

TABLE 24

Foreign R&D paid for by the company and others and performed by the company, by type of R&D, selected industry, and location: 2018

(Millions of U.S. dollars)

Industry and location	NAICS code	Total foreign R&D performance	Research (basic and applied)	Development
All locations				
All industries	21-23, 31-33, 42-81	100,376	19,788	80,589
Manufacturing industries	31-33	64,878	13,594	51,284
Chemicals	325	16,749	4,590	12,159
Pharmaceuticals and medicines	3254	13,945	4,004	9,941
Computer and electronic products	334	28,322	5,084 i	23,238
Semiconductor and other electronic components	3344	14,487	2,266 i	12,221 i
Nonmanufacturing industries	21-23, 42-81	35,498	6,194 i	29,304
Information	51	17,156	1,634	15,522
Software publishers	5112	7,175	1,124	6,052
Professional, scientific, and technical services	54	13,307	2,872	10,435 i
Scientific research and development services	5417	8,370 - 8,379	1,886 - 1,897	6,483
Africa				
All industries	21-23, 31-33, 42-81	328	48	280
Manufacturing industries	31-33	95	26	69
Chemicals	325	67	19	48
Pharmaceuticals and medicines	3254	54	17	37
Computer/electronic products	334	2	1	1
Semiconductor and other electronic components	3344	*	* i	* i
Nonmanufacturing industries	21-23, 42-81	233	22 i	211
Information	51	89	0 - 8	81 - 90
Software publishers	5112	0 - 58	0 - 8	0 - 58
Professional, scientific, and technical services	54	108	3	105
Scientific research and development services	5417	102	3	99
Asia and Pacific				
All industries	21-23, 31-33, 42-81	33,045	5,698	27,347
Manufacturing industries	31-33	22,011	3,991	18,020
Chemicals	325	3,265	966	2,299
Pharmaceuticals and medicines	3254	2,555	834	1,722
Computer/electronic products	334	12,965	1,975 i	10,990
Semiconductor and other electronic components	3344	7,942	1,020 i	6,922
Nonmanufacturing industries	21-23, 42-81	11,033	1,707 i	9,326
Information	51	5,630	476	5,154
Software publishers	5112	2,459	341	2,118
Professional, scientific, and technical services	54	3,368	539 i	2,828 i
Scientific research and development services	5417	1,879	219	1,660
Canada				
All industries	21-23, 31-33, 42-81	6,140	1,369	4,771
Manufacturing industries	31-33	3,390	695 i	2,695
Chemicals	325	644	182	462
Pharmaceuticals and medicines	3254	547	149	398
Computer/electronic products	334	1,840	359 i	1,481 i
Semiconductor and other electronic components	3344	705	92	613 i
Nonmanufacturing industries	21-23, 42-81	2,751	674	2,077
Information	51	1,588	253	1,335
Software publishers	5112	1,051	217	835
Professional, scientific, and technical services	54	899	310	589 i
Scientific research and development services	5417	420	216	203 i
Europe				
All industries	21-23, 31-33, 42-81	47,805	9,950	37,855

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(Millions of U.S. dollars)

Industry and location	NAICS code	Total foreign R&D performance	Research (basic and applied)	Development
Manufacturing industries	31-33	29,679	6,598	23,080
Chemicals	325	11,415	2,983	8,432
Pharmaceuticals and medicines	3254	9,760	2,640	7,120
Computer/electronic products	334	8,055	1,627 i	6,428 i
Semiconductor and other electronic components	3344	3,386	646 i	2,740 i
Nonmanufacturing industries	21-23, 42-81	18,126	3,351	14,775 i
Information	51	8,559	802	7,757
Software publishers	5112	3,101	493	2,608
Professional, scientific, and technical services	54	7,182	1,814	5,367 i
Scientific research and development services	5417	5,495	1,421	4,073
Latin America and OWH				
All industries	21-23, 31-33, 42-81	6,436	1,411	5,025
Manufacturing industries	31-33	4,958	1,219	3,739
Chemicals	325	929	228	700
Pharmaceuticals and medicines	3254	667	186	481
Computer/electronic products	334	2,038 i	394 i	1,645 i
Semiconductor and other electronic components	3344	430	113 i	316 i
Nonmanufacturing industries	21-23, 42-81	1,478	193 i	1,286 i
Information	51	260	13	247
Software publishers	5112	0 - 82	0 - 12	0 - 71
Professional, scientific, and technical services	54	1,081	123 i	958 i
Scientific research and development services	5417	389	21	368 i
Middle East				
All industries	21-23, 31-33, 42-81	5,353	900 i	4,453 i
Manufacturing industries	31-33	3,626	700 i	2,926 i
Chemicals	325	332	163	169
Pharmaceuticals and medicines	3254	311	161	151
Computer/electronic products	334	2,769	472 i	2,298 i
Semiconductor and other electronic components	3344	1,916	371 i	1,545 i
Nonmanufacturing industries	21-23, 42-81	1,726	200 i	1,526
Information	51	1,019	85	933
Software publishers	5112	484	63	422
Professional, scientific, and technical services	54	580	66 i	513 i
Scientific research and development services	5417	85	8	77
Puerto Rico^a				
All industries	21-23, 31-33, 42-81	493	217	276
Manufacturing industries	31-33	481	214	267
Chemicals	325	59 - 95	14 - 51	45
Pharmaceuticals and medicines	3254	46	15	31
Computer/electronic products	334	125 - 423	101 - 200	0 - 223
Semiconductor and other electronic components	3344	0 - 111	0 - 27	0 - 87
Nonmanufacturing industries	21-23, 42-81	12	2	10 i
Information	51	0 - 13	0 - 3 i	0 - 10 i
Software publishers	5112	0 - 13	0 - 3	0 - 10
Professional, scientific, and technical services	54	0 - 8 i	0 - 3	0 - 6 i
Scientific research and development services	5417	0 - 8 i	0 - 3	0 - 6 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; OWH = Other Western Hemisphere.

^a Puerto Rico is not included in the U.S. total due to its classification as a U.S. territory.

Note(s):

Detail within a select location may not add to total because of rounding. Sum of locations do not equal all locations due to the undistributed portion not being published. 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 and also performed foreign R&D. This change has affected the comparability of these estimates with estimates published for years prior to 2018. 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, 2018.