Tennessee in 2022
- $595 million in tax receipts for all levels of government supported through GM’s activities in Tennessee.

We estimate the company supported a total of 21,200 jobs in Tennessee, 11,200 of which were sustained through the indirect channel and 6,160 through the induced channel. In total, GM’s contribution to Tennessee GDP amounted to $3.3 billion in 2022.

The tax revenue produced by all of the activity supported by GM in Tennessee amounted to nearly $595 million in 2022, enough to fund the salaries for 17% of the state’s public school teachers.
3.7 MISSOURI

Missouri hosts GM’s Wentzville Assembly site, which directly employed 4,170 workers in 2022.

Oxford Economics’ key findings include:

- A total GDP impact of $3.0 billion, and a GDP multiplier of 1.8
- 15,560 total jobs supported in state, with a jobs multiplier of 3.7
- $121 million invested in Missouri in 2022
- $469 million in tax receipts for all levels of government supported through GM’s activities in Missouri.

We estimate that the company supported a total of 15,560 jobs in Missouri, including those directly employed at the plant, as well as 6,150 indirect jobs and 5,240 workers sustained through the induced channel. This employment supported a total GDP contribution of $3.0 billion across the state in 2022.

The tax revenue produced by all of the activity supported by GM in Missouri amounted to over $469 million in 2022, enough to fund the salaries for 13% of the state’s public school teachers.
3.8 KENTUCKY

Home to the Bowling Green Assembly plant and approximately 1,420 GM employees state-wide, Kentucky benefits greatly from GM’s operations.

Oxford Economics’ key findings include:

- A total GDP impact of $1.7 billion, and a GDP multiplier of 4.6
- 13,540 total jobs supported in state, with a jobs multiplier of 9.5
- $58 million invested in Kentucky in 2022
- $326 million in tax receipts for all levels of government supported through GM’s activities in Kentucky.

In total, GM’s impact in Kentucky summed to some $1.7 billion of GDP supported, with its operations directly contributing $372 million of value to that total—an implied GDP multiplier of 4.6. Over and above the individuals directly employed by GM, the firm’s supply chain and capital investments accounted for an additional 8,640 jobs, while wage-induced spending channels supported a further 3,490 jobs across the state in 2022.

The tax revenue produced by all of the activity supported by GM in Kentucky amounted to $326 million in 2022, enough to fund the salaries for 14% of the state’s public school teachers.
3.9 KANSAS

Home to the Fairfax Assembly & Stamping plant in Kansas City, Kansas counts approximately 2,180 GM employees state-wide.

Oxford Economics’ key findings include:

- A total GDP impact of $919 million, and a GDP multiplier of 1.4
- 4,430 total jobs supported in state, with a jobs multiplier of 2.0
- $137 million in tax receipts for all levels of government supported through GM’s activities in Kansas.

In total, GM’s impact in Kansas summed to $919 million of GDP supported, with its operations directly contributing $671 million of value to that total—an implied GDP multiplier of 1.4. Over and above the individuals directly employed by GM, the firm’s supply chain and capital investments accounted for an additional 900 jobs, while wage-induced spending channels supported a further 1,360 jobs across Kansas in 2022.

The tax revenue produced by all of the activity supported by GM in Kansas amounted to $137 million in 2022, enough to fund the salaries for 7% of the state’s public school teachers.
4. CONCLUSION

Among the largest manufacturing employers in the United States, GM makes up an integral part of national and local economies across the country.

With regards to its contribution to national income, GM created or supported nearly $116.5 billion of GDP in 2022—approximately $1 in every $219 created in the US that year. With an eye towards the American workforce, GM’s activities supported 709,100 jobs in 2022, including 237,100 jobs in the domestic manufacturing sector. Additionally, combining all three channels of impact and levels of government, GM’s activities supported an estimated $21.5 billion in tax revenues in 2022.

