
**American Economic Association
Allied Social Science Associations
2006 Annual Meeting, Boston, MA
January 6, 2006**

**Globalization, Offshoring, and Multinational Companies:
What Are the Questions, and How Well Are We Doing in Answering Them?**

**Presenter: Ralph Kozlow, Associate Director for International Economics
U.S. Bureau of Economic Analysis**

This paper is based on a paper by J. Steven Landefeld and Ralph Kozlow of the U.S. Department of Commerce's Bureau of Economic Analysis for the June 2003 Conference of European Statisticians, Geneva. It represents the views of the author and does not necessarily represent the views of the BEA or of the U.S. Department of Commerce.

Globalization, Offshoring, and Multinational Companies:
What Are the Questions, and How Well Are We Doing in Answering Them?

I. Introduction

Globalization has placed new demands on statistical agencies to provide the information necessary to inform policy in today's increasingly interdependent world economy. This phenomenon has manifested itself in the interdependence of financial markets, the increasing role of multinational corporations (MNCs), the transfer of technology, the increasing dependence of domestic markets on foreign trade, increasing trade in services, and greater interdependence of monetary, fiscal, investment, and regulatory policy. Indeed, this interdependence in policy has led to increased demands for harmonization in world statistical standards. These have led to efforts by countries and international organizations to more closely adhere to international economic statistical standards; the updating of the *System of National Accounts*, the International Monetary Fund's *Balance of Payments Manual*, and the OECD *Benchmark Definition of Foreign Direct Investment*; the issuance of the OECD Handbook on Globalization Indicators; development of international data dissemination standards; and the development and issuance of a series of handbooks ranging from international trade in services to tourism.

Much of this work has involved filling gaps in coverage required by changes in the economy using conventional data collection methods and the existing structure of the national accounts. Providing the information needed for evaluating the economic impact of MNCs, however, normally requires the development of direct surveys of companies that capture data on the overseas activities of their foreign affiliates. It also may require the use of alternative estimation methods. Despite the cost to statistical agencies and the burden imposed on business respondents by surveys, the sheer size, growth, and impact

of multinational companies have motivated a number of countries to develop, or consider developing, data based on surveys of MNCs.

The United States is the world's largest direct investor and also the world's largest recipient of inward direct investment. At yearend 2004, the value of the U.S. direct investment position abroad at current-cost was \$2.4 trillion, and the value of the foreign direct investment position in the United States at current-cost was \$1.7 trillion. In 2003, U.S. exports and imports of goods associated with U.S. parent companies, their foreign affiliates, and U.S. affiliates of foreign companies totaled nearly \$1.2 trillion and accounted for more than half of U.S. imports and over two-thirds of U.S. exports. These companies employed about 35 million people in the United States and abroad in 2003 (25 million were in the United States, of a total workforce of about 130 million). The combined gross product of U.S. parents and U.S. affiliates accounted for more than one-fifth of the U.S. gross domestic product for private industries.

Recent estimates by the United Nations illustrate the significance of MNCs worldwide.¹ The U.N. estimates worldwide sales by foreign affiliates in 2003 at \$17 trillion, or nearly double the size of world exports. By comparison, in 1990, sales by foreign affiliates were only about 25 percent larger than world exports. Over the period 1990-2004, the world stock of outward direct investment increased an average of 12 percent per year, from \$1.8 trillion to \$9.7 trillion, compared to an annual growth rate of world current-dollar GDP of 4.2 percent. In 2004, foreign affiliates accounted for one-third of world exports.

By any measure, it is clear that MNCs are large and important, and that their role and influence has expanded as they have rapidly grown in recent years. Coincidental with this growth, the questions that policymakers, the academic community, and others are asking about MNCs have also become more numerous and varied. Public awareness

1. United Nations Conference on Trade and Development 2005.

of the offshoring of services has recently led to renewed focus on MNCs and the decisions they make in determining where and by whom their business functions will be performed. The United States has what is widely recognized as the most extensive statistical program in the world for tracking the activities of MNCs, and it is one that we continually strive to improve. In this regard, to be able to analyze questions about MNCs or offshoring and address concerns, the U.S. Congress has recently provided incremental funds for the collection of new information, and for the development, acceleration, and/or modernization of presentations of this information.

This paper identifies key questions that are being asked about the role and impact of MNCs and then reviews the types of statistics that are required to answer those questions. The paper goes on to assess whether the statistics collected by the Bureau of Economic Analysis (BEA) are adequate to address those questions. In so doing, it highlights questions that cannot be readily answered just through data collections but that also require the use of economic theory, modeling techniques, and statistical inference. Finally, it identifies steps that might be considered to address data weaknesses and to help policy makers and other data users better answer the important questions that they now are asking about the impact of MNCs.

