

**IMF Committee on Balance of Payments Statistics and
OECD Workshop on International Investment Statistics**

DIRECT INVESTMENT TECHNICAL EXPERT GROUP

**Background Paper to Issue #3,
Indirect Investment: FCS, USM, or 50% Ownership**

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Background Paper for DITEG Issue #3, Indirect Investment: FCS, USM, or 50% Ownership¹

Introduction

1. During the discussion of the different methods for defining direct investment relationships, the representative from the United States offered to explore the feasibility of comparing selected data on U.S. direct investment abroad using three different methods: the method now used by the U.S. Bureau of Economic Analysis (the “US method”, henceforth “USM”), which is based on a straight mathematical calculation of direct and indirect ownership percentages; the Fully Consolidated System (“FCS”), which is the method recommended in existing international standards including *BPM5* and the OECD *Benchmark Definition of Foreign Direct Investment*; and a method proposed by the European Union that includes directly owned foreign affiliates, companies that are majority owned by those affiliates, and all other companies below them in a continuous chain of majority ownership (“EUM”).

2. Each of these methods has strengths and weaknesses. For example, a strength of the FCS is that it is usually regarded as coming closest of all methods to the conceptually correct method of identifying direct investment relationships, but it is difficult for direct investment data users and respondents to understand and employ all elements of this method. A strength of the USM is that it can be readily understood by direct investment data users and respondents, and it is widely believed that results tabulated under this method come quite close to those that would result under the FCS, but it may be considered weaker than the FCS on conceptual grounds. A strength of the EUM is that it is much easier to understand and employ than the other two methods, but a concern expressed about this method is that it may omit sizable amounts of data that (conceptually) should be included in direct investment.

3. This paper provides data that may be used in comparing these three methods, by providing tabulations of data for each of the methods. It shows that data on direct investment positions (by country and by industry) are usually similar under all three methods, and that data on foreign

¹ Raymond J. Mataloni, Jr. of the Bureau of Economic Analysis assisted in preparing this background paper and prepared the tabulations of data for the FCS and EUM.

affiliate assets and employment are typically quite similar under the USM and FCS. However, data on affiliate assets and employment under the EUM often differ substantially from data under the USM, especially at the individual country or industry level.

What data items were tabulated

4. Based on its data for U.S. direct investment abroad, BEA has now tabulated three data items for purposes of this comparison -- direct investment positions, assets, and employment. Data were generated for 64 individual countries² (as shown in the standard country stub used in many BEA publications) and for 62 industries³ (as shown in BEA's standard industry stub) (see attachments). BEA is unable to release the detailed tabulations for the FCS and EUM because of concerns about confidentiality. In particular, in many cases, only one or a few foreign affiliates account for the entire difference between the USM and the other methods shown, and BEA is therefore concerned about residual disclosure of respondent provided information.

5. In preparing its tabulations, BEA manipulated its data to determine the extent to which the USM is more *inclusive* than the other two methods. However, BEA has no data on foreign affiliates covered by the other methods but not by the USM, and so BEA cannot determine the extent that the USM is less inclusive than the other two methods.

Description and general information

6. The BEA tabulations were based on a sample of nonbank foreign affiliates (albeit, a large one covering 79 percent of the position in nonbank foreign affiliates, 78 percent of nonbank affiliate employment, and 85 percent of nonbank affiliate assets), not the universe, of foreign affiliates, representing those for which the necessary chain-of-ownership information was filed on the 2002 BE-11 annual survey of U.S. direct investment abroad. BEA has developed no information that shows whether or not the data omissions resulted in biased results, and so the accompanying tabulations therefore should be used with caution.

² The word "countries" is used broadly here. It applies to individual countries as well as detailed groups of countries that are not shown separately, such as "other Europe" and "other Africa", but excludes subtotals, such as Europe and Africa.

³ The word "industries" is used broadly here. It applies to individual industries as well as detailed groups of industries that are not shown separately, such as "other chemicals" and wholesale trade of "other durable goods", but excludes subtotals, such as chemicals and wholesale trade.

7. The three methods of defining direct investment differ only in their treatment of indirectly held direct investment enterprises. All three methods consider a directly held foreign firm to be a direct investment enterprise if the equity interest of the direct investor is at least 10%. The USM considers an indirectly held foreign firm to be a direct investment enterprise if the equity interest of the direct investor, calculated by multiplying the equity interests at each tier of ownership, is at least 10%. In the example below, the direct investor's equity interest in all four foreign firms (A, B, C, and D) meets the BEA criterion for direct investment: Foreign Firm A (70%), Foreign Firm B (70% of 45%, or 32%), Foreign Firm C (28%), and Foreign Firm D (11%).

Example of a Chain of Equity Ownership

Parent Firm owns 70% \Rightarrow Foreign Firm A, who owns 45% \Rightarrow Foreign Firm B, who owns 90% \Rightarrow Foreign Firm C, who owns 40% \Rightarrow Foreign Firm D.

In this example, the Parent Firm directly owns 70% of Firm A and it indirectly owns 32% of Firm B ($= 70\% \times 45\%$), 28% of Firm C ($= 70\% \times 45\% \times 90\%$), and 11% of Firm D ($70\% \times 45\% \times 90\% \times 40\%$).

8. The FCS considers an indirectly held foreign firm to be a direct investment enterprise as long as either: (1) there is an unbroken chain of majority ownership between the U.S. direct investor and all higher-tier foreign firms and the penultimate-tier foreign firm has at least a 10-percent equity interest in the foreign firm in question, or (2) after a break in the chain of majority ownership, a foreign firm is within an unbroken chain of majority ownership. In the example, Foreign Firms A and B would qualify under the first criterion and Foreign Firm C would qualify under the second; Foreign Firm D would not be considered a direct investment enterprise because the chain of majority-ownership under Foreign Firm B ends with Foreign Firm C.

9. The EUM considers an indirectly held foreign firm to be a direct investment enterprise only if there is an unbroken chain of majority-ownership between the indirectly held foreign firms. In the example, directly held Foreign Firm A would be a direct investment enterprise (because it is owned at least 10% by the direct investor) but none of the indirectly held foreign firms (B, C, or

D) would be direct investment enterprises (because foreign firm B is not majority owned, it and all of its lower-tier foreign affiliates are not considered to be direct investment enterprises).

10. Data under the EUM are a subset of data under the FCS, because the EUM excludes all indirectly held foreign firms that are not majority owned and all firms below them in the chain of ownership, whereas the FCS includes the first indirectly held foreign firm and all majority held foreign firms below them in the chain of ownership. Also, in the tabulations prepared for this paper, data under both the FCS and EUM are subsets of data under the USM (a result that necessarily holds because, as noted above, BEA has no data for affiliates covered by the other methods but not by the USM).

11. The differences between the estimates based on the USM, FCS, and EUM vary by data item, by country, and by industry. In the following discussion, when differences between the USM and FCS, or between the USM and EUM, are expressed in percentage terms, they reflect the amount by which data tabulated under the FCS or EUM must be increased, to arrive at the level under the USM.

12. The remaining text of this background paper summarizes and highlights data that are presented in the attached tables. Many readers may prefer to quickly scan through this material and focus on the tables themselves.

Differences in Direct Investment Positions

13. At the global level, differences among the estimates using these three methods are small for the direct investment position abroad. The USM results in an estimate that is 0.1 percent higher than that based on the FCS and 1.3 percent higher than that based on the EUM. At lower levels of aggregation (individual countries or individual industries), there are relatively few large differences in direct investment positions under the three methods.

a. Direct Investment Positions: USM compared to FCS

14. As noted, across individual countries, the estimates of the position tend to be close, with few exceptions. The difference between the estimates based on the USM and FCS is greater than 5 percent for no countries.

15. Across industries, the difference between the estimates based on the USM and FCS is greater than 5 percent for only one of the 62 industries (telecommunications).

b. Direct Investment Positions: USM compared to EUM

16. Across countries, the estimates of positions are usually close, but not as close as USM compared to FCS. The percentage difference between the estimates based on the USM and EUM is greater than 5 percent for 6 of the 64 countries (Norway, Turkey, Colombia, Peru, Nigeria, and Hong Kong). It is greater than 15 percent for 4 countries (Turkey, Colombia, Nigeria, and Hong Kong).

17. Across industries, the percentage difference between the estimates based on the USM and EUM is greater than 5 percent for 4 of the 62 industries (food manufacturing; furniture and related products manufacturing; management, scientific, and technical consulting; and agriculture, forestry, fishing, and hunting). The difference is greater than 15 percent for 1 industry (agriculture, forestry, fishing, and hunting), but the difference is small in dollar terms.

