

**The Economic Effects on Michigan
of the Cardell Corporation Expansion Decision**

**George A. Fulton
Peter Nicolas
Donald R. Grimes**

University of Michigan

October 2, 1995

Abstract

The Cardell Corporation is considering expanding its custom stamping, assembly, and injection and insert molded part activities in Michigan, which by 1998 would employ 505 people. We estimate that by 2010, this increased activity will have generated a total of 1,069 jobs in the state. Total state government revenues through 2010, net of MEGA costs and adjusted for inflation, would be increased by \$40,475,000 (1995 dollars) due to the expansion of the Cardell Corporation's activity.

The purpose of this study is to estimate the potential economic and fiscal benefits to Michigan of the Cardell Corporation's expanding its custom stamping, assembly, and injection and insert molded part activities (SIC 346) in the state. A new facility would be built between 1996 and 1997, with an investment of \$46.7 million, and would begin production in mid-1996. The new facility would employ 505 workers by 1998.

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 1996 to 2010, are shown in the attached table. The MEGA incentive package includes relief from 75 percent of the single business tax for the period 1996-2010 and a tax credit to the company equal to 75 percent of the income tax withheld from the facility's employees for the same period.

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 construction of the facility and investment in machinery and equipment is expected to generate a total of 333 jobs in 1996 and 173 in 1997; almost all of these jobs are temporary. In 1998, the first year of full production, an additional 1,015 jobs are generated in the state. We estimate that by 2010, this facility will have generated a total of 1,069 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 expansion activity ranges from 1.9 to 2.1 over the period 1998-2010. 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 Cardell were to expand in Michigan under the incentive program, state personal income in 1998 would be higher by \$52.7 million (in current dollars) than it would be without the facility, and in 2010 it would be \$103.3 million higher. Adjusted for inflation, these numbers in 1995 dollars would be \$39.1 million in 1998 and \$51.7 million in 2010.

The gain in economic activity results in higher state government revenues. We estimate that the additional economic activity resulting from the expansion of this activity and the construction and investment in machinery and equipment would generate \$1,440,000 in additional gross state government revenue in 1996 and \$2,576,000 in 1997. The MEGA package would provide incentives to Cardell of \$72,000 in 1996 and \$285,000 in 1997. Thus, the Cardell Corporation's activity would generate additional revenue of \$1,368,000 in 1996 and \$2,291,000 in 1997. We estimate that in 1998, the first year of full production, the operation of the facility would generate \$4,216,000 in additional gross state government revenue, and that the MEGA package would provide a \$596,000 incentive to Cardell. Thus, the Cardell Corporation's activity would generate an additional \$3,620,000 in revenue to state government in 1998, net of MEGA incentive costs.

Over the period 1996-2010, gross state government revenue is projected to increase by \$83,888,000 (in current dollars) due to the expansion of the Cardell Corporation's activity. The MEGA incentive package for Cardell is forecast to cost \$14,289,000 over the period, resulting in a net increase in state government revenue of \$69,599,000. Adjusted for inflation, the total net increase in state government revenue from 1996 to 2010 would be \$40,475,000 in 1995 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 Cardell Corporation Expansion Decision
Net Benefits with the Incentive Package

| Economic/Fiscal Indicator | 1996 | 1997 | 1998 | 1999 | 2000 | 2005 | 2010 | Total 1996-2010 |
|--|--------|--------|--------|--------|--------|--------|---------|--------------------|
| Total employment | 470 | 691 | 1,015 | 1,005 | 992 | 994 | 1,069 | — |
| Manufacturing | 93 | 282 | 533 | 521 | 513 | 501 | 512 | — |
| Nonmanufacturing | 377 | 409 | 482 | 484 | 479 | 493 | 557 | — |
| Retail trade | 58 | 86 | 121 | 119 | 115 | 110 | 123 | — |
| Services | 94 | 134 | 186 | 181 | 175 | 173 | 203 | — |
| Other | 225 | 189 | 175 | 184 | 189 | 210 | 231 | — |
| In current dollars (thousands): | | | | | | | | |
| Personal income | 18,000 | 32,200 | 52,700 | 58,000 | 61,900 | 79,400 | 103,300 | 1,048,600 |
| Gross state revenue | 1,440 | 2,576 | 4,216 | 4,640 | 4,952 | 6,352 | 8,264 | 83,888 |
| MEGA cost* | 72 | 285 | 596 | 867 | 905 | 1,125 | 1,389 | 14,289 |
| State revenue net of MEGA cost | 1,368 | 2,291 | 3,620 | 3,773 | 4,047 | 5,227 | 6,875 | 69,599 |
| Adjusted for inflation (thousands of 1995 dollars): | | | | | | | | |
| Personal income | 14,067 | 25,009 | 39,081 | 40,454 | 41,964 | 45,788 | 51,704 | 630,557 |
| Gross state revenue | 1,125 | 2,001 | 3,127 | 3,236 | 3,357 | 3,663 | 4,136 | 50,445 |
| MEGA cost* | 69 | 264 | 531 | 742 | 745 | 762 | 772 | 9,970 |
| State revenue net of MEGA cost | 1,056 | 1,737 | 2,596 | 2,494 | 2,612 | 2,901 | 3,364 | 40,475 |