II. What Questions Are Being Asked About MNCs?

The following summary attempts to lay out the key questions, provide the answers yielded by U.S. data on MNCs, and identify some of the remaining unanswered questions and the additional data that may be needed. The questions are largely drawn from academic research and policy studies. It is, of course, impossible to develop a complete list of all the questions that people are asking about MNCs, but it is possible to identify key questions that are being asked by leading policymakers, researchers, and others who have extensive knowledge and experience with issues concerning MNCs, globalization, and offshoring issues more generally.

A. Brief History

Before attempting to evaluate how well we may be doing in answering the key questions, it may be informative to put BEA's current data collection efforts and studies in an historical context. Some information on direct investment was collected by the U.S. Government in the early 1900s, but systematic data collection did not begin until around 1950. At that time, some data on the overall operations of parent companies and affiliates began to be collected, but the focus was on the data needed to compile the U.S. balance of payments accounts; the overall operations data tended to be viewed as supplements to the balance-of-payments data and were used mainly to analyze the balance-of-payments effects of direct investment, such as the extent to which production abroad by the foreign affiliates of U.S. companies substituted for, or was complementary to, U.S. exports. Until about the mid-1970s, much greater emphasis was placed on the data for U.S. direct investment abroad (outward investment), which, at the time, was far greater than foreign direct investment in the United States (inward investment).

With the continued growth in outward investment and with the acceleration in the growth of inward investment in the 1970s and 1980s, interest in the non-balance-of-payments aspects of direct investment (such as its effects on employment, technology transfer, and domestic production) increased correspondingly, and equal emphasis came to be placed on collecting data on investment in both directions. In response, BEA expanded its data on the overall operations of U.S. parent companies and their foreign affiliates and instituted new surveys to collect data on the overall operations of the U.S. affiliates of foreign companies.

As concern over the rapid growth in inward investment increased during the late 1980s, Congress and the general public demanded more information to assess the impact of inward investment in particular industries and states. This call led to efforts to link

BEA's enterprise-level data on direct investment to establishment-level data from the Census Bureau and Bureau of Labor Statistics, to obtain those agencies' more detailed data by industry and state for the foreign-owned U.S. companies that report to BEA. This project represented one of a number of improvements that have been made simply by better utilizing existing data, without imposing additional reporting burdens on the business community. Other major data improvement projects that did not impose additional respondent burden were the development of estimates of affiliate value added; the development of a supplemental, ownership-based framework of the current account; and BEA's revaluations of direct investment from historical cost, or book value, to estimates based on current market prices.

Today, BEA provides policymakers and researchers with a wide array of MNC data items cross-classified by country, industry, and state. BEA's surveys of direct investment include employment data, R&D expenditures, trade in goods and services, and selected financial data.² Extensive data at aggregate and detailed levels are provided to the public free of charge on BEA's Web site at <www.bea.gov>. While BEA must maintain strict confidentiality of micro-level data, a special program allows access to micro-level data for distinguished researchers working in the area of foreign direct investment or trade in services.

BEA has conducted significant methodological and conceptual work, which has led to the collection of additional data items and the refinement of concepts. In addition, BEA has been actively involved in work throughout the world, in clarifying concepts and in exploring the borderline between direct investment and other types of investment. For example, staff have actively contributed to the development of the *Balance of Payments Manual*, the *Manual of Statistics on International Trade in Services*, the *Benchmark Definition of Foreign Direct Investment*, and the *System of National Accounts*. In addition, they actively participate in various international workgroups, examining such

2. BEA's trade-in-services program covers trade by all U.S. residents (whether or not they are MNCs) with

issues as direct investment, nonperforming loans, the measurement of software trade, the measurement of insurance services, and various other measurement and statistical issues.

In these ways, BEA has responded to the need for more relevant information for use in analyzing and understanding the role of MNCs in the globalization process. Throughout the history of its data collection program, BEA has taken steps to improve the accuracy and timeliness of its data. However, in this era of globalization, working to improve the accuracy and timeliness of direct investment data is no longer sufficient. Comparability of the data, both to data on the domestic economy and to the data of other countries, is also necessary.³ Also, to minimize respondent burden and maximize data utility, it is essential to organize and enhance the data that are obtained.⁴ In recent years, BEA, its counterpart agencies in other countries, and international organizations have paid increasing attention to improving the comparability of MNC data across countries and, for a given country, to data for the domestic economy to which the data might be compared.

