

INDUSTRIAL R&D EMPLOYMENT IN THE UNITED STATES AND IN U.S. MULTINATIONAL CORPORATIONS

by Francisco Moris

This *InfoBrief* provides employment estimates for industrial scientists and engineers who engage in research and development (R&D employees or R&D workers), using survey data from the National Science Foundation (NSF), U.S. Bureau of Economic Analysis (BEA), and U.S. Bureau of Labor Statistics (BLS). The combined data reveal that since 1994, industrial R&D employment has grown at a faster rate than overall industrial employment in the United States. R&D employment among U.S. multinational corporations (MNCs) is concentrated domestically, but between 1994 and 1999, overseas affiliates of MNCs increased their R&D workforce at a faster rate than did their U.S. parent companies. Overseas R&D employment of U.S. MNCs was concentrated in Europe, but growth was notable in some emerging markets.

NSF data are from the Survey of Industrial R&D, which collects data for all R&D-performing companies in the United States, regardless of ownership status. BEA data are from two international investment surveys, the Survey of Foreign Direct Investment in the United States and the Survey of U.S. Direct Investment Abroad, which collect selected R&D data from affiliates of foreign companies located in the United States, parent companies of U.S. MNCs, and their overseas affiliates. Selected aggregate data on industrial employment are from the BLS Survey of Current Employment Statistics. See Data Notes, below, for more detail on these surveys.

R&D employment data from both the NSF and the BEA surveys include scientists and engineers who perform R&D activities, whether or not the employee's college degree is in a science and engineering field. BEA R&D employment estimates are based on head counts for

scientists and engineers that devote the majority of their time to R&D activities. NSF R&D employment estimates are based on full-time equivalent (FTE) R&D scientists and engineers. To report FTE counts, companies are asked to include scientists and engineers who perform R&D functions on a full-time basis plus an adjusted number of employees whose activities are not solely devoted to R&D (based on the proportion of their time devoted to R&D activities).¹

U.S. Industrial R&D Employment Trends

NSF data show that U.S. industrial R&D employment was nearly level in the early 1990s (figure 1). Since then, R&D employment strengthened, reaching one million workers for the first time in 1999. In 2001 there were 1.05 million FTE R&D workers in the United States compared to 109.01 million workers in industries other than agriculture (nonfarm workers) (NSF and BLS data; table 1).

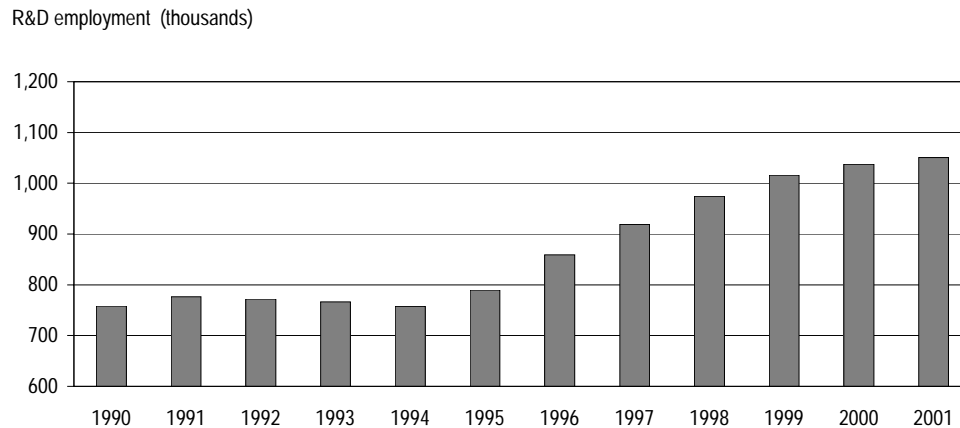
Wages and related labor costs in the 1990s typically accounted for over 40 percent of U.S. industrial R&D expenditures.² From 1994 to 2000 these expenditures grew annually an average of 7.0 percent (after adjusting for inflation), supporting an average annual growth rate of 5.4 percent in R&D employment, compared

¹ For example, to report its FTE R&D scientists and engineers, a company with 60 scientists and engineers who devoted one-fourth of their time to R&D projects would add 15 to the number of scientists and engineers engaged in R&D activities on a full-time basis.

