

TABLE 12

Domestic R&D paid for by the company and others and performed by the company, by type of R&D, industry, and company size: 2016

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Basic research	Applied research	Development
All industries	21-23, 31-33, 42-81	374,685	24,644	61,020	289,021
Manufacturing industries	31-33	250,553	18,882	42,443	189,228
Food	311	4,828	502	1,470	2,856
Beverages and tobacco products	312	D	155	D	D
Textiles, apparel, and leather products	313-16	1,166	85	120	961
Wood products	321	188	13	45	130
Printing and related support activities	323	219	31	33	155
Chemicals	325	73,575	10,117	15,771	47,687
Pharmaceuticals and medicines	3254	64,628	9,237	13,753	41,638
Other chemicals	other 325	8,947	880	2,018	6,049
Plastics and rubber products	326	3,752	346	874	2,532
Nonmetallic mineral products	327	1,289	150	291	848
Primary metals	331	592	65	115	412
Fabricated metal products	332	2,239	120	413	1,706
Machinery	333	12,585	654	1,530	10,401
Computer and electronic products	334	77,385	2,468	10,298	64,619
Semiconductors and other electronic components	3344	31,391	821	4,501	26,069
Navigational, measuring, electromedical, and control instruments	3345	14,885	755	2,212	11,918
Other computer and electronic products	other 334	31,109	892	3,584	26,632
Electrical equipment, appliances, and components	335	4,771	312	727	3,732
Transportation equipment	336	51,275	3,112	7,859	40,305
Aerospace products and parts	3364	26,645	1,629	3,742	21,274
Other transportation equipment	other 336	24,630	1,483	4,117	19,031
Furniture and related products	337	366	16	85	265
Miscellaneous manufacturing	322, 324, 339	D	737	D	D
Nonmanufacturing industries	21-23, 42-81	124,132	5,762	18,576	99,794
Information	51	70,748	2,028	6,805	61,916
Publishing	511	33,574	1,092	2,846	29,636
Telecommunications	517	D	377	D	D
Data processing, hosting, and related services	518	11,914	D	D	10,051
Other information	other 51	D	D	D	D
Professional, scientific, and technical services	54	37,595	2,671	9,900	25,024
Architectural, engineering, and related services	5413	3,412	330	1,423	1,659
Computer systems design and related services	5415	15,747	873	3,342	11,532
Scientific research and development services	5417	14,842	1,282	4,305	9,255
Biotechnology research and development	541711	4,464	586	592	3,286
Physical, engineering, and life sciences (except biotechnology) research and development	541712	9,659	640	3,263	5,756
Social sciences and humanities research and development	541720	719	57	450	212
Other professional, scientific, and technical services	other 54	3,595	186	831	2,578
Other nonmanufacturing	21-23, 42-49, 52, 53, 55-81	15,789	1,064	1,871	12,854
All companies (number of domestic employees)	-	374,685	24,644	61,020	289,021
Micro companies ^a					
5 - 9	-	1,581	202	485	894
Small companies					
10 - 19	-	4,958	383	1,471	3,104
20 - 49	-	9,662	860	2,554	6,248
Medium companies					
50 - 99	-	9,298	910	2,038	6,350

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100 – 249	–	14,875	1,104	3,243	10,529
Large companies					
250 – 499	–	13,092	788	2,870	9,434
500 – 999	–	14,450	1,158	2,329	10,963
1,000 – 4,999	–	63,971	4,794	12,711	46,466
5,000 – 9,999	–	40,633	1,955	4,468	34,210
10,000 – 24,999	–	65,594	3,826	11,736	50,033
25,000 or more	–	136,571	8,664	17,115	110,792

D = data withheld to avoid disclosing operations of individual companies; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

^a Business R&D and Innovation Survey does not include companies with fewer than five 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. Statistics are representative of companies located in the United States that performed or funded R&D.

Source(s)

National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2016.