B. What are the questions, and how well are we answering them?

The United States has made major strides in providing information that has been used to answer many of the key questions being asked about globalization. Some of these key questions are:

- How do MNCs affect output, incomes, and employment in home and host economies? Do multinationals export jobs? How do they affect wages?⁵

affiliated and unaffiliated foreign residents.

3. One major recent effort that has improved comparability of the U.S. data with data produced by Canada and Mexico was the release in 1997 of the North American Industry Classification System.

4. See Whichard 2003 for a discussion of how BEA has organized and enhanced data it obtains from MNCs.

5. Several research and policy studies involving these questions have been performed using MNC data. See for example, Brainard and Riker 1997, Slaughter 1995, Lipsey 1994, Graham and Krugman 1995, and Graham 2000.

A frequently expressed fear is that multinational companies will shift production offshore to lower wage countries, thereby exporting jobs and exerting downward pressure on wages back home. BEA's data suggest that multinationals generally invest abroad for access to markets rather than low wages and that the share of their activities conducted abroad has not increased appreciably over time. According to BEA's data, worldwide value added, capital expenditures, and employment of U.S. MNCs remained concentrated in the United States in 2003. U.S. operations' share of the worldwide value added, capital expenditures, and employment of U.S. MNCs in 2003 was 74 percent, 74 percent, and 72 percent, respectively, down somewhat from 1977 when the shares were 75 percent, 79 percent, and 78 percent.⁶ These shares have remained relatively stable over this period of rapid globalization.

Evidence also suggests that the wage rates of parent companies are not significantly affected by the wage rates of their foreign affiliates.⁷ In addition, studies suggest that output in both the home and host countries is positively correlated with new direct investments, and that foreign direct investment may lead to knowledge "spillovers" with other firms in the host economy. The impact on host and home country employment from new direct investments is unclear.⁸ However, this lack of clarity has less to do with absence of data on employment than it does with disentangling the impact of new foreign direct investment from macroeconomic and industry specific factors that also affect domestic employment. This point is revisited later in this paper.

- What determines the location of production by multinationals?

6. Mataloni 2005.

7. Slaughter 1995.

8. Data collected by the U.S. Government would potentially permit additional study of the impact of foreign takeovers (and of how foreign takeovers compare with takeovers more generally) on U.S. employment levels and wage rates, but (partly due to unresolved interagency data sharing questions) these data sets have not yet been utilized for this purpose.

BEA's data on foreign direct investment has helped refute one of the major fallacies about multinationals, which is that the most important determinant of the location of their overseas investment is access to low wage labor. Indeed, the most important determinant seems to be access to large and prosperous markets. Companies tend to invest for purposes of *selling* goods and services rather than for gaining access to low-cost labor and other resources for *producing* goods and services. Two-thirds of U.S. direct investment abroad is in high-income countries. Interestingly, in manufacturing, 80 percent of overseas affiliates' production is in high-wage, developed countries, where investment is stimulated by a number of non-wage factors, including access to markets; production of products designed for the local market; local service, support, sales, and advertising activities; tax incentives; or reduced transport costs.

- How do MNCs respond to barriers to trade and investment? To tax and investment incentives?

As suggested above, the major determinant of foreign direct investment has been access to developed economies with large and growing markets. Tax laws and investment incentives were found to be of secondary importance.

More recently, however, the proliferation of investment incentives and changes in U.S. tax law may have increased the importance of tax laws and investment incentives.⁹ BEA's data show that U.S. parent companies are increasingly using holding company affiliates within their organizational structure. In 2004, investment in holding companies accounted for one-third of U.S. direct investment abroad, compared to 9 percent in 1982.¹⁰ These holding companies typically represent a new, intermediate layer of direct investment, created between the direct investor and its affiliates in manufacturing or other industries located in third countries. One of the reasons why MNCs use holding

9. Desai, Foley, and Hines 2003.

10. Koncz and Yorgason 2005.

11. U.S. Department of Commerce 1993 and 1997.

companies is to take advantage of favorable tax incentives. BEA's data do show a concentration of holding-company affiliates in developed and developing foreign countries where the income tax rate is relatively low.

- How do MNCs contribute to cross-border transfers of technology?