² R&D expenditures include costs related to wages, materials and supplies, and depreciation but do not include capital expenditures. See the NSF Industrial Research and Development Information System (IRIS), available at <http://www.nsf.gov/sbe/srs/iris/start.htm>.



FIGURE 1. U.S. industrial R&D employment: 1990–2001



NOTE: R&D employment data are for full-time-equivalent employees.

SOURCE: National Science Foundation, Survey of Industrial R&D.

TABLE 1. U.S. industrial employment, R&D employment, and R&D expenditures: 1994–2001

Year	Employment (thousands)		R&D expenditures (millions)		R&D expenditures per R&D employee (constant US\$)
	Total	R&D ¹	Current US\$	Constant US\$	
1994	93,279.3	757.3	119,595	124,565	164,486
1995	96,165.8	789.5	132,103	134,662	170,576
1996	98,477.6	859.3	144,667	144,667	168,364
1997	101,416.4	918.6	157,539	154,526	168,219
1998	104,312.1	974.6	169,180	163,934	168,207
1999	106,976.3	1,015.7	182,711	174,592	171,894
2000	109,314.8	1,037.5	199,539	186,679	179,931
2001	109,005.8	1,050.8	198,505	181,423	172,661

¹ Data are provided as annual averages of full-time-equivalent workers.

NOTES: Beginning with 2001, industrial R&D expenditures exclude federally funded research and development centers. R&D expenditures refer to U.S. R&D performance of for-profit companies, regardless of domestic or foreign ownership status, from all funding sources. Constant-dollar figures are inflation-adjusted using gross domestic product price deflators (1996 = 100).

SOURCES: National Science Foundation, Division of Science Resources Statistics, Survey of Industrial R&D, <http://www.nsf.gov/sbe/srs/indus/start.htm>; U.S. Bureau of Labor Statistics, Survey of Current Employment Statistics, <http://www.bls.gov/ces/home.htm>. Accessed February 2004.

with 2.7 percent in total industrial employment. R&D employment changed little from 2000 to 2001 (table 1).

Key Industries

The U.S. manufacturing sector employed 58 percent of R&D workers in 2001, consistent with its 61 percent share in R&D expenditures (table 2). The computer and electronic products industry employed nearly one-fourth of U.S. industrial R&D workers. Together, the information industry and professional, scientific, and technical services employed another fourth of industrial R&D employees, reflecting the growing role of information and service industries in U.S. R&D activities.

Trade and transportation equipment manufacturing completed the list of top five industries in terms of R&D employment.³

In 2001 R&D expenditures per R&D worker for the aerospace industry were almost twice as large as the average for all industries, followed by transportation equipment, pharmaceuticals and medicines, and scientific R&D services (table 2).

³ Ongoing research at NSF strongly implies that much of trade R&D can be attributed to activities not related to trade. See NSF 2003:3.

TABLE 2. U.S. industrial R&D employment and R&D expenditures, by selected NAICS industry: 2001

Industry	R&D employment ¹ (thousands)	R&D expenditures (millions)		R&D expenditures per R&D employee (constant US\$)
		Current US\$	Constant US\$	
All industries	1050.8	198,505	181,423	172,661
Manufacturing	612.3	120,705	110,318	180,170
Chemicals	81.4	17,892	16,352	200,889
Pharmaceuticals and medicines	41.1	10,137	9,265	225,693
Machinery	53.8	6,404	5,853	108,790
Computer and electronic products ²	251.4	47,079	43,028	171,152
Electrical equipment, appliances, and components	28.2	4,980	4,551	161,686
Transportation equipment	104.1	25,965	23,731	228,070
Motor vehicles, trailers, and parts	74.4	D	D	D
Aerospace products and parts	22.1	7,868	7,191	325,382
Nonmanufacturing	438.5	77,799	71,104	162,172
Trade	106.7	24,372	22,275	208,760
Information	118.3	D	D	D
Publishing	86.8	13,760	12,576	144,967
Software	82.2	13,111	11,983	145,864
Professional, scientific, and technical services	149.3	27,704	25,320	169,648
Computer systems design and related services	54.6	9,154	8,366	153,228
Scientific R&D services	58.4	14,244	13,018	223,107

D = withheld to avoid disclosing operations of individual companies.

NAICS = North America Industry Classification System.

¹ Data are provided as annual averages of full-time-equivalent workers.

² Imputation rate for R&D employment is more than 50 percent.