Differences in assets and employment

18. Differences between the measures of assets and employment under the USM and FCS tend to be small, even at low levels of aggregation (individual countries or individual industries).

However, differences in the measures of assets and employment under the USM and EUM tend to be much greater and more widespread, and often exceed 15 percent. Differences between the methods tend to be greater for financial and operating data items such as assets and employment, because, unlike for direct investment equity positions, indirectly held affiliates may play a large role in these data sets. It should be noted that differences by individual country cross-classified by individual industry (such as food manufacturing or wholesale trade of petroleum in a particular country) are likely to be substantially larger, on average, than the differences observed

at higher levels of aggregation, but no comparisons were performed at these very low levels of aggregation.

a. Assets and employment: USM compared to FCS

Assets

19. At the global level, the percentage difference between the estimates of assets based on the USM and FCS is 0.5 percent. Across countries, the percentage difference is greater than 5 percent for 6 of the 64 countries (Belgium, Czech Republic, France, Venezuela, “other countries” in South America, and “other countries” in “Other Western Hemisphere”).

20. Across industries, the percentage difference between the estimates of assets based on the USM and FCS is greater than 5 percent for one of the 62 industries (telecommunications).

Employment

21. At the global level, the percentage difference between the estimates of employment based on the USM and FCS is 0.9 percent. Across countries, the percentage difference is greater than 5 percent for 4 of the 64 countries (Belgium, Czech Republic, Venezuela, and “other countries” in Central America). The percentage difference is larger than 15 percent for 2 of these countries (Belgium and Venezuela).

22. Across industries, the percentage difference between the estimates of employment based on the USM and FCS is greater than 5 percent for only one of the 62 industries (telecommunications). The percentage difference for this industry is also larger than 15 percent.

b. Assets and employment: USM compared to EUM

Assets

23. At the global level, the percentage difference between the estimates of assets based on the USM and EUM is 7.4 percent. Across countries, the percentage difference is greater than 5 percent for 39 of the 64 countries (in fact, it is greater than 5 percent for major geographic

regions including Europe; Latin America and Other Western Hemisphere; Africa; Middle East; and Asia and Pacific). The percentage difference is larger than 15 percent for 14 countries (Belgium, Denmark, Luxembourg, Russia, “other Europe”, Peru, Venezuela, “other South America”, Nigeria, Saudi Arabia, “other Middle East”, Australia, Indonesia, and Korea).

24. Across industries, the percentage difference between the estimates of assets based on the USM and EUM is greater than 5 percent for 24 of the 62 industries. The percentage difference is larger than 15 percent for 9 industries (oil and gas extraction; petroleum and coal products manufacturing; manufacturing of agriculture, construction, and mining machinery; “other machinery manufacturing”; wholesale trade of petroleum and petroleum products; broadcasting, cable networks, and program distribution; telecommunications; management, scientific, and technical consulting; and transportation and warehousing).

Employment

25. At the global level, the percentage difference between the estimates of employment based on the USM and EUM is 6.4 percent. Across countries, the percentage difference is greater than 5 percent for 30 of the 64 countries. The percentage difference is larger than 15 percent for 8 countries (Belgium, Venezuela, Nigeria, Saudi Arabia, “other Middle East”, Australia, Indonesia, and Japan).

26. Across industries, the percentage difference between the estimates of employment based on the USM and EUM is greater than 5 percent for 20 of the 62 industries. The percentage difference is larger than 15 percent for 9 industries (oil and gas extraction; manufacturing of beverages and tobacco products; petroleum and coal products manufacturing; manufacturing of resins and synthetic rubber, fibers, and filaments; manufacturing of agriculture, construction, and mining machinery; “other machinery manufacturing”; wholesale trade of petroleum and petroleum products; telecommunications; and real estate).

Table 1.--Comparison of Sample Estimates¹ for Selected Items on USM, FCS, and EUM

	Percent Difference Between Sample Estimates							
	0%	5% or less	5% to 10%	10% to 15%	15% to 25%	25% to 50%	50% to 100%	100% or more
	Number of Countries							
USM less FCS ²								
Position	48	16	0	0	0	0	0	0
Total Assets	37	21	5	1	0	0	0	0
Total Employment	40	20	1	1	2	0	0	0
USM less EUM ³								
Position	32	26	1	1	4	0	0	0
Total Assets	3	22	18	7	2	8	3	1
Total Employment	7	27	19	3	1	6	0	1
	Number of Industries							
USM less FCS ²								
Position	47	14	0	1	0	0	0	0
Total Assets	36	25	0	1	0	0	0	0
Total Employment	39	22	0	0	1	0	0	0
USM less EUM ³								
Position	24	34	2	1	0	0	1	0
Total Assets	13	26	9	5	4	4	0	1
Total Employment	13	29	9	2	6	3	0	0

USM United States Method

FCS Fully Consolidated System

EUM European Union Method

1. The sample estimates (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) cover only affiliates for which the necessary chain-of-ownership information was filed on the 2002 BE-11 annual survey of U.S. direct investment abroad.
2. Equals [(Sample estimates based on USM less sample estimates based on FCS) divided by the sample estimates based on FCS] times one hundred.
3. Equals [(Sample estimates based on USM less sample estimates based on EUM) divided by the sample estimates based on EUM] times one hundred.

Table 2a.--Comparison of Sample Estimates and BEA Published Universe Estimates for Selected Items on USM, FCS, and EUM, 2002
(Millions of Dollars or Thousands of Employees)

	Comparison of Estimates for a Large Sample of Companies (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) Covering Only Affiliates for which the Necessary Chain-of-Ownership Information was Filed on the 2002 BE-11 Annual Survey of U.S. Direct Investment Abroad						BEA Published Universe Estimates for 2002		
	USM less FCS ¹			USM less EUM ²			U.S. direct investment position abroad	Total assets of foreign affiliates	Total employment by foreign affiliates
	Greater than 5 Percent Difference Between Sample Estimates			Greater than 5 Percent Difference Between Sample Estimates					
	Position	Assets	Employment	Position	Assets	Employment			
All countries					✓	✓	1,601,414	6,865,705	9,695.9
Canada							170,169	514,250	1,124.1
Europe					✓		848,599	4,103,349	4,118.4
Austria							4,514	20,404	31.2
Belgium		✓	✓		✓	✓	24,868	172,524	141.5
Czech Republic		✓	✓		✓	✓	1,400	9,522	52.8
Denmark					✓		6,132	(D)	L
Finland							1,838	9,041	18.4
France		✓			✓		42,999	212,778	583.2
Germany					✓		67,404	351,566	653.0
Greece							1,017	(D)	K
Hungary					✓		2,512	7,048	48.4
Ireland							46,617	240,473	88.1
Italy					✓		24,886	106,230	248.3
Luxembourg					✓	✓	59,496	314,034	10.9
Netherlands					✓		164,217	534,795	230.6
Norway				✓	✓	✓	6,307	29,954	37.3
Poland							4,969	12,756	83.2
Portugal							3,402	19,161	38.8
Russia					✓		666	9,550	39.4
Spain						✓	33,735	97,425	211.5
Sweden						✓	29,359	73,834	92.9
Switzerland							71,454	199,399	59.9
Turkey				✓	✓		1,880	7,140	38.7
United Kingdom							239,219	1,581,483	1,219.4
Other					✓	✓	9,708	30,601	79.1
Latin America and Other Western Hemisphere					✓	✓	284,561	994,055	1,990.0
South America					✓	✓	67,133	224,566	753.2
Argentina					✓	✓	11,247	37,332	94.9
Brazil					✓	✓	27,615	101,114	391.1
Chile					✓		9,991	24,361	64.1
Colombia				✓	✓		2,557	12,668	71.2
Ecuador						✓	1,179	3,052	15.5
Peru				✓	✓	✓	2,809	11,691	22.8
Venezuela		✓	✓		✓	✓	10,330	29,643	79.9
Other		✓			✓	✓	1,406	4,704	13.7
Central America						✓	64,840	180,245	1,169.5
Costa Rica							1,802	5,055	26.1
Honduras							181	1,346	17.4
Mexico						✓	55,724	142,566	1,041.5
Panama							5,844	(D)	L
Other			✓		✓	✓	1,290	(D)	J
Other Western Hemisphere							152,587	589,243	67.3
Barbados							1,571	(D)	1.7
Bermuda						✓	80,048	322,453	10.0
Dominican Republic						✓	983	4,498	20.7
United Kingdom Islands, Caribbean							49,806	191,997	5.7
Other		✓			✓	✓	20,180	(D)	29.2
Africa					✓	✓	16,290	77,632	218.7
Egypt							2,859	7,146	30.8
Nigeria				✓	✓	✓	1,753	9,900	9.2
South Africa							3,366	13,852	115.5
Other					✓	✓	8,312	46,734	63.1
Middle East					✓	✓	14,671	59,623	87.9
Israel					✓	✓	5,632	20,301	57.1
Saudi Arabia					✓	✓	3,823	17,108	15.3
United Arab Emirates					✓	✓	1,277	(D)	6.6
Other					✓	✓	3,939	(D)	8.8
Asia and Pacific					✓	✓	267,125	1,116,796	2,156.7
Australia					✓	✓	34,409	154,272	320.6
China							10,499	45,605	327.7
Hong Kong				✓	✓		41,571	107,225	98.5
India					✓	✓	3,283	16,290	115.6
Indonesia					✓	✓	10,341	34,875	79.8
Japan					✓	✓	65,939	431,911	503.7
Korea, Republic of					✓	✓	12,178	35,776	96.3
Malaysia					✓		6,954	27,420	114.5
New Zealand					✓		4,004	20,154	46.4
Philippines							4,642	17,311	90.1
Singapore							52,449	130,672	113.6
Taiwan						✓	10,153	51,299	81.4
Thailand					✓	✓	7,608	31,627	144.7
Other					✓		3,094	12,362	23.8

