

TABLE 47

Domestic R&D paid for by sources located outside the United States and performed by the company, by source of funds, industry, and company size: 2019

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Foreign companies				Foreign government agencies	Foreign universities, colleges, and academic researchers	All other
			Subsidiaries ^a	Company's parent	Unaffiliated companies				
All industries	21-23, 31-33, 42-81	46,840	27,117	17,563	1,991		123	3 - 16	32 - 44
Manufacturing industries	31-33	35,363	19,475	14,290	1,459		119	0 - 11	11 - 23
Food	311	365	129	234	2		0	0	0
Beverage and tobacco products	312	119	8	111	0		0	0	0
Textile, apparel, and leather products	313-16	13	8	*	5		0	0	0
Wood products	321	6	0	6	0		0	0	0
Paper	322	*	0	0	*		0	0	*
Printing and related support activities	323	0	0	0	0		0	0	0
Petroleum and coal products	324	154 - 274	74 - 170	72 - 104	0 - 9		0	0	0
Chemicals	325	12,478	5,011	6,643	816		*	0 - 10	0 - 10
Basic chemicals	3251	160	19	141	*		0	0	0
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	77	0 - 16	61 - 77	1		0	0	*
Pesticide, fertilizer, and other agricultural chemicals	3253	391 - 836	73 - 490	287 - 345	0 - 15		0	0	0 - 10
Pharmaceuticals and medicines	3254	11,204	4,490	5,906	801		*	0 - 9	0 - 9
Soap, cleaning compound, and toilet preparation	3256	172	14	158	1		0	0	*
Paint, coating, adhesive, and other chemicals	3255, 3259	27 - 471	0 - 399	14 - 72	0 - 15		0	0 - 10	0 - 10
Plastics and rubber products	326	14	4	10	*		0	0	1
Nonmetallic mineral products	327	33	2	31	*		*	0	*
Primary metals	331	4 - 16	*	0 - 10	5		*	0	0
Fabricated metal products	332	69	9	60	*		0	0	*
Machinery	333	723	33	632	57		*	0	*
Agricultural implement	33311	15	8	6	*		0	0	0
Semiconductor machinery	333242	559	3	497 - 557	0 - 58		0	0	*
Engine, turbine, and power transmission equipment	3336	19	8	11	0		0	0	0
Other machinery	other 333	130	14	57 - 117	0 - 58		*	0	0
Computer and electronic products	334	17,144	13,501	3,283	321		36	0 - 2	2 - 6
Communications equipment	3342	3,941	3,593 - 3,767	124 - 297	0 - 53		*	0	*
Semiconductor and other electronic components	3344	3,485	964	2,379	142		0	0 - 2	0 - 2

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Other information	other 51	4,140	i	4,003	i	122 - 138	0 - 14	i	0	0	0
Finance and insurance	52	1,036		1,036		0	0		0	0	0
Real estate and rental and leasing	53	0		0		0	0		0	0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0		0		0	0		0	0	0
Other real estate and rental and leasing	other 53	0		0		0	0		0	0	0
Professional, scientific, and technical services	54	2,944		240		2,362	312		5	4	21
Architectural, engineering, and related services	5413	113		41		44	14		3	3	8
Computer systems design and related services	5415	1,581		78		1,491	12		*	i	*
Scientific research and development services	5417	1,112	i	94		760	i	242	2	1	i
Research and development in biotechnology	541711	283	i	8		231	i	38	1	0	6
Research and development in the physical, engineering, and life sciences (except biotechnology)	541712	829	i	86		530	i	204	1	1	i
Research and development in the social sciences and humanities	541720	0		0		0	0		0	0	0
Other professional, scientific, and technical services	other 54	139		28		67	44		0	*	*
Health care services	621-23	4		0		0	4		0	0	0
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	42		0 - 31		0 - 29	12		*	i	0
All companies (number of domestic employees)	-	46,840		27,117		17,563	1,991		123	3 - 16	32 - 44
Small companies											
10-19 ^b	-	199	i	48		99	i	42	i	1	3
20-49	-	782		115		595	65	i	4	0 - 6	0 - 6
Medium companies											
50-99	-	1,027		240		573	211		*	0 - 5	0 - 5
100-249	-	1,716		560		1,060	87		*	0 - 11	0 - 11
Large companies											
250-499	-	1,716		303		1,216	189		*	i	0
500-999	-	2,521		928		1,439	153		*	i	0
1,000-4,999	-	9,904		2,401		6,993	507		3	*	*
5,000-9,999	-	2,461		1,318		795	346		*	0	2
10,000-24,999	-	8,261		3,306		4,623	295	i	36	0	0

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25,000 or more	-	18,254	17,897	171	97	79 i	0 - 13 i	0 - 13 i

* = amount < \$500,000; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

^a Statistics are based on companies in the United States that reported to the survey. No systematic item imputation was applied. These statistics include an adjustment to the weight to account for unit nonresponse.

^b The Business Enterprise Research and Development Survey does not include companies with fewer than 10 domestic employees.

Note(s):

Detail may not add to total because of rounding. Industry classification is 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. Beginning in survey year 2018, statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D. This change has affected the comparability of these estimates with estimates published for years prior to 2018. In all other tables, R&D costs of foreign-company subsidiaries of U.S. companies are included in company-funded U.S. domestic R&D totals. Only in this table are such R&D costs classified as being part of R&D paid for by sources located outside of the United States. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2019.