NOTES: Beginning with 2001, industrial R&D expenditures data exclude federally funded research and development centers. R&D expenditures refer to U.S. R&D performance of for-profit companies, regardless of domestic or foreign ownership status, from all funding sources. Constant-dollar figures are inflation-adjusted using gross domestic product price deflators (1996 = 100).

SOURCE: National Science Foundation, Division of Science Resources Statistics, Survey of Industrial R&D, <http://www.nsf.gov/sbe/srs/indus/start.htm>. Accessed February 2004.

U.S. Affiliates of Foreign Companies

According to BEA data, U.S. affiliates of foreign companies employed 141,700 R&D workers in the United States in 2001 (table 3), compared to 1.05 million FTE R&D workers employed by all R&D-performing companies located in the United States.⁴ R&D expenditures in U.S. affiliates of foreign companies represented 15 percent of U.S. industrial R&D expenditures in 2001.

R&D employment in U.S. affiliates of foreign companies grew at an average annual rate of 4.4 percent between 1994 and 2001, comparable to the growth rate in all U.S. R&D performing companies (4.8 percent). Over the same period, R&D expenditures in U.S. affiliates of foreign companies grew at an annual average

rate of 7.6 percent (after adjusting for inflation), higher than the growth rate in all U.S. R&D performing companies (5.5 percent).

Between 1994 and 2001 R&D employment as a percentage of total employment (R&D employment intensity) in U.S. affiliates of foreign companies was just above two percent (table 3).

Key Investing Countries and Industries

Germany, the United Kingdom, Switzerland, France, and Japan accounted for about 70 percent of R&D expenditures and R&D employment in 2001 by U.S. affiliates of foreign companies. From 2000 to 2001 Finnish subsidiaries in the United States more than doubled their R&D workforce (1,400 to 3,300), and in the same period their R&D employment intensity almost doubled (3.5 percent to 6.8 percent). In 2001 Finnish subsidiaries had the largest R&D employment intensity among investing countries, followed by Ger-

⁴ BEA data in this section are for nonbank affiliates in the 50 U.S. states, the District of Columbia, Puerto Rico, and U.S. territories that are owned at least 10 percent by foreign companies. 2001 data are preliminary. Source: Survey of Foreign Direct Investment in the United States, <http://www.bea.doc.gov/bea/di/di1fdiop.htm>.

TABLE 3. Industrial employment, R&D employment, and R&D expenditures in U.S. affiliates of foreign companies: 1994–2001

Year	Employment (thousands)		R&D expenditures (millions)		R&D expenditures per R&D employee (constant US\$)	R&D employment intensity ¹ (%)
	Total	R&D	Current US\$	Constant US\$		
1994	4,840.5	105.1	15,566	16,213	154,262	2.2
1995	4,941.8	103.7	17,542	17,882	172,437	2.1
1996	5,105.0	112.8	17,984	17,984	159,433	2.2
1997	5,201.9	118.1	19,428	19,056	161,358	2.3
1998	5,646.1	135.7	25,373	24,586	181,181	2.4
1999	6,027.6	135.3	26,914	25,718	190,082	2.2
2000	6,524.6	141.8	29,274	27,387	193,140	2.2
2001	6,371.9	141.7	29,638	27,088	191,161	2.2

¹ R&D employment intensity is R&D employment as a percentage of total employment.

NOTES: Data are for U.S. affiliates owned at least 10 percent by foreign companies and exclude banks and other depository institutions. Constant dollar figures are inflation-adjusted using gross domestic product price deflators (1996 = 100). Data for 2001 are preliminary estimates.

SOURCE: U.S. Bureau of Economic Analysis, Survey of Foreign Direct Investment in the United States, <http://www.bea.gov/bea/di/di1fdiop.htm>. Accessed February 2004.

man and Swiss subsidiaries at 3.5 and 3.2 percent, respectively (table 4).⁵

Manufacturers represented nearly 75 percent of both R&D employment and expenditures in 2001, dominating R&D activity by foreign-owned affiliates in the United States. Chemical manufacturers (including pharmaceutical and medicine manufacturers) and computer and electronic products manufacturers employed a combined 41 percent of R&D workers (table 5). The information industry employed about 8 percent of R&D workers, and its publishing component (which includes software services) had the largest R&D employment intensity among nonmanufacturing industries.