D Suppressed to avoid disclosure of data of individual companies.

USM United States Method

FCS Fully Consolidated System

EUM European Union Method

1. Equals [(Sample estimates based on USM less sample estimates based on FCS) divided by the sample estimates based on FCS] times one hundred.

2. Equals [(Sample estimates based on USM less sample estimates based on EUM) divided by the sample estimates based on EUM] times one hundred.

Note. Size ranges are given in employment cells that are suppressed. The size ranges are: A--1 to 499; F--500 to 999; G--1,000 to 2,499; H--2,500 to 4,999; I--5,000 to 9,999; J--10,000 to 24,999; K--25,000 to 49,999; L--50,000 to 99,999; M--100,000 or more.

Table 2b.--Comparison of Sample Estimates and BEA Published Universe Estimates for Selected Items on USM, FCS, and EUM, 2002
 [Millions of Dollars or Thousands of Employees]

	Comparison of Estimates for a Large Sample of Companies (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) Covering Only Affiliates for which the Necessary Chain-of-Ownership Information was Filed on the 2002 BE-11 Annual Survey of U.S. Direct Investment Abroad						BEA Published Universe Estimates for 2002		
	USM less FCS ¹			USM less EUM ²			U.S. direct investment position abroad	Total assets of foreign affiliates	Total employment by foreign affiliates
	Greater than 5 Percent Difference Between Sample Estimates			Greater than 5 Percent Difference Between Sample Estimates					
	Position	Assets	Employment	Position	Assets	Employment			
All industries					✓	✓	1,601,414	6,865,705	9,695.9
Mining					✓	✓	86,564	298,637	167.5
Oil and gas extraction					✓	✓	62,361	238,946	61.7
Other					✓	✓	24,203	59,691	105.8
Utilities					✓	✓	24,330	142,367	101.4
Manufacturing					✓	✓	339,391	1,343,683	5,062.8
Food				✓	✓	✓	18,340	76,557	418.4
Beverages and tobacco products					✓	✓	19,060	82,976	414.5
Textiles, apparel, and leather products					✓	✓	3,402	11,990	144.3
Wood products					✓	✓	4,521	14,602	25.1
Paper					✓	✓	13,757	45,216	161.0
Printing and related support activities							1,715	3,676	31.9
Petroleum and coal products					✓	✓	12,187	84,454	55.0
Chemicals					✓	✓	81,449	345,030	656.3
Basic chemicals					✓	✓	13,922	61,264	106.1
Resins and synthetic rubber, fibers, and filaments					✓	✓	10,635	55,473	66.9
Pharmaceuticals and medicines							29,681	140,395	225.1
Soap, cleaning compounds, and toilet preparations							9,835	33,930	131.2
Other					✓	✓	17,376	53,969	127.0
Plastics and rubber products							11,385	30,187	167.1
Nonmetallic mineral products							8,243	18,712	83.1
Primary and fabricated metals							21,926	64,165	255.9
Primary metals							10,528	33,110	108.2
Fabricated metal products							11,398	31,054	147.7
Machinery					✓	✓	18,612	70,477	385.0
Agriculture, construction, and mining machinery					✓	✓	4,244	18,378	76.8
Industrial machinery							2,583	8,206	31.3
Other					✓	✓	11,784	43,892	277.0
Computers and electronic products							53,601	177,022	713.1
Computers and peripheral equipment							10,402	64,267	174.1
Communications equipment							10,918	28,790	107.2
Audio and video equipment							1,113	(D)	K
Semiconductors and other electronic components							27,631	63,775	319.1
Navigational, measuring, and other instruments							4,382	15,727	61.8
Magnetic and optical media							-846	(D)	J
Electrical equipment, appliances, and components							9,030	32,183	250.5
Transportation equipment					✓	✓	44,820	245,032	1,075.3
Motor vehicles, bodies and trailers, and parts					✓	✓	38,693	234,624	M
Other							6,127	10,408	K
Furniture and related products					✓	✓	1,278	4,980	38.3
Miscellaneous manufacturing							16,065	36,425	188.2
Wholesale trade					✓	✓	124,686	463,176	823.4
Professional and commercial equipment and supplies							46,128	144,743	324.7
Other durable goods					✓	✓	34,317	107,125	204.2
Petroleum and petroleum products					✓	✓	7,920	66,781	40.9
Other nondurable goods							36,322	144,526	253.6
Information		✓	✓		✓	✓	39,812	280,209	646.0
Publishing industries							18,943	32,848	80.5
Motion picture and sound recording industries							5,576	11,505	49.3
Broadcasting and telecommunications	✓	✓	✓		✓	✓	8,113	212,703	379.7
Broadcasting, cable networks, and program distribution					✓	✓	529	25,508	38.1
Telecommunications	✓	✓	✓		✓	✓	7,584	187,195	341.6
Information services and data processing services							7,179	23,152	136.5
Finance (except depository institutions) and insurance							264,680	2,438,387	332.5
Finance, except depository institutions							193,109	1,967,929	166.4
Securities, commodity contracts, and other intermediation and related activities							115,146	1,502,730	71.8
Other finance, except depository institutions							77,963	465,199	94.5
Insurance carriers and related activities							17,571	470,457	166.2
Professional, scientific, and technical services					✓	✓	34,907	123,553	443.9
Architectural, engineering, and related services					✓	✓	2,297	9,624	39.9
Computer systems design and related services					✓	✓	15,580	49,170	189.7
Management, scientific, and technical consulting					✓	✓	4,971	28,385	41.9
Advertising and related services							7,768	23,337	84.8
Other							4,292	13,037	87.7
Other industries					✓	✓	630,450	1,775,694	2,118.3
Agriculture, forestry, fishing, and hunting					✓	✓	1,418	4,071	69.8
Construction							2,567	7,203	42.4
Retail trade							29,991	64,386	605.1
Transportation and warehousing					✓	✓	8,455	73,711	195.8
Real estate and rental and leasing							26,606	104,775	56.9
Real estate							5,829	40,824	18.7
Rental and leasing (except real estate)							20,777	63,951	38.1
Management of nonbank companies and enterprises					✓	✓	529,222	1,432,918	33.0
Administration, support, and waste management							6,530	24,966	493.4
Health care and social assistance							481	2,075	10.7
Accommodation and food services							20,396	46,527	511.7
Accommodation							9,266	19,255	63.6
Food services and drinking places							11,130	27,273	448.1
Miscellaneous services							4,785	15,062	99.6

D Suppressed to avoid disclosure of data of individual companies.

USM United States Method
 FCS Fully Consolidated System
 EUM European Union Method

1. Equals [(Sample estimates based on USM less sample estimates based on FCS) divided by the sample estimates based on FCS] times one hundred.
2. Equals [(Sample estimates based on USM less sample estimates based on EUM) divided by the sample estimates based on EUM] times one hundred.

Note. Size ranges are given in employment cells that are suppressed. The size ranges are: A--1 to 499; F--500 to 999; G--1,000 to 2,499; H--2,500 to 4,999; I--5,000 to 9,999; J--10,000 to 24,999; K--25,000 to 49,999; L--50,000 to 99,999; M--100,000 or more.

