



APPENDIX TABLE 4-13

Funds spent for business R&D performed in the United States, by source of funds and selected industry: 2008–14

(Millions of dollars)

Industry and NAICS code	All R&D	Paid for by the company	Paid for by others							
			Total	Federal	Companies				All other organizations ^b	
					Domestic		Foreign ^a			
2014										
All industries, 21–33, 42–81 ^c	340,728	282,570	58,158	26,554	13,227		17,246		1,131	
Manufacturing industries, 31–33	232,815	192,160	40,655	21,303	5,062		13,573		717	
Chemicals, 325	66,301	56,488	9,813	404	1,660		7,674		75	
Pharmaceuticals and medicines, 3254	56,612	47,646	8,966	272	1,600		7,022		72	
Other, 325	9,689	8,842	847	132	60		652		3	
Machinery, 333	12,128	11,458	670	78	199	i	385	i	8	i
Computer and electronic products, 334	73,891	64,695	9,195	4,456	1,467		3,028		244	
Electrical equipment, appliances, and components, 335	4,365	4,178	187	48	15	i	117	i	7	i
Transportation equipment, 336	46,746	27,261	19,485	16,153	1,398		1,666		268	i
Automobiles, trailers, and parts, 3361–63	18,404	15,900	2,504	254	625		1,619		6	
Aerospace products and parts, 3364	26,181	10,300	15,881	14,826	747		47		261	i
Other 336	2,161	1,061	1,100	1,073	26		0		1	
Manufacturing nec, other 31–33	29,384	28,080	1,305	164	323		703		115	



Industry and NAICS code	All R&D		Paid for by the company		Paid for by others									
					Total		Federal		Companies			All other organizations ^b		
									Domestic		Foreign ^a			
Nonmanufacturing industries, 21–23, 42–81	107,913		90,409		17,504		5,251		8,165		3,673	i	415	i
Information, 51	63,773		62,296		1,477		162		517		775		23	
Software publishers, 5112	36,052		34,781		1,270		99		463		707		1	
Other 51	27,721		27,515		207		63		54		68		22	
Finance and insurance, 52	4,122		4,090		32		0		s		0		s	
Professional, scientific, and technical services, 54	30,975	i	16,061	i	14,914		5,016		7,189		2,391	i	318	i
Computer systems design and related services, 5415	11,019	i	8,644	i	2,375	i	471	i	690	i	1,095	i	119	i
Scientific R&D services, 5417	12,807		2,668		10,139		2,954		6,105		941		139	
Other 54	7,149		4,749		2,400		1,591		394		355		60	
Nonmanufacturing nec, other 21–23, 42–81	9,043		7,962		1,081		73		s		507		s	
2013														
All industries, 21–33, 42–81 ^c	322,528		264,913		57,615		29,362		13,450		13,791		1,012	
Manufacturing industries, 31–33	221,476		181,170		40,306		22,958		5,174		11,427		747	
Chemicals, 325	61,664		54,285		7,379		356		1,389		5,594		40	
Pharmaceuticals and medicines, 3254	52,426		45,891		6,534		167		1,343		4,987		37	
Other 325	9,238		8,394		845		189		46		607		3	
Machinery, 333	12,650		12,092		558		128		110		309		11	



Industry and NAICS code	All R&D		Paid for by the company		Paid for by others								
					Total		Federal		Companies			All other organizations ^b	
									Domestic		Foreign ^a		
Computer and electronic products, 334	67,205		57,364		9,841		4,866		1,748		s		s
Electrical equipment, appliances, and components, 335	4,136		3,660		475	i	129	i	83		s		s
Transportation equipment, 336	45,972		25,165		20,807	i	17,312		1,328		s		s
Automobiles, trailers, and parts, 3361-63	16,729		14,081		2,647		304	i	565	i	1,772		6
Aerospace products and parts, 3364	27,114		10,042		17,072	i	15,927		758		s		s
Other 336	2,129		1,042		1,088		1,081		5		s		s
Manufacturing nec, other 31-33	29,849		28,604		1,246		167		516		540		23
Nonmanufacturing industries, 21-23, 42-81	101,052		83,742		17,310		6,404		8,276		2,364		266
Information, 51	57,207		56,039		1,168		203		447		512		6
Software publishers, 5112	35,333		34,296		1,037		173		386		474		4
Other 51	21,874		21,743		131		30		61		38		2
Finance and insurance, 52	4,308		4,298		10		0		10		0		0
Professional, scientific, and technical services, 54	31,017		15,617	i	15,400		6,033		7,610		1,525		232
Computer systems design and related services, 5415	9,268		8,107	i	1,161	i	809	i	175	i	157		20
Scientific R&D services, 5417	14,201		2,838		11,363		3,288		6,841		1,127		107
Other 54	7,548		4,672		2,876		1,936		594		241		105
Nonmanufacturing nec, other 21-23, 42-81	8,520		7,788		732		168		209		327		28



