

**The Economic Effects on Michigan
of the Gelman Sciences Plant Expansion Decision**

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

**University of Michigan
August 17, 1995**

Abstract

Gelman Sciences is considering expanding its surgical and medical instruments plant in Michigan, which by 1998 would employ 150 people. We estimate that by 2011, this facility will have generated a total of 336 jobs in the state. Total state government revenues through 2011, net of MEGA costs and adjusted for inflation, would be increased by \$12,455,000 (1995 dollars) due to the expansion of the Gelman Sciences plant.

The purpose of this study is to estimate the potential economic and fiscal benefits to Michigan of the Gelman Sciences company's expanding a surgical and medical instruments plant (SIC 3841) in the state. A new facility would be built between 1995 and 1997, with an investment of \$15.5 million, and would begin production in mid-1996. The facility would employ 150 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 1995 to 2011, are shown in the attached table. The MEGA incentive package includes relief from the single business tax for the period 1997-2001 and a tax credit to the company equal to the income tax withheld from the plant's employees for the period 1997-2011.

The total employment effects, reported in the first line of the table, include the direct jobs created at the plant 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 54 jobs in 1995, 51 in 1996, and 58 in 1997; almost all of these jobs are temporary. In 1998, the first full year of production without investment activity, an additional 337 jobs are generated in the state. We estimate that by 2011, this facility will have generated a total of 336 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 2.1 to 2.2 over the period 1998-2011. 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 facility were to locate in Michigan under the incentive program, state personal income in 1998 would be higher by \$16.5 million (in current dollars) than it would be without the facility, and in 2011 it would be \$32.9 million higher. Adjusted for inflation, these numbers in 1995 dollars would be \$11.6 million in 1998 and \$15.4 million in 2011.

The gain in economic activity results in higher state government revenues. In 1995, the construction of the plant and investment in machinery and equipment would generate \$152,000 (in current dollars) in additional gross state revenue. Since there are no MEGA incentives offered to the construction companies, these values are also the impact on net state revenue. We estimate that the additional economic activity resulting from the operation of this plant and the investment in machinery and equipment would generate \$488,000 in additional gross state government revenue in 1996 and \$1,136,000 in 1997, and that the MEGA package would provide a \$173,000 incentive to Gelman Sciences in 1997. Thus, the Gelman Sciences facility would generate an additional \$963,000 in revenue to state government in 1997, net of MEGA incentive costs. We estimate that in 1998, the first full year of production without investment activity, the operation of the plant would generate \$1,320,000 in additional gross state government revenue, and that the MEGA package would provide a \$351,000 incentive to Gelman Sciences. Thus, the Gelman Sciences facility would generate an additional \$969,000 in revenue to state government in 1998, net of MEGA incentive costs.

Over the period 1995-2011, gross state government revenue is projected to increase by \$28,656,000 (in current dollars) due to the expansion of the Gelman Sciences plant. The MEGA incentive package for Gelman Sciences is forecast to cost \$5,546,000 over the period, resulting in a net increase in state government revenue of \$23,110,000. Adjusted for inflation, the total net increase in state government revenue from 1995 to 2011 would be \$12,455,000 in 1995 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.

**Economic and Fiscal Effects on Michigan of the Gelman Sciences Plant Expansion
Net Benefits with the Incentive Package**

Economic/Fiscal Indicator	1995	1996	1997	1998	1999	2000	2005	2011	Total 1995-2011
Total employment	54	155	332	337	326	318	313	336	—
Manufacturing	8	48	137	158	152	148	140	141	—
Nonmanufacturing	46	107	195	179	174	170	173	195	—
Retail trade	10	23	45	44	42	40	38	43	—
Services	13	36	74	75	72	69	67	78	—
Other	23	48	76	60	60	61	68	74	—
In current dollars (thousands):									
Personal income	1,900	6,100	14,200	16,500	17,800	18,900	24,100	32,900	358,200
Gross state revenue	152	488	1,136	1,320	1,424	1,512	1,928	2,632	28,656
MEGA cost*	0	0	173	351	449	470	333	444	5,546
State revenue net of MEGA cost	152	488	963	969	975	1,042	1,595	2,188	23,110
Adjusted for inflation (thousands of 1995 dollars):									
Personal income	1,900	4,240	11,548	11,554	12,172	12,561	12,336	15,360	204,637
Gross state revenue	152	339	924	924	974	1,005	987	1,229	16,371
MEGA cost*	0	0	160	312	385	387	225	238	3,916
State revenue net of MEGA cost	152	339	764	612	589	618	762	991	12,455

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