Table 3a.--Comparison of Sample Estimates and BEA Published Universe Estimates for Selected Items on USM, FCS, and EUM, 2002
(Millions of Dollars or Thousands of Employees)

	Comparison of Estimates for a Large Sample of Companies (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) Covering Only Affiliates for which the Necessary Chain-of-Ownership Information was Filed on the 2002 BE-11 Annual Survey of U.S. Direct Investment Abroad						BEA Published Universe Estimates for 2002		
	USM less FCS ¹			USM less EUM ²			U.S. direct investment position abroad	Total assets of foreign affiliates	Total employment by foreign affiliates
	Greater than 15 Percent Difference Between Sample Estimates			Greater than 15 Percent Difference Between Sample Estimates					
	Position	Assets	Employment	Position	Assets	Employment			
All countries							1,601,414	6,865,705	9,695.9
Canada							170,169	514,250	1,124.1
Europe							848,599	4,103,349	4,118.4
Austria							4,514	20,404	31.2
Belgium			✓	✓	✓		24,868	172,524	141.5
Czech Republic							1,400	9,522	52.8
Denmark				✓			6,132	(D)	L
Finland							1,838	9,041	18.4
France							42,999	212,778	583.2
Germany							67,404	351,566	653.0
Greece							1,017	(D)	K
Hungary							2,512	7,048	48.4
Ireland							46,617	240,473	88.1
Italy							24,886	106,230	248.3
Luxembourg				✓			59,496	314,034	10.9
Netherlands							164,217	534,795	230.6
Norway							6,307	29,954	37.3
Poland							4,969	12,756	83.2
Portugal							3,402	19,161	38.8
Russia				✓			666	9,550	39.4
Spain							33,735	97,425	211.5
Sweden							29,359	73,834	92.9
Switzerland							71,454	199,399	59.9
Turkey				✓			1,880	7,140	38.7
United Kingdom							239,219	1,581,483	1,219.4
Other					✓		9,708	30,601	79.1
Latin America and Other Western Hemisphere							284,561	994,055	1,990.0
South America							67,133	224,566	753.2
Argentina							11,247	37,332	94.9
Brazil							27,615	101,114	391.1
Chile							9,991	24,361	64.1
Colombia				✓			2,557	12,668	71.2
Ecuador							1,179	3,052	15.5
Peru					✓		2,809	11,691	22.8
Venezuela			✓	✓	✓		10,330	29,643	79.9
Other					✓		1,406	4,704	13.7
Central America							64,840	180,245	1,169.5
Costa Rica							1,802	5,055	26.1
Honduras							181	1,346	17.4
Mexico							55,724	142,566	1,041.5
Panama							5,844	(D)	L
Other							1,290	(D)	J
Other Western Hemisphere							152,587	589,243	67.3
Barbados							1,571	(D)	1.7
Bermuda							80,048	322,453	10.0
Dominican Republic							983	4,498	20.7
United Kingdom Islands, Caribbean							49,806	191,997	5.7
Other							20,180	(D)	29.2
Africa					✓		16,290	77,632	218.7
Egypt							2,859	7,146	30.8
Nigeria				✓	✓		1,753	9,900	9.2
South Africa							3,366	13,852	115.5
Other							8,312	46,734	63.1
Middle East					✓	✓	14,671	59,623	87.9
Israel							5,632	20,301	57.1
Saudi Arabia					✓	✓	3,823	17,108	15.3
United Arab Emirates							1,277	(D)	6.6
Other					✓	✓	3,939	(D)	8.8
Asia and Pacific							267,125	1,116,796	2,156.7
Australia					✓	✓	34,409	154,272	320.6
China							10,499	45,605	327.7
Hong Kong				✓			41,571	107,225	98.5
India							3,283	16,290	115.6
Indonesia					✓	✓	10,341	34,875	79.8
Japan							65,939	431,911	503.7
Korea, Republic of					✓		12,178	35,776	96.3
Malaysia							6,954	27,420	114.5
New Zealand							4,004	20,154	46.4
Philippines							4,642	17,311	90.1
Singapore							52,449	130,672	113.6
Taiwan							10,153	51,299	81.4
Thailand							7,608	31,627	144.7
Other							3,094	12,362	23.8

D Suppressed to avoid disclosure of data of individual companies.

USM United States Method

FCS Fully Consolidated System

EUM European Union Method

1. Equals [(Sample estimates based on USM less sample estimates based on FCS) divided by the sample estimates based on FCS] times one hundred.

2. Equals [(Sample estimates based on USM less sample estimates based on EUM) divided by the sample estimates based on EUM] times one hundred.

Note. Size ranges are given in employment cells that are suppressed. The size ranges are: A--1 to 499; F--500 to 999; G--1,000 to 2,499; H--2,500 to 4,999; I--5,000 to 9,999; J--10,000 to 24,999; K--25,000 to 49,999; L--50,000 to 99,999; M--100,000 or more.

Table 3b.--Comparison of Sample Estimates and BEA Published Universe Estimates for Selected Items on USM, FCS, and EUM, 2002
 [Millions of Dollars or Thousands of Employees]

	Comparison of Estimates for a Large Sample of Companies (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) Covering Only Affiliates for which the Necessary Chain-of-Ownership Information was Filed on the 2002 BE-11 Annual Survey of U.S. Direct Investment Abroad						BEA Published Universe Estimates for 2002		
	USM less FCS ¹			USM less EUM ²			U.S. direct investment position abroad	Total assets of foreign affiliates	Total employment by foreign affiliates
	Greater than 15 Percent Difference Between Sample Estimates			Greater than 15 Percent Difference Between Sample Estimates					
	Position	Assets	Employment	Position	Assets	Employment			
All industries							1,601,414	6,865,705	9,695.9
Mining							86,564	298,637	167.5
Oil and gas extraction							62,361	238,946	61.7
Other							24,203	59,691	105.8
Utilities							24,330	142,367	101.4
Manufacturing							339,391	1,343,683	5,062.8
Food							18,340	76,557	418.4
Beverages and tobacco products							19,060	82,976	414.5
Textiles, apparel, and leather products							3,402	11,990	144.3
Wood products							4,521	14,602	25.1
Paper							13,757	45,216	161.0
Printing and related support activities							1,715	3,676	31.9
Petroleum and coal products							12,187	84,454	55.0
Chemicals							81,449	345,030	656.3
Basic chemicals							13,922	61,264	106.1
Resins and synthetic rubber, fibers, and filaments							10,635	55,473	66.9
Pharmaceuticals and medicines							29,681	140,395	225.1
Soap, cleaning compounds, and toilet preparations							9,835	33,930	131.2
Other							17,376	53,969	127.0
Plastics and rubber products							11,385	30,187	167.1
Nonmetallic mineral products							8,243	18,712	83.1
Primary and fabricated metals							21,926	64,165	255.9
Primary metals							10,528	33,110	108.2
Fabricated metal products							11,398	31,054	147.7
Machinery							18,612	70,477	385.0
Agriculture, construction, and mining machinery							4,244	18,378	76.8
Industrial machinery							2,583	8,206	31.3
Other							11,784	43,892	277.0
Computers and electronic products							53,601	177,022	713.1
Computers and peripheral equipment							10,402	64,267	174.1
Communications equipment							10,918	28,790	107.2
Audio and video equipment							1,113	(D)	K
Semiconductors and other electronic components							27,631	63,775	319.1
Navigational, measuring, and other instruments							4,382	15,727	61.8
Magnetic and optical media							-846	(D)	J
Electrical equipment, appliances, and components							9,030	32,183	250.5
Transportation equipment							44,820	245,032	1,075.3
Motor vehicles, bodies and trailers, and parts							38,693	234,624	M
Other							6,127	10,408	K
Furniture and related products							1,278	4,980	38.3
Miscellaneous manufacturing							16,065	36,425	188.2
Wholesale trade							124,686	463,176	823.4
Professional and commercial equipment and supplies							46,128	144,743	324.7
Other durable goods							34,317	107,125	204.2
Petroleum and petroleum products							7,920	66,781	40.9
Other nondurable goods							36,322	144,526	253.6
Information							39,812	280,209	646.0
Publishing industries							18,943	32,848	80.5
Motion picture and sound recording industries							5,576	11,505	49.3
Broadcasting and telecommunications							8,113	212,703	379.7
Broadcasting, cable networks, and program distribution							529	25,508	38.1
Telecommunications							7,584	187,195	341.6
Information services and data processing services							7,179	23,152	136.5
Finance (except depository institutions) and insurance							264,680	2,438,387	332.5
Finance, except depository institutions							193,109	1,967,929	166.4
Securities, commodity contracts, and other intermediation and related activities							115,146	1,502,730	71.8
Other finance, except depository institutions							77,963	465,199	94.5
Insurance carriers and related activities							71,571	470,457	166.2
Professional, scientific, and technical services							34,907	123,553	443.9
Architectural, engineering, and related services							2,297	9,624	39.9
Computer systems design and related services							15,580	49,170	189.7
Management, scientific, and technical consulting							4,971	28,385	41.9
Advertising and related services							7,768	23,337	84.8
Other							4,292	13,037	87.7
Other industries							630,450	1,775,694	2,118.3
Agriculture, forestry, fishing, and hunting							1,418	4,071	69.8
Construction							2,567	7,203	42.4
Retail trade							29,991	64,386	605.1
Transportation and warehousing							8,455	73,711	195.8
Real estate and rental and leasing							26,606	104,775	56.9
Real estate							5,829	40,824	18.7
Rental and leasing (except real estate)							20,777	63,951	38.1
Management of nonbank companies and enterprises							529,222	1,432,918	33.0
Administration, support, and waste management							6,530	24,966	493.4
Health care and social assistance							481	2,075	10.7
Accommodation and food services							20,396	46,527	511.7
Accommodation							9,266	19,255	63.6
Food services and drinking places							11,130	27,273	448.1
Miscellaneous services							4,785	15,062	99.6