Industry and NAICS code	All R&D	Paid for by the company	Paid for by others								
			Total	Federal	Companies			All other organizations ^b			
					Domestic		Foreign ^a				
2012											
All industries, 21-33, 42-81 ^c	302,250	247,280	54,970	30,621	i	11,624		12,093		632	
Manufacturing industries, 31-33	208,415	170,197	38,218	24,059	i	4,553		9,320		286	
Chemicals, 325	57,225	50,867	6,359	369	i	1,374		4,605		11	
Pharmaceuticals and medicines, 3254	48,146	42,594	5,552	57		1,337		4,153		5	
Other 325	9,079	8,273	807	312		37		452		6	
Machinery, 333	14,254	13,294	960	385		278		192		105	
Computer and electronic products, 334	65,068	56,677	8,391	4,852		1,248		2,167		124	
Electrical equipment, appliances, and components, 335	3,087	2,900	187	44	i	10	i	132		1	
Transportation equipment, 336	42,305	21,344	20,961	i	18,268	i	1,312	1,359		22	
Automobiles, trailers, and parts, 3361-63	s	13,191	s	s		558	i	s		s	
Aerospace products and parts, 3364	24,817	7,140	17,677	i	16,895	i	749	s		s	
Other 336	s	1,013	s	s		5	s	s		s	
Manufacturing nec, other 31-33	26,476	25,115	1,360	141		331		865		23	
Nonmanufacturing industries, 21-23, 42-81	93,835	77,083	16,752	6,562		7,071		2,773		346	
Information, 51	46,805	45,851	954	142		351		419		42	
Software publishers, 5112	28,745	28,012	733	103		256		367		7	



Industry and NAICS code	All R&D		Paid for by the company		Paid for by others									
					Total		Federal		Companies			All other organizations ^b		
									Domestic		Foreign ^a			
Other 51	18,060		17,839		221		39		95		52		35	
Finance and insurance, 52	3,519		3,507		12		0		11		2		0	
Professional, scientific, and technical services, 54	34,309		20,166		14,143		5,606		6,333		1,947		257	
Computer systems design and related services, 5415	11,251	i	9,163	i	2,088		1,449		435	i	180		24	
Scientific R&D services, 5417	16,544		6,788		9,756		2,596		5,512		1,540		108	
Other 54	6,514		4,215		2,299		1,561		386		227		125	
Nonmanufacturing nec, other 21-23, 42-81	9,202		7,559		1,643		814		376		405		48	
2011														
All industries, 21-33, 42-81 ^c	294,093		238,768		55,324		31,309	i	11,124		12,007		884	
Manufacturing industries, 31-33	201,361		163,340		38,021		24,698	i	4,196		8,870		257	
Chemicals, 325	55,324		49,988		5,337		110		1,320		3,867		40	
Pharmaceuticals and medicines, 3254	45,949		41,111		4,838		52		1,285		3,474		27	
Other 325	9,375		8,877		499		58		35		393		13	
Machinery, 333	14,709		13,578		1,131		522		423		s		s	
Computer and electronic products, 334	62,704		53,664		9,040		5,161		1,087		2,726		66	
Electrical equipment, appliances, and components, 335	3,595		3,417		178		76		24		74		4	
Transportation equipment, 336	40,880		20,275		20,605	i	s		1,086		s		s	