U.S. Multinational Corporations and Overseas R&D Employment

Domestic and Overseas Activity

According to the latest available BEA data, in 1999 U.S. MNCs employed a global R&D workforce of 770,300, or close to 3 percent of their employees (table 6).⁶ U.S. MNCs comprise U.S. parent companies and their

majority-owned affiliates located overseas (foreign affiliates). U.S. parent companies employed 84 percent (646,800) of their R&D workers domestically; the remaining 16 percent (123,500) worked abroad for their foreign affiliates. In 1999 R&D expenditures showed a similar distribution in favor of U.S.-based activities.⁷

Between 1994 and 1999 worldwide R&D employment in U.S. MNCs grew at an average annual rate of 1.2 percent, well below average annual growth in both their overall employment (4.9 percent) and their R&D expenditures (6.9 percent). Within U.S. MNCs, however, R&D employment growth differed between parent companies and their foreign affiliates over this 5-year period. Overseas R&D employment grew at an average annual rate of 3.9 percent, compared with just 0.7 percent domestically, an indication of the increasing globalization of innovation and knowledge-based competition.

Key Industries

In 1999 two-thirds of R&D employment and three-fourths of R&D expenditures by foreign affiliates of U.S. MNCs were concentrated in three manufacturing industries: chemicals (including pharmaceuticals and medicines), computer and electronic products, and transportation equipment. Pharmaceuticals and medicines affiliates had the largest R&D employment intensity, at 8.5 percent (table 7). Professional, scientific, and

⁵ Year-to-year changes in operational data of MNCs can result from cross-border mergers and acquisitions, establishment of new facilities, or activities in existing facilities.

⁶ R&D employment data from the BEA Survey of U.S. Direct Investment Abroad are available only every 5 years from benchmark surveys, in contrast to R&D expenditure data, which are available annually. BEA data in this section are for nonbank U.S. parent companies and their nonbank majority-owned foreign affiliates (affiliates in which the combined ownership of all U.S. parents is more than 50 percent). Source: Survey of U.S. Direct Investment Abroad, <http://www.bea.doc.gov/bea/di/di1usdop.htm>.

⁷ In 2001 U.S. MNCs performed \$162,948 million in R&D activities: \$143,546 million (88 percent) by parent companies domestically and \$19,402 million (12 percent) by their overseas affiliates. 2001 data are preliminary.

TABLE 4. Industrial employment, R&D employment, and R&D expenditures in U.S. affiliates of foreign companies, by home country or region: 2001

Country or region	Employment (thousands)		R&D expenditures (millions)		R&D expenditures per R&D employee (constant US\$)	R&D employment intensity ¹ (%)
	Total	R&D	Current US\$	Constant US\$		
All countries or regions	6,371.9	141.7	29,638	27,088	191,161	2.2
Canada	562.2	11.1	2,218	2,027	182,625	2.0
Europe	4,251.0	101.0	21,920	20,034	198,354	2.4
Germany	734.8	26.0	6,010	5,493	211,262	3.5
United Kingdom	1,120.7	21.4	4,762	4,352	203,375	1.9
Switzerland	546.8	17.7	4,162	3,804	214,907	3.2
France	578.6	15.9	3,215	2,938	184,801	2.7
Netherlands	571.9	7.7	1,627	1,487	193,116	1.3
Finland	48.7	3.3	607	555	168,111	6.8
Sweden	248.8	3.3	408	373	112,997	1.3
Italy	101.3	1.5	252	230	153,543	1.5
Ireland	66.9	1.2	D	D	D	1.8
Asia and Pacific	965.1	20.4	4,038	3,691	180,908	2.1
Japan	786.8	17.9	3,474	3,175	177,377	2.3
Latin America and other Western Hemisphere	456.3	7.4	1,152	1,053	142,279	1.6
Middle East	48.2	1.1	186	170	154,540	2.3
Africa	11.0	0.2	39	36	178,220	1.8

D = withheld to avoid disclosing operations of individual companies.

¹R&D employment intensity is R&D employment as a percentage of total employment.

NOTES: Data are preliminary estimates for U.S. affiliates owned at least 10 percent by foreign companies and exclude banks and other depository institutions. Constant-dollar data are inflation-adjusted using gross domestic product price deflators (1996 = 100).