D Suppressed to avoid disclosure of data of individual companies.

USM United States Method
 FCS Fully Consolidated System
 EUM European Union Method

1. Equals [(Sample estimates based on USM less sample estimates based on FCS) divided by the sample estimates based on FCS] times one hundred.
2. Equals [(Sample estimates based on USM less sample estimates based on EUM) divided by the sample estimates based on EUM] times one hundred.

Note. Size ranges are given in employment cells that are suppressed. The size ranges are: A--1 to 499; F--500 to 999; G--1,000 to 2,499; H--2,500 to 4,999; I--5,000 to 9,999; J--10,000 to 24,999; K--25,000 to 49,999; L--50,000 to 99,999; M--100,000 or more.

Table 4a.--U.S. Direct Investment Position Abroad, by Country, 2002: Comparison of Estimates for a Large Sample of Companies (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) Covering Only Affiliates for which the Necessary Chain-of-Ownership Information was Filed on the 2002 BE-11 Annual Survey of U.S. Direct Investment Abroad and BEA Published Universe Estimates
(Millions of Dollars or Percent)

	Percent Difference Between Sample Estimates		BEA Published Universe Estimates
	USM less FCS ¹	USM less EUM ²	
All countries	A	A	1,601,414
Canada	A	A	170,169
Europe	A	A	848,599
Austria	0	A	4,514
Belgium	A	A	24,868
Czech Republic	0	0	1,400
Denmark	0	0	6,132
Finland	0	A	1,838
France	A	A	42,999
Germany	0	A	67,404
Greece	0	0	1,017
Hungary	0	0	2,512
Ireland	0	A	46,617
Italy	0	A	24,886
Luxembourg	0	A	59,496
Netherlands	A	A	164,217
Norway	0	AAA	6,307
Poland	A	A	4,969
Portugal	0	0	3,402
Russia	0	0	666
Spain	0	A	33,735
Sweden	0	A	29,359
Switzerland	0	A	71,454
Turkey	0	AAA	1,880
United Kingdom	A	A	239,219
Other	0	A	9,708
Latin America and Other Western Hemisphere	A	A	284,561
South America	A	A	67,133
Argentina	A	A	11,247
Brazil	0	A	27,615
Chile	0	A	9,991
Colombia	A	AAA	2,557
Ecuador	0	A	1,179
Peru	A	AA	2,809
Venezuela	A	A	10,330
Other	0	A	1,406
Central America	A	A	64,840
Costa Rica	0	A	1,802
Honduras	0	0	181
Mexico	0	A	55,724
Panama	0	A	5,844
Other	A	A	1,290
Other Western Hemisphere	A	A	152,587
Barbados	0	0	1,571
Bermuda	0	A	80,048
Dominican Republic	0	A	983
United Kingdom Islands, Caribbean	A	A	49,806
Other	A	A	20,180
Africa	0	A	16,290
Egypt	0	0	2,859
Nigeria	0	AAA	1,753
South Africa	0	A	3,366
Other	0	A	8,312
Middle East	A	A	14,671
Israel	A	A	5,632
Saudi Arabia	0	A	3,823
United Arab Emirates	0	0	1,277
Other	0	A	3,939
Asia and Pacific	A	A	267,125
Australia	A	A	34,409
China	0	A	10,499
Hong Kong	0	AAA	41,571
India	0	A	3,283
Indonesia	0	A	10,341
Japan	A	A	65,939
Korea, Republic of	0	A	12,178
Malaysia	0	A	6,954
New Zealand	0	A	4,004
Philippines	0	A	4,642
Singapore	0	A	52,449
Taiwan	0	0	10,153
Thailand	0	A	7,608
Other	0	A	3,094

USM United States Method
FCS Fully Consolidated System
EUM European Union Method

1. Equals [(Sample estimates based on USM less sample estimates based on FCS) divided by the sample estimates based on FCS] times one hundred.
2. Equals [(Sample estimates based on USM less sample estimates based on EUM) divided by the sample estimates based on EUM] times one hundred.

Note: Size ranges are given for the absolute value of the percent difference between sample estimates. The size ranges are A 0.1--4.9; AA 5.0--9.9; AAA 10.0--24.9; AAAA 25.0--49.9; AAAAA 50.0--99.9; AAAAAA 100.0 or more.

Table 4b.--U.S. Direct Investment Position Abroad, by Industry, 2002: Comparison of Estimates for a Large Sample of Companies (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) Covering Only Affiliates for which the Necessary Chain-of-Ownership Information was Filed on the 2002 BE-11 Annual Survey of U.S. Direct Investment Abroad and BEA Published Universe Estimates
[Millions of Dollars or Percent]

	Percent Difference Between Sample Estimates		BEA Published Universe Estimates
	USM less FCS ¹	USM less EUM ²	
All industries	A	A	1,601,414
Mining	0	A	86,564
Oil and gas extraction	0	A	62,361
Other	0	0	24,203
Utilities	0	A	24,330
Manufacturing	A	AA	339,391
Food	0	AA	18,340
Beverages and tobacco products	0	A	19,060
Textiles, apparel, and leather products	0	A	3,402
Wood products	0	0	4,521
Paper	A	A	13,757
Printing and related support activities	0	0	1,715
Petroleum and coal products	A	A	12,187
Chemicals	A	A	81,449
Basic chemicals	A	A	13,922
Resins and synthetic rubber, fibers, and filaments	0	A	10,635
Pharmaceuticals and medicines	0	A	29,681
Soap, cleaning compounds, and toilet preparations	0	A	9,835
Other	A	A	17,376
Plastics and rubber products	0	A	11,385
Nonmetallic mineral products	0	A	8,243
Primary and fabricated metals	0	A	21,926
Primary metals	0	0	10,528
Fabricated metal products	0	A	11,398
Machinery	0	A	18,612
Agriculture, construction, and mining machinery	0	A	4,244
Industrial machinery	0	0	2,583
Other	0	A	11,784
Computers and electronic products	0	A	53,601
Computers and peripheral equipment	0	0	10,402
Communications equipment	0	A	10,918
Audio and video equipment	0	0	1,113
Semiconductors and other electronic components	0	0	27,631
Navigational, measuring, and other instruments	0	0	4,382
Magnetic and optical media	0	0	-846
Electrical equipment, appliances, and components	A	A	9,030
Transportation equipment	0	A	44,820
Motor vehicles, bodies and trailers, and parts	0	A	38,693
Other	0	0	6,127
Furniture and related products	0	AAA	1,278
Miscellaneous manufacturing	A	A	16,065
Wholesale trade	A	A	124,686
Professional and commercial equipment and supplies	0	A	46,128
Other durable goods	A	A	34,317
Petroleum and petroleum products	A	A	7,920
Other nondurable goods	A	A	36,322
Information	A	A	39,812
Publishing industries	A	A	18,943
Motion picture and sound recording industries	0	A	5,576
Broadcasting and telecommunications	AA	A	8,113
Broadcasting, cable networks, and program distribution	0	A	529
Telecommunications	AAA	A	7,584
Information services and data processing services	0	A	7,179
Finance (except depository institutions) and insurance	0	A	264,680
Finance, except depository institutions	0	A	193,109
Securities, commodity contracts, and other intermediation and related activities	0	A	115,146
Other finance, except depository institutions	0	A	77,963
Insurance carriers and related activities	0	A	71,571
Professional, scientific, and technical services	A	A	34,907
Architectural, engineering, and related services	0	0	2,297
Computer systems design and related services	A	A	15,580
Management, scientific, and technical consulting	A	AAA	4,971
Advertising and related services	0	A	7,768
Other	0	0	4,292
Other industries	A	A	630,450
Agriculture, forestry, fishing, and hunting	0	AAAA	1,418
Construction	0	0	2,567
Retail trade	0	A	29,991
Transportation and warehousing	0	A	8,455
Real estate and rental and leasing	0	A	26,606
Real estate	0	0	5,829
Rental and leasing (except real estate)	0	A	20,777
Management of nonbank companies and enterprises	A	A	529,222
Administration, support, and waste management	0	0	6,530
Health care and social assistance	0	0	481
Accommodation and food services	0	A	20,396
Accommodation	0	A	9,266
Food services and drinking places	0	A	11,130
Miscellaneous services	A	A	4,785

