

**The Economic Effects on Michigan of the  
Global Engine Alliance, L.L.C. Facility Location Decision**

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### Abstract

*Global Engine Alliance, L.L.C., a joint-venture company created by DaimlerChrysler, Hyundai Motor America and Mitsubishi Motor Manufacturing of America, Inc. to manufacture a new family of four-cylinder engines for worldwide use by the three companies, is considering building a facility in Dundee, Michigan that would include 450,000 square feet of manufacturing space, 50,000 square feet of warehouse space, and 40,000 square feet of office space. The facility would employ an additional 400 people by 2008. We estimate that by 2023, this location will have generated a total of 1,136 jobs in the state. Total state government revenues through 2023, net of MEGA costs and adjusted for inflation, would increase by \$76,123,000 (2002 dollars) due to the location of Global Engine Alliance.*

The purpose of this study is to estimate the potential economic and fiscal benefits to Michigan of Global Engine Alliance, L.L.C., a joint-venture company created by DaimlerChrysler, Hyundai Motor America and Mitsubishi Motor Manufacturing of America, Inc. to manufacture a new family of four-cylinder engines for worldwide use by the three companies, building a facility in Dundee, Michigan that would include 450,000 square feet of manufacturing space, 50,000 square feet of warehouse space, and 40,000 square feet of office space (SIC 3714). Investment activity would take place between 2003 and 2008, with an investment of \$374.9 million. The facility would employ an additional 400 people by 2008.

The estimates of the benefits include the total number of jobs created in Michigan (by major industry, including spin-off jobs), and the associated personal income and state government revenue. Benefits net of the MEGA incentive package, from 2003 to 2023, are shown in the attached table. The MEGA incentive package includes relief from 100 percent of the single business tax for the period 2004 to 2009 and from 60 percent of the single business tax in 2010; it also includes a tax credit to the company for the period 2004 to 2023 equal to 100 percent of the state income tax rate on the payroll (gross wages) of employees hired at the facility as a result of the project.

The total employment effects, reported in the first line of the table, include the direct jobs created at the facility itself plus spin-off jobs. The spin-off jobs are generated from two sources, increased purchases from Michigan suppliers and spending by people who receive income due to the increased economic activity. The investment activity is expected to generate a total of 835 jobs in 2003, 1,250 jobs in 2004, and 322 jobs in 2005; almost all of these jobs are temporary. In 2008, the first year of full operations, an additional 961 jobs are generated in the state. We estimate that by 2023, this location will have generated a total of 1,136 additional jobs in the state. The total number of jobs created (direct plus spin-off) for every direct job introduced

constitutes the "employment multiplier." The employment multiplier for the location averages 2.6 over the period 2008 to 2023. Sectoral detail on the employment gains is also shown in the table.

Personal income is shown in the next section of the table. Personal income is defined as the income of Michigan residents from all sources, after deduction of contributions to social insurance programs but before deduction of income tax and other personal taxes. As shown in the table, if Global Engine Alliance were to locate its operations to Michigan under the incentive program, state personal income in 2008 would be higher by \$69.6 million (in current dollars) than it would be without the location, and in 2023 it would be \$130.4 million higher. Adjusted for inflation, these numbers in 2002 dollars would be \$49.6 million in 2008 and \$71.7 million in 2023.

The gain in economic activity results in higher state government revenues. We estimate that in 2008, the first year of full operations, the new facility would generate \$5,352,000 in additional gross state government revenue, and that the MEGA package would provide a \$2,987,000 incentive to Global Engine Alliance. Thus, the Global Engine Alliance location would increase state government revenues in 2008 by \$2,365,000, net of MEGA incentive costs.

Over the period 2003 to 2023, gross state government revenue is projected to increase by \$141,081,000 (in current dollars) due to the location of Global Engine Alliance. The MEGA incentive package for Global Engine Alliance is forecast to cost \$21,531,000 over the period, resulting in a net increase in state government revenue of \$119,550,000. Adjusted for inflation, the total net increase in state government revenue from 2003 to 2023 would be \$76,123,000 in 2002 dollars.

None of these estimates include the nonmeasurable effects that would produce additional economic and fiscal benefits for Michigan, such as the intangible advantages of influencing other location and expansion decisions.

**Economic and Fiscal Effects on Michigan of the Global Engine Alliance, L.L.C. Facility Location  
Net Benefits with the Incentive Package**

| Economic/Fiscal Indicator                              | 2004   | 2005   | 2006   | 2007   | 2008   | 2010   | 2015   | 2020    | 2023    | Total<br>2003-2023 |
|--|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------------------|
| Total Employment                                       | 1,514  | 1,081  | 611    | 683    | 961    | 949    | 1,008  | 1,088   | 1,136   | —                  |
| Manufacturing  | 304    | 343    | 286    | 333    | 443    | 434    | 436    | 445     | 449     | —                  |
| Nonmanufacturing                                       | 1,210  | 738    | 325    | 350    | 518    | 515    | 572    | 643     | 687     | —                  |
| Retail Trade   | 173    | 132    | 74     | 83     | 119    | 114    | 119    | 129     | 136     | —                  |
| Services   | 366    | 231    | 98     | 114    | 177    | 165    | 182    | 222     | 248     | —                  |
| Other  | 671    | 375    | 153    | 153    | 222    | 236    | 271    | 292     | 303     | —                  |
| In current dollars (thousands):                        |        |        |        |        |        |        |        |         |         |                    |
| Personal income  | 80,100 | 68,200 | 47,700 | 52,000 | 69,600 | 75,000 | 92,700 | 114,800 | 130,400 | 1,834,600          |
| Gross state revenue                                    | 6,160  | 5,244  | 3,668  | 3,999  | 5,352  | 5,768  | 7,129  | 8,828   | 10,028  | 141,081            |
| MEGA cost  | 323    | 390    | 1,651  | 2,796  | 2,987  | 2,074  | 582    | 705     | 789     | 21,531             |
| State revenue net of MEGA cost                         | 5,837  | 4,854  | 2,017  | 1,203  | 2,365  | 3,694  | 6,547  | 8,123   | 9,239   | 119,550            |
| Adjusted for inflation<br>(thousands of 2002 dollars): |        |        |        |        |        |        |        |         |         |                    |
| Personal income  | 60,782 | 48,940 | 32,678 | 36,667 | 49,574 | 52,155 | 59,652 | 67,222  | 71,745  | 1,177,207          |
| Gross state revenue                                    | 4,674  | 3,763  | 2,513  | 2,820  | 3,812  | 4,011  | 4,587  | 5,170   | 5,517   | 90,527             |
| MEGA cost  | 245    | 280    | 1,131  | 1,972  | 2,128  | 1,442  | 375    | 413     | 434     | 14,404             |
| State revenue net of MEGA cost                         | 4,429  | 3,483  | 1,382  | 848    | 1,684  | 2,569  | 4,212  | 4,757   | 5,083   | 76,123             |

\*These estimates do not include any state government revenue losses due to the Investment Tax Credit or the property tax abatement.