SOURCE: U.S. Bureau of Economic Analysis, Survey of Foreign Direct Investment in the United States, <http://www.bea.gov/bea/di/di1fdiop.htm>. Accessed February 2004.

technical services affiliates (which include those in scientific R&D services) employed the highest number of R&D employees (9,500) outside manufacturing and represented 7.7 percent of the overseas R&D workforce of U.S. MNCs.

Overseas Locations

R&D employment in foreign affiliates of U.S. MNCs was concentrated in Europe (figure 2). In 1999 foreign affiliates of U.S. companies in three European countries—France, Germany, and the United Kingdom—employed 52 percent (63,800) of all overseas R&D workers in U.S. MNCs and performed 49 percent (\$8.83 billion) of all overseas R&D expenditures by U.S. MNCs (table 8). Affiliates of U.S. MNCs in Canada and Japan each employed 6 percent of overseas R&D workers of U.S. MNCs.

From 1994 to 1999, foreign affiliates of U.S. MNCs expanded their R&D workforce in some Asian emerging markets, including China, Hong Kong, Malaysia, Singapore, and South Korea, as well as in Israel and Mexico. During this period, R&D employment by U.S.

MNCs in the Asia-Pacific region, excluding Japan, almost doubled to over 13,000 (see also NSB 2004:4-67 to 4-70; NSF 2004).

Data Notes

Surveys

The NSF Survey of Industrial R&D is a nationally representative sample of all for-profit companies in the 50 U.S. states and the District of Columbia, regardless of ownership status. Estimates are subject to sampling and non-sampling errors. See <http://www.nsf.gov/sbe/srs/sird/start.htm> for a description of the survey and its methodology.

BEA international investment data from the Survey of Foreign Direct Investment in the United States (FDIUS) and the Survey of U.S. Direct Investment Abroad (USDIA) are obtained from a combination of census-type surveys in benchmark years (every 5 years) and sample-based surveys in nonbenchmark years. For a description of data and for survey methodology see <http://www.bea.gov/bea/di/fddscrpt.htm> (FDIUS) and <http://www.bea.gov/bea/di/usdscrpt.htm> (USDIA).

TABLE 5. Industrial employment, R&D employment, and R&D expenditures in U.S. affiliates of foreign companies, by selected NAICS industry: 2001

Industry	Employment (thousands)		R&D expenditures (millions)		R&D expenditures per R&D employee (constant US\$)	R&D employment intensity ¹ (%)
	Total	R&D	Current US\$	Constant \$US		
All industries	6,371.9	141.7	29,638	27,088	191,161	2.2
Manufacturing	2,569.8	105.6	21,777	19,903	188,476	4.1
Chemicals	385.2	35.4	8,316	7,600	214,700	9.2
Pharmaceuticals and medicines	151.8	24.2	6,566	6,001	247,974	15.9
Machinery	309.9	14.8	2,005	1,832	123,815	4.8
Computer and electronic products	256.6	22.7	5,308	4,851	213,711	8.8
Electrical equipment, appliances, and components	198.8	7.5	905	827	110,283	3.8
Transportation equipment	389.2	12.8	3,380	3,089	241,339	3.3
Motor vehicles, trailers, and parts	339.6	10.4	3,088	2,822	271,372	3.1
Aerospace products and parts	NA	NA	NA	NA	NA	NA
Nonmanufacturing	3,802.1	36.1	7,861	7,185	199,018	0.9
Trade	1,373.1	16.6	4,561	4,169	251,115	1.2
Information	307.4	10.9	1,503	1,374	126,024	3.5
Publishing	101.9	8.2	1,182	1,080	131,742	8.0
Software	NA	NA	NA	NA	NA	NA
Professional, scientific, and technical services	202.4	4.3	931	851	197,880	2.1
Computer systems design and related services	43.1	2.0	308	281	140,748	4.6
Scientific R&D services	NA	NA	NA	NA	NA	NA

NA = not available.

NAICS = North America Industry Classification System.

¹R&D employment intensity is R&D employment as a percentage of total employment.

NOTES: Data are preliminary estimates for U.S. affiliates owned at least 10 percent by foreign companies and exclude banks and other depository institutions. Constant dollar data are inflation-adjusted using gross domestic product price deflators (1996 = 100).

SOURCE: U.S. Bureau of Economic Analysis Survey of Foreign Direct Investment in the United States, <http://www.bea.gov/bea/di/di1fdiop.htm>. Accessed February 2004.