USM United States Method
FCS Fully Consolidated System
EUM European Union Method

1. Equals [(Sample estimates based on USM less sample estimates based on FCS) divided by the sample estimates based on FCS] times one hundred.
2. Equals [(Sample estimates based on USM less sample estimates based on EUM) divided by the sample estimates based on EUM] times one hundred.

Note: Size ranges are given for the absolute value of the percent difference between sample estimates. The size ranges are A 0.1--4.9; AA 5.0--9.9; AAA 10.0--24.9; AAAA 25.0--49.9; AAAAA 50.0--99.9; AAAAAA 100.0 or more.

Table 4c.--Total Assets of Foreign Affiliates, by Country, 2002: Comparison of Estimates for a Large Sample of Companies (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) Covering Only Affiliates for which the Necessary Chain-of-Ownership Information was Filed on the 2002 BE-11 Annual Survey of U.S. Direct Investment Abroad and BEA Published Universe Estimates

(Millions of Dollars or Percent)

	Percent Difference Between Sample Estimates		BEA Published Universe Estimates
	USM less FCS ¹	USM less EUM ²	
All countries	A	AA	6,865,705
Canada	A	A	514,250
Europe	A	AA	4,103,349
Austria	0	A	20,404
Belgium	AA	AAAA	172,524
Czech Republic	AA	AA	9,522
Denmark	0	AAAA	(D)
Finland	0	A	9,041
France	AA	AA	212,778
Germany	A	AAA	351,566
Greece	0	A	(D)
Hungary	0	AA	7,048
Ireland	A	A	240,473
Italy	A	AA	106,230
Luxembourg	0	AAAA	314,034
Netherlands	A	AA	534,795
Norway	0	AA	29,954
Poland	A	A	12,756
Portugal	0	A	19,161
Russia	0	AAAAA	9,550
Spain	A	A	97,425
Sweden	0	A	73,834
Switzerland	0	A	199,399
Turkey	0	AA	7,140
United Kingdom	A	A	1,581,483
Other	0	AAAA	30,601
Latin America and Other Western Hemisphere	A	AA	994,055
South America	A	AAA	224,566
Argentina	A	AAA	37,332
Brazil	0	AA	101,114
Chile	A	AA	24,361
Colombia	A	AA	12,668
Ecuador	0	A	3,052
Peru	A	AAAA	11,691
Venezuela	AAA	AAAAA	29,643
Other	AA	AAA	4,704
Central America	A	A	180,245
Costa Rica	0	A	5,055
Honduras	0	0	1,346
Mexico	A	A	142,566
Panama	0	A	(D)
Other	A	AA	(D)
Other Western Hemisphere	A	A	589,243
Barbados	0	A	(D)
Bermuda	0	AA	322,453
Dominican Republic	0	A	4,498
United Kingdom Islands, Caribbean	A	A	191,997
Other	AA	AA	(D)
Africa	0	AAA	77,632
Egypt	0	A	7,146
Nigeria	0	AAAAAA	9,900
South Africa	0	A	13,852
Other	0	AAA	46,734
Middle East	A	AAAA	59,623
Israel	A	AA	20,301
Saudi Arabia	A	AAAA	17,108
United Arab Emirates	0	AA	(D)
Other	0	AAAAA	(D)
Asia and Pacific	A	AAA	1,116,796
Australia	A	AAA	154,272
China	0	A	45,605
Hong Kong	A	AAA	107,225
India	0	AAA	16,290
Indonesia	0	AAAA	34,875
Japan	A	AAA	431,911
Korea, Republic of	0	AAAA	35,776
Malaysia	0	AA	27,420
New Zealand	0	AA	20,154
Philippines	0	A	17,311
Singapore	0	A	130,672
Taiwan	0	A	51,299
Thailand	0	AAA	31,627
Other	A	AA	12,362

D Suppressed to avoid disclosure of data of individual companies.

USM United States Method

FCS Fully Consolidated System

EUM European Union Method

1. Equals [(Sample estimates based on USM less sample estimates based on FCS) divided by the sample estimates based on FCS] times one hundred.

2. Equals [(Sample estimates based on USM less sample estimates based on EUM) divided by the sample estimates based on EUM] times one hundred.

Note: Size ranges are given for the percent difference between sample estimates. The size ranges are A 0.1--4.9; AA 5.0--9.9; AAA 10.0--24.9; AAAA 25.0--49.9; AAAAA 50.0--99.9; AAAAAA 100.0 or more.

Table 4d.--Total Assets of Foreign Affiliates, by Industry, 2002: Comparison of Estimates for a Large Sample of Companies (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) Covering Only Affiliates for which the Necessary Chain-of-Ownership Information was Filed on the 2002 BE-11 Annual Survey of U.S. Direct Investment Abroad and BEA Published Universe Estimates
[Millions of Dollars or Percent]

	Percent Difference Between Sample Estimates		BEA Published Universe Estimates
	USM less FCS ¹	USM less EUM ²	
All industries	A	AA	6,865,705
Mining	0	AAA	298,637
Oil and gas extraction	0	AAA	238,946
Other	0	AA	59,691
Utilities	A	AA	142,367
Manufacturing	A	AA	1,343,683
Food	A	AA	76,557
Beverages and tobacco products	A	AAA	82,976
Textiles, apparel, and leather products	0	A	11,990
Wood products	0	0	14,602
Paper	A	AA	45,216
Printing and related support activities	A	A	3,676
Petroleum and coal products	A	AAAA	84,454
Chemicals	A	AA	345,030
Basic chemicals	A	AAA	61,264
Resins and synthetic rubber, fibers, and filaments	0	AAA	55,473
Pharmaceuticals and medicines	0	A	140,395
Soap, cleaning compounds, and toilet preparations	A	A	33,930
Other	A	AA	53,969
Plastics and rubber products	0	A	30,187
Nonmetallic mineral products	0	A	18,712
Primary and fabricated metals	0	A	64,165
Primary metals	0	A	33,110
Fabricated metal products	0	A	31,054
Machinery	A	AAA	70,477
Agriculture, construction, and mining machinery	0	AAA	18,378
Industrial machinery	A	A	8,206
Other	0	AAAA	43,892
Computers and electronic products	A	A	177,022
Computers and peripheral equipment	0	0	64,267
Communications equipment	A	A	28,790
Audio and video equipment	0	0	(D)
Semiconductors and other electronic components	0	0	63,775
Navigational, measuring, and other instruments	0	0	15,727
Magnetic and optical media	0	0	(D)
Electrical equipment, appliances, and components	A	A	32,183
Transportation equipment	0	AAA	245,032
Motor vehicles, bodies and trailers, and parts	0	AAA	234,624
Other	0	0	10,408
Furniture and related products	0	AA	4,980
Miscellaneous manufacturing	A	A	36,425
Wholesale trade	A	AA	463,176
Professional and commercial equipment and supplies	0	A	144,743
Other durable goods	A	AA	107,125
Petroleum and petroleum products	A	AAA	66,781
Other nondurable goods	A	A	144,526
Information	AA	AAA	280,209
Publishing industries	A	A	32,848
Motion picture and sound recording industries	0	A	11,505
Broadcasting and telecommunications	AAA	AAAA	212,703
Broadcasting, cable networks, and program distribution	A	AAAA	25,508
Telecommunications	AAA	AAAA	187,195
Information services and data processing services	0	A	23,152
Finance (except depository institutions) and insurance	0	A	2,438,387
Finance, except depository institutions	0	A	1,967,929
Securities, commodity contracts, and other intermediation and related activities	0	A	1,502,730
Other finance, except depository institutions	0	A	465,199
Insurance carriers and related activities	0	A	470,457
Professional, scientific, and technical services	A	AAAA	123,553
Architectural, engineering, and related services	0	AA	9,624
Computer systems design and related services	A	AA	49,170
Management, scientific, and technical consulting	A	AAAAA	28,385
Advertising and related services	0	A	23,337
Other	0	A	13,037
Other industries	A	AAA	1,775,694
Agriculture, forestry, fishing, and hunting	0	A	4,071
Construction	0	A	7,203
Retail trade	0	A	64,386
Transportation and warehousing	A	AAA	73,711
Real estate and rental and leasing	A	A	104,775
Real estate	A	A	40,824
Rental and leasing (except real estate)	0	A	63,951
Management of nonbank companies and enterprises	A	AAA	1,432,918
Administration, support, and waste management	A	A	24,966
Health care and social assistance	0	0	2,075
Accommodation and food services	0	A	46,527
Accommodation	0	A	19,255
Food services and drinking places	0	A	27,273
Miscellaneous services	A	A	15,062

