Science and engineering profile: Michigan

Characteristic	State	U.S.	Rank
Doctoral scientists, 2003	14,490	566,330	14
Doctoral engineers, 2003	4,760	118,540	7
S&E doctorates awarded, 2004	1,012	26,275	7
Engineering (percent)	27	22	na
Life sciences (percent)	25	27	na
Social sciences (percent)	17	16	na
S&E and health postdoctorates in doctorate-granting institutions, 2003	1,405	46,807	8
S&E and health graduate students in doctorate-granting institutions, 2003	19,486	507,247	9
Population, 2004 (thousands)	10,113	297,550	8
Civilian labor force, 2004 (thousands)	5,079	148,769	8
Personal income per capita, 2004 (dollars)	32,052	33,041	23
Federal spending			
Total expenditures, 2003 (millions of dollars)	57,870	2,024,246	9
R&D obligations, 2003 (millions of dollars)	1,673	91,359	18
Total R&D performance, 2003 (millions of dollars)	16,884	277,577	2
Industry R&D, 2003 (millions of dollars)	15,241	198,244	2
Academic R&D, 2003 (millions of dollars)	1,388	40,055	9
Life sciences (percent)	59	59	na
Engineering (percent)	17	15	na
Social sciences (percent)	11	4	na
Number of SBIR awards, 1999–2004	581	31,847	15
Utility patents issued to state residents, 2004	3,757	84,268	4
Gross state product, 2004 (billions of dollars)	372	11,744	9

na = not applicable.

S&E = science and engineering.

SBIR = small business innovation research.

NOTES: Rankings and totals are based on data for the 50 states, District of Columbia, and Puerto Rico. Reliability of estimates of industry R&D and of doctoral scientists and engineers varies by state, because sample allocation was not based on geography. Rankings do not take into account the margin of error of estimates from sample surveys. Data on doctoral scientists and engineers include only recipients of doctoral degrees from U.S. institutions in S&E and health fields. The field percentages represent the largest three fields within the state.

Federal obligations for research and development, by agency and performer: Michigan, FY 2003

(Thousands of dollars)

	Performer							
Agency	Total	Federal intramural	All FFRDCs	Industrial firms	Universities and colleges	Other nonprofits	State and local government	Rank
All agencies	1,673,200	243,250	0	693,250	718,966	10,993	6,741	18
Department of Agriculture	27,161	5,260	0	57	21,238	606	0	27
Department of Commerce	20,478	7,784	0	10,391	2,288	0	15	11
Department of Defense	789,407	102,581	0	640,346	46,255	214	11	16
Department of Energy	29,452	0	0	5,249	24,203	0	0	20
Department of Health and Human Services	630,097	116,453	0	19,290	482,637	9,720	1,997	12
Department of the Interior	9,036	8,408	0	100	400	0	128	15
Department of Transportation	18,458	0	0	12,253	1,857	0	4,348	10
Environmental Protection Agency	11,155	2,619	0	365	7,871	250	50	13
National Aeronautics and Space Administration	15,370	145	0	2,665	12,526	32	2	27
National Science Foundation	122,586	0	0	2,534	119,691	171	190	9
Rank	18	20	na	16	9	35	18	na

FFRDC = federally funded research and development center.

na = not applicable.

NOTES: Federal R&D obligations are as reported by funding agencies. Ranks and totals are based on data for the 50 states, District of Columbia, and Puerto Rico.

SOURCES: Prepared by the National Science Foundation/Division of Science Resources Statistics. Data compiled from numerous sources; see the section, Data Sources for Science and Engineering (S&E) State Profiles.