These estimates reflect the impact of GM nationally on the broader economy. However, as illustrated in this study there are additional longer-term channels and myriad local impacts.

GM is committed to training a highly skilled workforce. As part of its efforts to invest in the skills of its workers, GM financed more than 1.6 million hours of training in 2022, or more than two days of labor per employee on average. The cost of the training offered to GM’s employees was worth an estimated $140 million in 2022, $109 million of which were paid in payroll costs and $31 million of which were direct training costs.

GM is an industry leader for research in cutting edge net zero technologies, and investment in US production and manufacturing capacity. In 2022 alone, the firm committed $5.6 billion in capital expenditures nationwide. This investment is vital for continuing to deliver technologically advanced products to GM’s customers. In addition, capital investment and R&D create wider spillover benefits as new commercial applications are found for innovations.

GM’s presence is felt all across the country. In Michigan, the spiritual home of the American automobile, GM’s activities support the jobs of more than 5% of the state’s entire labour force, and 8.4% of its entire economy. In Ohio, GM’s large spending with local suppliers means that the firm’s activities are associated with a jobs multiplier of 11.3, meaning that for every individual GM directly employs there are an additional 10.3 jobs supported elsewhere in the state’s labor force.

By paying high wages to its employees and investing in R&D and capital improvements, GM has a major impact not only on the US economy in terms of the economic activity, job creation, and tax revenues its operations support, but also on local communities and the US long-term productive potential.
APPENDIX: METHODOLOGY

ECONOMIC IMPACT MODELING

Economic impact modeling is a standard tool used to quantify the economic contribution of an investment or a company. Impact analysis traces the economic contribution of an investment through three separate channels:

1. **Direct impact**: refers to activity conducted directly by GM in the US.

2. **Indirect impact**: consists of activity that is supported as a result of the procurement of goods and services by GM in the US, purchases by those companies in turn, and so on.

3. **Induced impact**: reflects activity supported by the spending of wage income by direct and indirect employees.

**Direct Impacts**

The direct value added of GM is calculated as revenues minus the cost of goods brought in. Direct employment was provided directly by GM, while total workers’ compensation was estimated combining GM salary data and ratios of employee compensation to wages derived from IMPLAN for the car manufacturing sector.

**Indirect and induced impacts**

Indirect and induced impacts for the US as a whole as well as for the nine states are estimated using IMPLAN economic impact software, an integrated input-output modeling platform based on BEA and other data sources. An input-output model gives a snapshot of an economy at any point in time.
The Economic Impact of General Motors in the US

Oxford Economics was founded in 1981 as a commercial venture with Oxford University’s business college to provide economic forecasting and modelling to UK companies and financial institutions expanding abroad. Since then, we have become one of the world’s foremost independent global advisory firms, providing reports, forecasts and analytical tools on more than 200 countries, 100 industries, and 8,000 cities and regions. Our best-in-class global economic and industry models and analytical tools give us an unparalleled ability to forecast external market trends and assess their economic, social and business impact.

Headquartered in Oxford, England, with regional centers in New York, London, Frankfurt, and Singapore, Oxford Economics has offices across the globe in Belfast, Boston, Cape Town, Chicago, Dubai, Dublin, Hong Kong, Los Angeles, Mexico City, Milan, Paris, Philadelphia, Stockholm, Sydney, Tokyo, and Toronto. We employ 450 staff, including more than 300 professional economists, industry experts, and business editors—one of the largest teams of macroeconomists and thought leadership specialists. Our global team is highly skilled in a full range of research techniques and thought leadership capabilities from econometric modeling, scenario framing, and economic impact analysis to market surveys, case studies, expert panels, and web analytics.

Oxford Economics is a key adviser to corporate, financial and government decision-makers and thought leaders. Our worldwide client base now comprises over 2,000 international organizations, including leading multinational companies and financial institutions; key government bodies and trade associations; and top universities, consultancies, and think tanks.

June 2023

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