

**The Economic Effects on Michigan of the
Harman Enterprises Engineering and Design Facility**

Prepared by the Michigan Economic Development Corporation utilizing Regional
Economic Models, Incorporated (REMI) software.

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Abstract

Harman Enterprises is considering building an engineering and design facility in Farmington Hills, Michigan. This facility would be responsible for innovations to the design of automotive navigation systems, radio entertainment, digital amplifiers, and speakers. The new facility would employ up to 78 people by the end of 2002. We estimate that by 2010, this location will have generated a total of 154 jobs in the state. Total state government revenues through 2010, net of MEGA costs and adjusted for inflation, would increase by \$7.5 million (2000 dollars) due to the location of the Harman Enterprises Engineering and Design Facility.

The purpose of this study is to estimate the potential economic and fiscal benefits to Michigan of Harman Enterprises locating an engineering and design facility in Farmington Hills. Investment activity would take place 2001, with an investment of \$10.9 million. The facility would employ an additional 78 people and would be at full production by 2002.

The estimates of the benefits attributable to the project 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 2001 to 2010, are shown in the attached table. The MEGA incentive package includes a tax credit to the company equal to 100 percent of the state income tax rate on the payroll (gross wages) of employees hired at the facility for the period 2001 to 2010.

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 created from two sources, increased purchases from Michigan suppliers and spending by people who receive income due to the increased economic activity. In 2002, the first year of full operations, an additional 203 jobs are generated in the state. The total number of jobs (direct plus spin-off) for every direct job introduced constitutes the "employment multiplier." The employment multiplier for the expansion averages 2.09 over the period 2001 to 2010. Sectoral detail on the employment 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 Harman Enterprises were to locate in Michigan under the incentive program, state personal income in 2002 would be higher by \$10.9 million (in current dollars) than it would be without the facility, and in 2010, it would be \$13.8 million higher. Adjusted for inflation, these numbers in 2000 dollars would be \$10.6 million in 2002 and \$11.2 million in 2010.

The gain in economic activity results in higher government revenues. We estimate that in 2002, the first year of full operations without investment activity, the facility would generate \$869,000 in additional gross state revenue, and that the MEGA package would provide a \$119,000 incentive to Harman Enterprises. Thus, the new Harman Enterprises facility would increase state revenues in 2002 by \$750,000, net of MEGA costs.

Over the period 2001 to 2010, state government revenue is projected to increase by \$9.3 million (in current dollars) due to the new Harman Enterprises facility. The MEGA incentive package for Harman Enterprises is forecast to cost \$988,000 over the period, resulting in a net increase in state government revenue of \$8.4 million. Adjusted for inflation, the total net increase in state government revenue from 2001 to 2010 would be \$7.5 million in 2000 dollars. These calculations do not include any revenue losses due to the property tax abatement or the investment tax credit. If the costs of the abatement and the tax credit were included, the net revenue gain to state government would be slightly less.

None of the 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.

**Harman Enterprises Engineering and Design Facility
Economic and Fiscal Effects on Michigan - Net Benefits with the Incentive Package**

Economic/Fiscal Indicator	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Total Employment											
Manufacturing	94	203	192	182	171	164	158	155	153	154	
Non-Manufacturing	35	88	85	83	80	78	77	76	76	75	
Retail Trade	59	115	107	99	91	86	81	79	77	79	
Services	12	26	25	23	21	19	18	18	17	17	
Other	21	45	43	40	37	36	35	35	35	36	
Other	26	44	39	36	33	31	28	26	25	26	
In Current Dollars (Thousands):											
Personal Income	\$4,608	\$10,860	\$11,720	\$12,080	\$12,270	\$12,600	\$12,660	\$12,940	\$13,310	\$13,760	\$116,808
Gross State Revenue	369	869	938	966	982	1,008	1,013	1,035	1,065	1,101	9,346
Mega Cost	54	119	116	113	109	105	100	96	91	86	988
State Revenue Net of MEGA Cost*	\$315	\$750	\$822	\$853	\$873	\$903	\$913	\$939	\$974	\$1,015	\$8,358
Adjusted for Inflation (Thousands of 2000 Dollars):											
Personal Income	\$4,608	\$10,608	\$11,184	\$11,264	\$11,183	\$11,229	\$11,034	\$11,030	\$11,085	\$11,187	\$104,412
Gross State Revenue	369	849	895	901	895	898	883	882	887	895	8,354
Mega Cost	54	116	111	105	99	93	88	82	76	70	894
State Revenue Net of MEGA Cost*	\$315	\$733	\$784	\$796	\$796	\$805	\$795	\$800	\$811	\$825	\$7,460

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