Industry and NAICS code	All R&D	Paid for by the company	Paid for by others							
			Total	Federal	Companies			All other organizations ^b		
					Domestic		Foreign ^a			
Automobiles, trailers, and parts, 3361-63	s	11,737	s	s	s	s		s		
Aerospace products and parts, 3364	26,054	7,585	18,469 i	17,806 i	592		s		s	
Other 336	s	s	s	s	s		s		s	
Manufacturing nec, other 31-33	24,149	22,418	1,730	s	256		s		s	
Nonmanufacturing industries, 21-23, 42-81	92,731	75,428	17,303	6,611	6,928		3,138		626	
Information, 51	41,865	41,014	851	s	321		s		s	
Software publishers, 5112	27,965	27,280	685	136	s		s		s	
Other 51	13,900	13,734	166	s	s		s		s	
Finance and insurance, 52	3,457	3,310	146	0	145		1		0	
Professional, scientific, and technical services, 54	38,219	23,368	14,851	5,848	6,227		2,213		563	
Computer systems design and related services, 5415	13,259	11,706	1,553	598	626		209		120	
Scientific R&D services, 5417	15,301	6,170	9,131	3,226	3,834		1,833		238	
Other 54	9,659	5,492	4,167	2,024	1,767		171		205	
Nonmanufacturing nec, other 21-23, 42-81	9,190	7,736	1,455	s	235		s		s	
2010										
All industries, 21-33, 42-81 ^c	278,977	221,706	57,271	34,199 i	11,013		11,015		1,044	
Manufacturing industries, 31-33	196,712	159,579	37,133	26,739 i	3,655		6,375		364	



Industry and NAICS code	All R&D		Paid for by the company		Paid for by others							
					Total		Federal		Companies		All other organizations ^b	
									Domestic	Foreign ^a		
Chemicals, 325	58,038		53,555		4,483		180		s	s	s	
Pharmaceuticals and medicines, 3254	49,415		45,398		4,017		99		s	s	s	
Other 325	8,623		8,157		466		81		s	s	s	
Machinery, 333	9,955		9,384		571		98		176	282	15	
Computer and electronic products, 334	59,875		51,223		8,652		5,935	i	911	1,767	39	
Electrical equipment, appliances, and components, 335	3,321		3,141		180		84		s	s	s	
Transportation equipment, 336	42,913		21,076		21,837	i	20,191	i	1,016	541	89	
Automobiles, trailers, and parts, 3361-63	s		10,098		s		s		s	s	s	
Aerospace products and parts, 3364	29,854		10,152		19,702	i	18,921	i	635	s	s	
Other 336	s		826		s		s		s	s	s	
Manufacturing nec, other 31-33	22,610		21,200		1,410		251		s	s	s	
Nonmanufacturing industries, 21-23, 42-81	82,265		62,127		20,138		7,460		7,358	4,532	788	
Information, 51	36,853		36,085		768		152		244	s	s	
Software publishers, 5112	26,982		26,387		595		140		134	s	s	
Other 51	9,871		9,698		173		12		110	s	s	
Finance and insurance, 52	2,109		2,109		0		0		0	0	0	
Professional, scientific, and technical services, 54	33,690		15,438		18,252		6,829		6,906	3,801	716	



Industry and NAICS code	All R&D		Paid for by the company		Paid for by others									
					Total		Federal		Companies			All other organizations ^b		
									Domestic		Foreign ^a			
Computer systems design and related services, 5415	11,050		9,416		1,634		712		397		348		177	
Scientific R&D services, 5417	12,140		2,851		11,968		3,279		5,344		3,144		201	
Other 54	10,500		3,171		4,650		2,838		1,165		309		338	
Nonmanufacturing nec, other 21-23, 42-81	9,613		8,495		1,118		479		208		s		s	
2009														
All industries, 21-33, 42-81 ^c	282,393		224,920		57,473		39,573		9,567		7,647		685	
Manufacturing industries, 31-33	195,144		158,225		36,920		28,825		3,345		4,532		218	
Chemicals, 325	53,328		49,876		3,452		207		1,263		1,961		s	
Pharmaceuticals and medicines, 3254	44,936		41,751		3,185		113		1,247		1,813		11	
Other 325	8,392		8,125		267		94		16		148		s	
Machinery, 333	9,138		8,782		356		150		133		67		s	
Computer and electronic products, 334	56,436		48,865		7,571		5,210		738		1,578		s	
Electrical equipment, appliances, and components, 335	3,334		3,105		228		70		55		66		s	
Transportation equipment, 336	48,337		24,223		24,114		23,023		757		251		s	
Automobiles, trailers, and parts, 3361-63	s		10,853		s		s		s		s		s	
Aerospace products and parts, 3364	34,554		12,384		22,170		21,524		596		s		s	
Other 336	s		986		s		s		s		s		s	