D Suppressed to avoid disclosure of data of individual companies.

USM United States Method

FCS Fully Consolidated System

EUM European Union Method

1. Equals [(Sample estimates based on USM less sample estimates based on FCS) divided by the sample estimates based on FCS] times one hundred.

2. Equals [(Sample estimates based on USM less sample estimates based on EUM) divided by the sample estimates based on EUM] times one hundred.

Note: Size ranges are given for the percent difference between sample estimates. The size ranges are A 0.1--4.9; AA 5.0--9.9; AAA 10.0--24.9; AAAA 25.0--49.9; AAAAA 50.0--99.9; AAAAAA 100.0 or more.

Table 4e.--Total Employment by Foreign Affiliates, by Country, 2002: Comparison of Estimates for a Large Sample of Companies (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) Covering Only Affiliates for which the Necessary Chain-of-Ownership Information was Filed on the 2002 BE-11 Annual Survey of U.S. Direct Investment Abroad and BEA Published Universe Estimates

[Thousands of Employees or Percent]

	Percent Difference Between Sample Estimates		BEA Published Universe Estimates
	USM less FCS ¹	USM less EUM ²	
All countries	A	AA	9,695.9
Canada	A	A	1,124.1
Europe	A	A	4,118.4
Austria	0	A	31.2
Belgium	AAA	AAAA	141.5
Czech Republic	AA	AA	52.8
Denmark	0	A	L
Finland	0	A	18.4
France	A	A	583.2
Germany	A	A	653.0
Greece	0	A	K
Hungary	0	A	48.4
Ireland	A	A	88.1
Italy	A	A	248.3
Luxembourg	0	AA	10.9
Netherlands	A	A	230.6
Norway	0	AA	37.3
Poland	A	A	83.2
Portugal	0	A	38.8
Russia	0	A	39.4
Spain	A	AA	211.5
Sweden	0	AA	92.9
Switzerland	0	A	59.9
Turkey	0	A	38.7
United Kingdom	A	A	1,219.4
Other	0	AAA	79.1
Latin America and Other Western Hemisphere	A	AA	1,990.0
South America	A	AAA	753.2
Argentina	0	AA	94.9
Brazil	0	AA	391.1
Chile	A	A	64.1
Colombia	A	A	71.2
Ecuador	0	AA	15.5
Peru	A	AA	22.8
Venezuela	AAA	AAAA	79.9
Other	A	AA	13.7
Central America	A	AA	1,169.5
Costa Rica	0	A	26.1
Honduras	0	0	17.4
Mexico	A	AA	1,041.5
Panama	0	A	L
Other	AAA	AAA	J
Other Western Hemisphere	A	A	67.3
Barbados	0	0	1.7
Bermuda	0	A	10.0
Dominican Republic	0	AA	20.7
United Kingdom Islands, Caribbean	0	0	5.7
Other	A	AA	29.2
Africa	0	AA	218.7
Egypt	0	0	30.8
Nigeria	0	AAAAAA	9.2
South Africa	0	A	115.5
Other	0	AA	63.1
Middle East	A	AAA	87.9
Israel	A	AA	57.1
Saudi Arabia	A	AAAA	15.3
United Arab Emirates	0	AAA	6.6
Other	0	AAAA	8.8
Asia and Pacific	A	AAA	2,156.7
Australia	A	AAA	320.6
China	0	A	327.7
Hong Kong	0	A	98.5
India	0	AA	115.6
Indonesia	0	AAAA	79.8
Japan	A	AAAA	503.7
Korea, Republic of	0	AA	96.3
Malaysia	0	A	114.5
New Zealand	0	A	46.4
Philippines	0	A	90.1
Singapore	0	A	113.6
Taiwan	0	AA	81.4
Thailand	0	AA	144.7
Other	A	A	23.8

USM United States Method
FCS Fully Consolidated System
EUM European Union Method

1. Equals [(Sample estimates based on USM less sample estimates based on FCS) divided by the sample estimates based on FCS] times one hundred.
2. Equals [(Sample estimates based on USM less sample estimates based on EUM) divided by the sample estimates based on EUM] times one hundred.

Notes: Size ranges are given for the percent difference between sample estimates. The size ranges are A 0.1--4.9; AA 5.0--9.9; AAA 10.0--24.9; AAAA 25.0--49.9; AAAAA 50.0--99.9; AAAAAA 100.0 or more.
Size ranges are given in employment cells that are suppressed. The size ranges are: A--1 to 499; F--500 to 999; G--1,000 to 2,499; H--2,500 to 4,999; I--5,000 to 9,999; J--10,000 to 24,999; K--25,000 to 49,999; L--50,000 to 99,999; M--100,000 or more.

Table 4f.--Total Employment by Foreign Affiliates, by Industry, 2002: Comparison of Estimates for a Large Sample of Companies (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) Covering Only Affiliates for which the Necessary Chain-of-Ownership Information was Filed on the 2002 BE-11 Annual Survey of U.S. Direct Investment Abroad and BEA Published Universe Estimates
[Thousands of Employees or Percent]

	Percent Difference Between Sample Estimates		BEA Published Universe Estimates
	USM less FCS ¹	USM less EUM ²	
All industries	A	AA	9,695.9
Mining	0	AAA	167.5
Oil and gas extraction	0	AAAA	61.7
Other	0	AA	105.8
Utilities	A	A	101.4
Manufacturing	A	AA	5,062.8
Food	A	AA	418.4
Beverages and tobacco products	A	AAAA	414.5
Textiles, apparel, and leather products	0	A	144.3
Wood products	0	0	25.1
Paper	A	AA	161.0
Printing and related support activities	A	A	31.9
Petroleum and coal products	A	AAA	55.0
Chemicals	A	AA	656.3
Basic chemicals	A	AA	106.1
Resins and synthetic rubber, fibers, and filaments	0	AAA	66.9
Pharmaceuticals and medicines	0	A	225.1
Soap, cleaning compounds, and toilet preparations	A	A	131.2
Other	A	AA	127.0
Plastics and rubber products	0	A	167.1
Nonmetallic mineral products	0	A	83.1
Primary and fabricated metals	0	A	255.9
Primary metals	0	A	108.2
Fabricated metal products	0	A	147.7
Machinery	A	AAA	385.0
Agriculture, construction, and mining machinery	0	AAA	76.8
Industrial machinery	A	A	31.3
Other	0	AAA	277.0
Computers and electronic products	A	A	713.1
Computers and peripheral equipment	0	0	174.1
Communications equipment	A	A	107.2
Audio and video equipment	0	0	K
Semiconductors and other electronic components	0	0	319.1
Navigational, measuring, and other instruments	0	0	61.8
Magnetic and optical media	0	0	J
Electrical equipment, appliances, and components	A	AA	250.5
Transportation equipment	0	AA	1,075.3
Motor vehicles, bodies and trailers, and parts	0	AA	M
Other	0	0	K
Furniture and related products	0	AAA	38.3
Miscellaneous manufacturing	A	A	188.2
Wholesale trade	A	A	823.4
Professional and commercial equipment and supplies	0	A	324.7
Other durable goods	A	A	204.2
Petroleum and petroleum products	A	AAAA	40.9
Other nondurable goods	A	A	253.6
Information	AA	AAA	646.0
Publishing industries	A	A	80.5
Motion picture and sound recording industries	0	A	49.3
Broadcasting and telecommunications	AAA	AAA	379.7
Broadcasting, cable networks, and program distribution	A	AAA	38.1
Telecommunications	AAA	AAA	341.6
Information services and data processing services	0	A	136.5
Finance (except depository institutions) and insurance	0	A	332.5
Finance, except depository institutions	0	A	166.4
Securities, commodity contracts, and other intermediation and related activities	0	A	71.8
Other finance, except depository institutions	0	A	94.5
Insurance carriers and related activities	0	A	166.2
Professional, scientific, and technical services	A	A	443.9
Architectural, engineering, and related services	0	A	39.9
Computer systems design and related services	A	AA	189.7
Management, scientific, and technical consulting	A	A	41.9
Advertising and related services	0	A	84.8
Other	0	0	87.7
Other industries	A	A	2,118.3
Agriculture, forestry, fishing, and hunting	0	A	69.8
Construction	0	A	42.4
Retail trade	0	A	605.1
Transportation and warehousing	A	A	195.8
Real estate and rental and leasing	0	A	56.9
Real estate	0	AAA	18.7
Rental and leasing (except real estate)	0	A	38.1
Management of nonbank companies and enterprises	0	AA	33.0
Administration, support, and waste management	A	A	493.4
Health care and social assistance	0	0	10.7
Accommodation and food services	0	A	511.7
Accommodation	0	0	63.6
Food services and drinking places	0	A	448.1
Miscellaneous services	0	A	99.6

