

TABLE 21  
**Companies with domestic R&D paid for by the company and others and performed by the company in the nanotechnology focus area, by industry and company size: 2017**

(Millions of U.S. dollars)

Industry and company size	NAICS code	Nanotechnology R&D									
		Domestic R&D		Total		Paid for by the company		Paid for by others			
		Companies <sup>a</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount		
All industries	21-23, 31-33, 42-81	20,884	400,100	867	18,237	733	16,689	212	1,548		
Manufacturing industries	31-33	12,151	257,227	636	16,565	602	15,405	79	1,160		
Food	311	563	4,697	D	7	D	7	0	0		
Chemicals	325	1,840	74,977	188	449	183	423	13	26		
Basic chemicals	3251	269	2,574	42	123	41	115	3	7		
Pharmaceuticals and medicines	3254	841	66,202	51	218	50	212	4	6		
Other chemicals	other 325	731	6,202	94	108	92	96	6	12		
Plastics and rubber products	326	638	3,754	53	49	52	44	5	5		
Nonmetallic mineral products	327	193	1,334	14	56	14	48	D	7		
Fabricated metal products	332	1,260	2,206	10	20	10	18	D	1		
Machinery	333	1,793	13,197	51	2,060	51	2,015	3	45		
Agricultural implement	33311	183	1,570	0	0	0	0	0	0		
Semiconductor machinery	333242	39	3,694	9	1,925	9	1,923	D	2		
Engine, turbine, and power transmission equipment	3336	120	2,080	D	0-93	D	0-93	0	0		
Other machinery	other 333	1,452	5,853	D	42-136	D	0-93	D	43		
Computer and electronic products	334	1,793	78,575	179	13,543	157	12,493	44	1,050		
Semiconductor and other electronic components	3344	471	30,148	75	13,070	59	12,061	28	1,010		
Other electronic products	other 334	1,322	48,427	104	472	97	432	15	40		
Electrical equipment, appliances, and components	335	731	4,291	52	67	52	62	D	5		
Transportation equipment	336	844	53,292	11	83	8	66	3	17		
Automobiles, bodies, trailers, and parts	3361-63	396	23,881	7	19	5	8	D	11		
Other transportation	other 336	449	29,410	4	64	3	58	D	6		
Miscellaneous manufacturing	339	1,428	15,695	59	197	56	193	5	4		
Other manufacturing	312-16, 321-24, 331, 337	1,078	5,209	D	34	D	34	D	*		
Nonmanufacturing industries	21-23, 42-81	8,736	142,874	231	1,672	131	1,284	132	388		
Mining, extraction, and support activities	21	117	3,150	D	78	D	75	D	3		
Utilities	22	36	317	0	0	0	0	0	0		
Wholesale trade	42	691	534	D	*	D	*	0	0		
Information	51	2,527	80,252	18	769	18	765	D	5		
Publishing	511	1,074	34,338	D	769	D	764	D	5		

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		Domestic R&D		Total		Paid for by the company		Paid for by others			
		Companies <sup>a</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount		
Telecommunications	517	D	3,682 - 3,806	0	0	0	0	0	0	0	
Data processing, hosting, and related services	518	1,131	16,155	D	* i	D	* i	0	0		
Other information	other 51	D	25,954 - 26,077	0	0	0	0	0	0		
Professional, scientific, and technical services	54	4,304	36,922	202	i	822	105	i	442	127	380
Architectural, engineering, and related services	5413	1,265	2,708	18	i	42 i	14	i	29 i	6	13 i
Scientific research and development services	5417	1,035	17,321	157	i	435	70	i	105	111	330
Biotechnology research and development	541711	212	4,449	20	i	40	16		29	7	11
Other scientific research and development	other 5417	823	12,872	137	i	395	53	i	76	104	319
Other professional, scientific, and technical services	other 54	2,005	16,893	27	i	345	21	i	308	10	37
Health care services	621-23	177	1,101	D	2 i	D	2 i	0	0		
Other nonmanufacturing	23, 44-45, 48-49, 52-53, 55-56, 624, 71-72, 81	885	20,598	D	*	0	0	D	*		
All companies (number of domestic employees)	-	20,884	400,100	867	i	18,237 i	733	i	16,689 i	212	1,548
Small companies											
10-19 <sup>c</sup>	-	3,618	3,311	166	i	118	126	i	77	53	41
20-49	-	6,420	9,435	245	i	463	190	i	259	77	204
Medium companies											
50-99	-	3,806	10,141	159	i	315	145	i	247	19	68 i
100-249	-	3,176	17,216	115	i	402 i	104	i	236 i	21	166 i
Large companies											
250-499	-	1,475	14,103	50		368	47		345	10	23 i
500-999	-	939	17,871	38		524 i	36		383 i	7	141
1,000-4,999	-	984	65,112	56		3,504	52		2,894	D	610 i
5,000-9,999	-	206	40,198	12		2,831 i	11		2,818 i	D	13 i
10,000-24,999	-	154	73,485	15		4,571 i	11		4,352 i	8	219
25,000 or more	-	105	149,227	11		5,139 i	11		5,078 i	4	62

\* = amount < \$500,000; 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.

<sup>a</sup> Statistics for the number of companies are based only on companies in the United States that reported to the survey. These statistics do not include an adjustment to the weight to account for unit nonresponse. A company having multiple reporting parts for data collection may contribute to the statistics for multiple industries, so the detail may not add to the total for the number of companies.

<sup>b</sup> Statistics for the number of companies are based only on companies in the United States that reported to the survey. These statistics do not include an adjustment to the weight to account for unit nonresponse. These company count estimates reflect a new imputation process implemented for survey year 2014. This change has affected the comparability of these company count estimates with estimates published for years prior to 2014. A company having multiple reporting parts for data collection may contribute to the statistics for multiple industries, so the detail may not add to the total for the number of companies.

<sup>c</sup> Business 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. Statistics are representative of companies located in the United States that performed or funded R&D. Companies could report R&D in one, more than one, or no application area. 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 U.S. Census Bureau, Business Research and Development Survey, 2017.