Industry and NAICS code	All R&D		Paid for by the company		Paid for by others								
					Total		Federal		Companies			All other organizations ^b	
									Domestic		Foreign ^a		
Manufacturing nec, other 31-33	24,570		23,374		1,199		165		399		609		s
Nonmanufacturing industries, 21-23, 42-81	87,248		66,695		20,553		10,749		6,223		3,115		467
Information, 51	33,806		32,995		811		194		349		233		34
Software publishers, 5112	26,395		25,729		666		176		267		191		32
Other 51	7,411		7,266		145		18		82		42		2
Finance and insurance, 52	1,912		1,904		8		1		6		0		0
Professional, scientific, and technical services, 54	44,946		26,031		18,915		10,461		5,531		2,505		168
Computer systems design and related services, 5415	12,560		10,742		1,818		1,240		449		122		7
Scientific R&D services, 5417	17,270		7,981		9,289		2,657		4,397		2,110		125
Other 54	15,116		7,308		7,808		6,564		685		273		36
Nonmanufacturing nec, other 21-23, 42-81	6,584		5,765		819		93		337		377		265
2008													
All industries, 21-33, 42-81 ^c	290,680		232,505		58,176		36,360		12,181		8,877		758
Manufacturing industries, 31-33	203,755		164,386		39,368		31,102		3,444		4,712		s
Chemicals, 325	58,250		55,042		3,207		197		814		2,182		15
Pharmaceuticals and medicines, 3254	48,131		45,169		2,962		137		796		2,017		11
Other 325	10,119		9,873		245		60		18		165		4



Industry and NAICS code	All R&D		Paid for by the company		Paid for by others								
					Total		Federal		Companies		All other organizations ^b		
									Domestic	Foreign ^a			
Machinery, 333	10,104		9,846		258		62		95		97		3
Computer and electronic products, 334	60,464		42,912		7,551		4,646		1,520		1,338		47
Electrical equipment, appliances, and components, 335	3,143		2,947		196		91		34		66		5
Transportation equipment, 336	50,552		23,039		27,513		25,941		774		768		s
Automobiles, trailers, and parts, 3361-63	13,140		12,234		906		s		s		s		s
Aerospace products and parts, 3364	36,941		10,371		26,570		25,805	i	649		s		s
Other 336	471		434		37		s		s		s		s
Manufacturing nec, other 31-33	21,242		30,600		643		165		207		261		s
Nonmanufacturing industries, 21-23, 42-81	86,926		68,118		18,807		5,258		8,737		4,166		s
Information, 51	37,695		36,922		772		229		217		s		s
Software publishers, 5112	28,221		27,665		556		176		117		s		s
Other 51	9,473		9,257		216		53		100		s		s
Finance and insurance, 52	1,092		1,084		8		0		7		* i		0
Professional, scientific, and technical services, 54	37,954		20,539		17,415		4,844		8,221		3,753		s
Computer systems design and related services, 5415	12,146		8,569		3,577		784		1,183		1,490		120
Scientific R&D services, 5417	17,913		8,708		9,205		2,115		4,726		2,008		s
Other 54	7,895		3,262		4,633		1,945		2,312		255		s



Industry and NAICS code	All R&D		Paid for by the company		Paid for by others									
					Total		Federal		Companies		All other organizations ^b			
									Domestic				Foreign ^a	
Nonmanufacturing nec, other 21-23, 42-81	10,185		9,573		612		185		292		s		s	

* = amount less than \$500,000; i = more than 50% of value imputed; s = suppressed for reasons of reliability and/or confidentiality.

NAICS = North American Industry Classification System; nec = not elsewhere classified.

^a Includes unaffiliated foreign companies foreign parent companies of U.S. subsidiaries.

^b Includes U.S. state government agencies and laboratories, foreign agencies and laboratories, and all other organizations located inside and outside the United States.

^c Includes companies located in the United States that performed or funded R&D.

Note(s)

Detail may not add to total because of rounding. Industry classification was based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Excludes data for federally funded R&D centers.

Source(s)

National Science Foundation, National Center for Science and Engineering Statistics, Business R&D and Innovation Survey (BRDIS) (annual series).

Science and Engineering Indicators 2018