USM United States Method
FCS Fully Consolidated System
EUM European Union Method

1. Equals [(Sample estimates based on USM less sample estimates based on FCS) divided by the sample estimates based on FCS] times one hundred.
2. Equals [(Sample estimates based on USM less sample estimates based on EUM) divided by the sample estimates based on EUM] times one hundred.

Notes: Size ranges are given for the percent difference between sample estimates. The size ranges are A 0.1-4.9; AA 5.0-9.9; AAA 10.0-24.9; AAAA 25.0-49.9; AAAAA 50.0-99.9; AAAAAA 100.0 or more.

Size ranges are given in employment cells that are suppressed. The size ranges are: A--1 to 499; F--500 to 999; G--1,000 to 2,499; H--2,500 to 4,999; I--5,000 to 9,999; J--10,000 to 24,999; K--25,000 to 49,999; L--50,000 to 99,999; M--100,000 or more.

Table 5a.--Number of Foreign Affiliates in Sample¹, by Country, 2002

	USM	FCS	EUM
All countries	12,811	12,749	12,301
Canada	1,085	1,081	1,061
Europe	6,412	6,386	6,218
Austria	87	87	85
Belgium	312	308	294
Czech Republic	67	66	65
Denmark	106	106	104
Finland	46	46	45
France	705	700	683
Germany	760	759	745
Greece	51	50	49
Hungary	56	56	54
Ireland	276	274	271
Italy	418	416	405
Luxembourg	101	101	94
Netherlands	732	729	707
Norway	82	82	78
Poland	96	94	91
Portugal	67	66	64
Russia	46	46	43
Spain	311	309	305
Sweden	164	164	161
Switzerland	288	288	281
Turkey	53	53	50
United Kingdom	1,489	1,487	1,453
Other	99	99	91
Latin America and Other Western Hemisphere	2,185	2,169	2,073
South America	924	913	854
Argentina	178	176	163
Brazil	355	355	331
Chile	102	99	95
Colombia	73	72	69
Ecuador	27	27	25
Peru	38	36	30
Venezuela	111	109	106
Other	40	39	35
Central America	652	649	629
Costa Rica	21	21	20
Honduras	14	14	14
Mexico	518	517	500
Panama	57	57	56
Other	42	40	39
Other Western Hemisphere	609	607	590
Barbados	36	36	35
Bermuda	227	227	218
Dominican Republic	20	20	19
United Kingdom Islands, Caribbean	229	228	225
Other	97	96	93
Africa	281	281	260
Egypt	28	28	27
Nigeria	35	35	30
South Africa	74	74	70
Other	144	144	133
Middle East	166	163	147
Israel	68	67	62
Saudi Arabia	35	33	28
United Arab Emirates	31	31	28
Other	32	32	29
Asia and Pacific	2,682	2,669	2,542
Australia	426	423	410
China	291	291	278
Hong Kong	283	282	273
India	103	103	94
Indonesia	91	91	83
Japan	533	525	486
Korea, Republic of	147	147	140
Malaysia	110	110	107
New Zealand	55	55	52
Philippines	80	80	76
Singapore	255	255	250
Taiwan	128	128	125
Thailand	116	116	109
Other	64	63	59

USM United States Method

FCS Fully Consolidated System

EUM European Union Method

1. The sample (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) covers only affiliates for which the necessary chain-of-ownership information was filed on the 2002 BE-11 annual survey of U.S. direct investment abroad.

Table 5b.--Number of Foreign Affiliates in Sample¹, by Industry, 2002

	USM	FCS	EUM
All industries	12,811	12,749	12,301
Mining	510	510	487
Oil and gas extraction	350	350	331
Other	160	160	156
Utilities	195	191	168
Manufacturing	4,554	4,527	4,356
Food	373	366	346
Beverages and tobacco products	152	151	138
Textiles, apparel, and leather products	102	102	97
Wood products	23	23	23
Paper	170	167	158
Printing and related support activities	39	38	37
Petroleum and coal products	80	78	65
Chemicals	1,124	1,117	1,063
Basic chemicals	237	233	216
Resins and synthetic rubber, fibers, and filaments	144	144	126
Pharmaceuticals and medicines	258	258	251
Soap, cleaning compounds, and toilet preparations	218	217	213
Other	267	265	257
Plastics and rubber products	221	221	218
Nonmetallic mineral products	92	92	88
Primary and fabricated metals	286	286	276
Primary metals	109	109	107
Fabricated metal products	177	177	169
Machinery	395	394	379
Agriculture, construction, and mining machinery	85	85	79
Industrial machinery	51	50	50
Other	259	259	250
Computers and electronic products	486	485	484
Computers and peripheral equipment	58	58	58
Communications equipment	99	98	97
Audio and video equipment	8	8	8
Semiconductors and other electronic components	215	215	215
Navigational, measuring, and other instruments	94	94	94
Magnetic and optical media	12	12	12
Electrical equipment, appliances, and components	192	189	183
Transportation equipment	588	588	573
Motor vehicles, bodies and trailers, and parts	537	537	522
Other	51	51	51
Furniture and related products	40	40	38
Miscellaneous manufacturing	191	190	190
Wholesale trade	2,263	2,256	2,204
Professional and commercial equipment and supplies	492	492	486
Other durable goods	707	705	696
Petroleum and petroleum products	239	238	215
Other nondurable goods	825	821	807
Information	570	563	541
Publishing industries	118	117	117
Motion picture and sound recording industries	106	106	104
Broadcasting and telecommunications	218	212	194
Broadcasting, cable networks, and program distribution	45	44	35
Telecommunications	173	168	159
Information services and data processing services	128	128	126
Finance (except depository institutions) and insurance	1,523	1,523	1,487
Finance, except depository institutions	1,072	1,072	1,047
Securities, commodity contracts, and other intermediation and related activities	578	578	566
Other finance, except depository institutions	494	494	481
Insurance carriers and related activities	451	451	440
Professional, scientific, and technical services	480	474	453
Architectural, engineering, and related services	42	42	40
Computer systems design and related services	170	165	153
Management, scientific, and technical consulting	96	95	92
Advertising and related services	91	91	88
Other	81	81	80
Other industries	2,716	2,705	2,605
Agriculture, forestry, fishing, and hunting	32	32	31
Construction	31	31	30
Retail trade	226	226	217
Transportation and warehousing	274	273	252
Real estate and rental and leasing	269	268	264
Real estate	130	129	126
Rental and leasing (except real estate)	139	139	138
Management of nonbank companies and enterprises	1,539	1,532	1,474
Administration, support, and waste management	109	108	108
Health care and social assistance	11	11	11
Accommodation and food services	148	148	143
Accommodation	65	65	64
Food services and drinking places	83	83	79
Miscellaneous services	77	76	75

USM United States Method

FCS Fully Consolidated System

EUM European Union Method

1. The sample (covering more than 3/4 of the position in, and the total assets of, foreign affiliates) covers only affiliates for which the necessary chain-of-ownership information was filed on the 2002 BE-11 annual survey of U.S. direct investment abroad.