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Indirect Direct Investment Relationships

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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% Ownership[1]

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

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[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 countries[2] (as shown in the standard country stub used in many BEA publications) and for 62 industries[3] (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.

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[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% x 45%), 28% of Firm C (= 70% x 45% x 90%), and 11% of Firm D (70% x 45% x 90% x 40%).

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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

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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 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).