TABLE 6. Global industrial employment, R&D employment, and R&D expenditures in U.S. multinational corporations: 1994 and 1999

Year and corporate category	Employment (thousands)		R&D expenditures (current US\$millions)	R&D expenditures per R&D employee (current US\$)	R&D employment intensity ¹ (%)
	Total	R&D			
1994					
U.S. parent companies and foreign affiliates	24,272.5	726.8	103,451	142,338	3.0
U.S. parent companies	18,565.4	624.8	91,574	146,565	3.4
Foreign affiliates	5,707.1	102.0	11,877	116,441	1.8
1999					
U.S. parent companies and foreign affiliates	30,772.6	770.3	144,435	187,505	2.5
U.S. parent companies	23,006.8	646.8	126,291	195,255	2.8
Foreign affiliates	7,765.8	123.5	18,144	146,915	1.6

¹R&D employment intensity is R&D employment as a percentage of total employment.

NOTES: Data are for U.S. parent companies and their majority-owned foreign affiliates (combined ownership of all U.S. parents is more than 50 percent). Data exclude banks and other depository institutions.

SOURCE: U.S. Bureau of Economic Analysis, Survey of U.S. Direct Investment Abroad, <http://www.bea.gov/bea/di/di1usdop.htm>. Accessed February 2004.

TABLE 7. Industrial employment, R&D employment, and R&D expenditures in majority-owned foreign affiliates, by selected NAICS industry: 1999

Industry	Employment (thousands)		R&D expenditures (current US\$millions)	R&D expenditures per R&D employee (current US\$)	R&D employment intensity (%)
	Total	R&D			
All industries	7,765.8	123.5	18,144	146,915	1.6
Manufacturing	4,357.3	108.5	16,388	151,041	2.5
Chemicals	568.7	25.4	4,340	170,866	4.5
Pharmaceuticals and medicines	201.8	17.1	3,578	209,240	8.5
Machinery	346.9	6.4	748	116,875	1.8
Computer and electronic products	767.0	22.8	3,773	165,482	3.0
Electrical equipment, appliances, and components	264.6	3.8	214	56,316	1.4
Transportation equipment	865.7	35.5	5,669	159,690	4.1
Motor vehicles, trailers, and parts	824.2	32.7	5,385	164,679	4.0
Aerospace products and parts	NA	NA	NA	NA	NA
Nonmanufacturing	3,408.5	15.0	1,756	117,067	0.4
Trade	669.9	4.0	515	128,750	0.6
Information	295.6	1.2	161	134,167	0.4
Publishing	52.0	0.8	D	D	1.5
Software	NA	NA	NA	NA	NA
Professional, scientific, and technical services	395.9	9.5	1,040	109,474	2.4
Computer systems design and related services	157.9	2.6	305	117,308	1.6
Scientific R&D services	NA	NA	NA	NA	NA

D = withheld to avoid disclosing operations of individual companies.

NA = not available.

NAICS = North America Industry Classification System.

¹R&D employment intensity is R&D employment as a percentage of total employment.

NOTES: Data are for majority-owned foreign affiliates of U.S. companies (combined ownership of all U.S. parents is more than 50 percent). Data exclude banks and other depository institutions.

SOURCE: U.S. Bureau of Economic Analysis, Survey of U.S. Direct Investment Abroad, <http://www.bea.gov/bea/di/di1usdop.htm>. Accessed February 2004.

BLS data are from the Survey of Current Employment Statistics, which covers payrolls in nonfarm establishments in the 50 U.S. states and the District of Columbia. BLS data used in this *InfoBrief* exclude workers in government and in banks and other depository institutions. Employment is the total number of persons on establishment payrolls employed full or part time who received pay for any part of the survey reference period. See <http://www.bls.gov/ces/home.htm> for detailed information.

