

**The Economic Effects on Michigan  
of the Howmet/Pratt-Whitney Joint Venture Facility Location Decision**

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### Abstract

*The Howmet/Pratt-Whitney joint venture is considering a joint venture to produce rings and cases for jet engines. The joint venture would use Spraycast-X technology which would reduce production costs, lead time, and excess materials. By the year 2003, the facility would employ 130 people. We estimate that by 2019, this location will have generated a total of 333 jobs in the state. Total state government revenues through 2019, net of MEGA costs and adjusted for inflation, would be increased by \$13,367,000 (1996 dollars) due to the location of the Howmet/Pratt-Whitney joint venture.*

The purpose of this study is to estimate the potential economic and fiscal benefits to Michigan of the Howmet/Pratt-Whitney joint venture to produce rings and cases for jet engines (SIC 3369). The joint venture would use Spraycast-X technology which would reduce production costs, lead time, and excess materials. Construction activity would take place between 1997 and 2003, with an investment of \$8.8 million, and operations would begin in March 1999. The facility would employ 130 workers by 2003.

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 1997 to 2019, are shown in the attached table. The MEGA incentive package includes relief from 100 percent of the single business tax for the period 2000-2006 and a tax credit to the company for the period 2000-2019 equal to 4.4 percent of the payroll (gross wages) of employees hired at the facility as a result of the project. The payroll tax credit represents 100 percent of the maximum employment credit available to a company.

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 is expected to generate a total of 22 jobs in 1997, 18 jobs in 1998, and 0-2 jobs between 1999 and 2003; almost all of these jobs are temporary. In 2003, the year that full operations begin, an additional 253 jobs are generated in the state. We estimate that by 2019 this facility will have generated a total of 333 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 2.2 over the period 2003-2019. 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 the Howmet/Pratt-Whitney joint venture were to locate in Michigan under the incentive program, state personal income in the year 2003 would be higher by \$14.2 million (in current dollars) than it would be without the facility, and in 2019 it would be \$32.9 million higher. Adjusted for inflation, these numbers in 1996 dollars would be \$9.5 million in 2003 and \$15.5 million in 2019.

The gain in economic activity results in higher state government revenues. We estimate that in 2003, the year that full operations begin, the facility would generate \$1,136,000 in additional gross state government revenue, and that the MEGA package would provide a \$727,000 incentive to the Howmet/Pratt-Whitney joint venture. Thus, the Howmet/Pratt-Whitney joint venture facility would generate an additional \$409,000 in revenue to state government in 2003, net of MEGA incentive costs.

Over the period 1997-2019, gross state government revenue is projected to increase by \$34,528,000 (in current dollars) due to the location of the Howmet/Pratt-Whitney joint venture. The MEGA incentive package for the Howmet/Pratt-Whitney joint venture is forecast to cost \$8,510,000 over the period, resulting in a net increase in state government revenue of \$26,018,000. Adjusted for inflation, the total net increase in state government revenue from 1997 to 2019 would be \$13,367,000 in 1996 dollars. These calculations do not include any revenue losses due to the property tax abatement. If the cost of the abatement were included, the net revenue gain to state government would be slightly less.

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.

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Net Benefits with the Incentive Package**

Economic/Fiscal Indicator	1997	1998	1999	2000	2003	2005	2010	2015	2019	Total 1996-2019
Total Employment	64	100	149	156	253	260	283	310	333	—
Manufacturing	24	43	73	81	130	130	130	130	130	—
Nonmanufacturing	40	57	76	75	123	130	153	180	203	—
Retail Trade	8	12	18	19	31	31	34	38	42	—
Services	15	23	32	35	57	57	65	79	91	—
Other	17	22	26	21	35	42	54	63	70	—
In current dollars (thousands):										
Personal income	2,500	4,400	6,900	8,000	14,200	16,700	21,600	27,000	32,900	431,600
Gross state revenue	200	352	552	640	1,136	1,336	1,728	2,160	2,632	34,528
MEGA cost	0	0	0	407	727	772	279	337	350	8,510
State revenue net of MEGA cost	200	352	552	233	409	564	1,449	1,823	2,282	26,018
Adjusted for inflation (thousands of 1996 dollars):										
Personal income	2,085	3,478	5,340	5,677	9,519	10,459	12,296	14,012	15,454	244,105
Gross state revenue	167	278	427	454	762	837	984	1,121	1,236	19,528
MEGA cost	0	0	0	364	600	603	190	199	185	6,161
State revenue net of MEGA cost	167	278	427	90	162	234	794	922	1,051	13,367

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