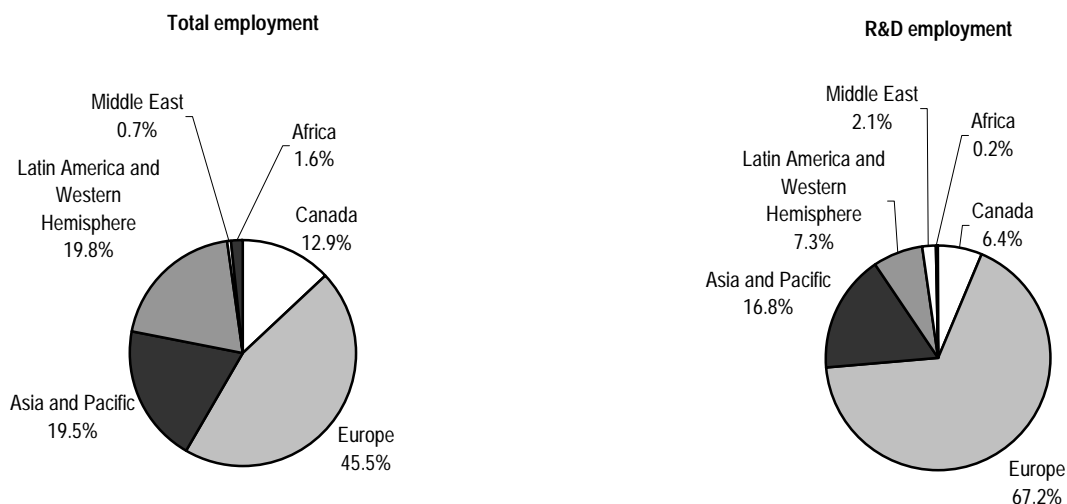
R&D Employment

NSF defines R&D employees as scientists and engineers with R&D functions. Scientists and engineers are defined as persons engaged in scientific or engineering work at a level of knowledge or experience equivalent

to completion of a 4-year college degree with a major in a science or engineering field (regardless of formal degree). R&D employment estimates are annual averages reported for January in two consecutive years and are based on full-time equivalents.

BEA international investment surveys define R&D employees as scientists, engineers, and other professional and technical employees, including managers, who spend all or a majority of their time engaged in scientific or engineering R&D work. Their R&D activities require knowledge of physical sciences, engineering, or mathematics at least equivalent to that acquired through completion of a 4-year college degree with a major in one of these fields (training may be either formal or by experience).

FIGURE 2. Distribution of employment in foreign affiliates of U.S. MNCs, by host country or region: 1999



NOTE: Data are for majority-owned foreign affiliates of U.S. multinational corporations (MNCs).

SOURCE: U.S. Bureau of Economic Analysis, Survey of U.S. Direct Investment Abroad.

TABLE 8. Industrial employment, R&D employment, and R&D expenditures in majority-owned foreign affiliates, by host country/region: 1994 and 1999

Country/region	Employment (thousands)				R&D expenditures (current US\$millions)	
	Total		R&D		1994	1999
	1994	1999	1994	1999		
All countries	5,707.1	7,765.8	102.0	123.5	11,877	18,144
Canada	810.2	1,004.2	7.3	7.9	836	1,681
Europe	2,582.7	3,530.5	73.1	83.1	8,676	12,217
France	364.6	530.4	11.3	10.8	1,372	1,452
Germany	548.9	640.6	24.4	25.3	2,849	3,377
Italy	164.1	188.2	4.4	3.8	365	504
Netherlands	136.5	165.5	4.2	3.8	415	374
Sweden	31.2	72.4	0.5	1.7	72	1,036
Switzerland	45.1	54.7	1.2	1.5	191	231
United Kingdom	787.9	1,059.6	18.9	27.7	2,158	4,000
Latin America and other Western Hemisphere	1,100.3	1,536.4	7.2	9.0	477	613
Brazil	262.7	348.8	D	5.4	238	288
Mexico	496.6	780.8	1.4	2.7	183	238
Asia and Pacific	1,073.6	1,516.7	13.0	20.8	1,775	3,226
Japan	164.7	207.3	6.0	7.5	1,130	1,523
Africa	78.7	126.0	0.2	0.2	15	18
South Africa	27.0	55.0	0.2	0.1	14	14
Middle East	38.0	52.2	1.3	2.6	98	389
Israel	25.8	33.0	1.3	2.6	96	389

D = withheld to avoid disclosing operations of individual companies.

NOTES: Data are for majority-owned foreign affiliates of U.S. companies (combined ownership of all U.S. parents is more than 50 percent). Data exclude banks and other depository institutions.

SOURCE: U.S. Bureau of Economic Analysis, Survey of U.S. Direct Investment Abroad, <http://www.bea.gov/bea/di/di1usdop.htm>. Accessed February 2004.

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