One of the major concerns expressed about multinationals is that they erode the U.S. technological advantage either by U.S. companies transferring technology to their overseas investment partners or by foreign companies buying U.S. high-technology companies to gain access to U.S. technology and know how. Unfortunately, technology transfers are very hard to define and measure. Technology transfer may occur simply by an employee traveling to an overseas affiliate and discussing technology or through a series of E-mails rather than through an explicit royalty or licensing payment that would show up in companies' financial accounting statements or foreign direct investment operations reports.

By default, research has tended to focus on identifying and categorizing the U.S. industries in which foreign companies invest and how much they spend on research and development. As it turns out, they mainly invest in the same industries as their parents, and their investments are only slightly more concentrated in high-technology industries than those of all U.S. companies.¹¹ Research and development activity has grown faster within foreign-owned firms than in all U.S. firms, but this may simply reflect the propensity of these firms—like U.S. multinationals—to invest in more concentrated, more capital intensive, higher productivity, higher wage, and higher technology industries. Additional data development work by the National Science Foundation, the U.S. Census Bureau, and the Bureau of Economic Analysis may shed more light on this topic.¹²

12. A study of the feasibility of linking BEA's data on the identity of U.S. MNCs and of U.S. companies that are foreign owned with NSF/Census Bureau data on research and development expenditures was

- How do multinationals affect trade flows and trade balances?

Although multinationals' trade accounted for more than half of U.S. goods imports and over two-thirds of U.S. goods exports in 2003, it is not clear what the impact of overseas investment by multinationals is on total U.S. trade or the U.S. trade balance. Many would suggest that overseas investment expands the overall volume of trade and production rather than substituting foreign for domestic production. Indeed, the share of U.S. multinationals' total production occurring abroad shows no upward trend. BEA studies do, however, show that, although U.S. affiliates of foreign companies do purchase most intermediate inputs domestically, they are more reliant on imports than other U.S. firms.¹³ In addition, some of the industries associated with large imports represent wholesaling operations in which affiliates were established to facilitate the distribution of goods produced by their foreign parent companies. In several cases, such affiliates have subsequently been replaced by, or have evolved into, manufacturing affiliates, which over time may progressively rely more on their own value added and on locally procured intermediate inputs, and less on imports from their foreign parents.

Another perspective on the contribution of multinationals to the U.S. economy can be seen by looking at BEA's supplemental ownership-based measures of the U.S. current account. These measures highlight the large overseas sales of U.S. and foreign companies and their relation to U.S. trade and investment income.¹⁴

successfully concluded in 2005. BEA also collects data on exports and imports of research and development services that could provide additional insights into cross-border transfers of technology.

13. Zeile 1998.

14. Landefeld, Whichard, and Lowe 1993, and Lowe 2005. The ownership-based framework of the current account groups direct investment income generated by sales through affiliates with cross-border trade in goods and services, to recognize the active role of parent companies in managing and coordinating their affiliates' operations. Such income differs fundamentally from income on other types of investments, and might be regarded as a kind of implicit management fee that compensates the parent company for undertaking an active role in affiliate operations. The framework also provides more detailed information on trade within MNCs than does the traditional current-account framework.

- Do MNCs invest abroad mainly to achieve efficiency in vertical integration, by locating different stages of production in different countries, or does their international expansion tend to be more horizontal in nature, with essentially identical processes replicated in multiple countries?

Several studies have concluded that the bulk of multinationals' investment is horizontal in nature.¹⁵ Once again, it is access to large and growing markets—rather than access to low wage labor for labor intensive stages of the production process or on-site access to raw materials for initial processing—that is driving foreign direct investment. By locating duplicate facilities in each country or region, companies can provide integrated sales, advertising, production, inventory control, and delivery of their product tailored to the needs of the individual markets. Also, BEA's data show that some investment in developing countries is driven by market access and not factor cost differences, as evidenced by the high share of sales to the local market by affiliates in developing countries. Nonetheless, recent studies have suggested that vertical integration and access to low cost foreign labor may be gaining in importance.¹⁶

- How do foreign-owned companies differ from domestically owned companies?

At one time, especially during the wave of Japanese investment in the early 1990s, there was concern about foreign companies' operating practices, especially on the part of organized labor. Would the U.S. affiliates of these companies pay lower wages, hire lower-skilled workers, or use their U.S. operations as a conduit, investing less in capital equipment and performing less research and development, leaving those functions for the home office overseas?

BEA's data show that foreign-owned U.S. companies actually tend to pay higher than average wages, but after controlling for differences in industry mix, they pay

15. Carr, Markusen, and Maskus 2001.

roughly the same wages as U.S. firms in the same industries.¹⁷ Foreign investors also tend to invest in U.S. industries that are relatively capital intensive and to fund and perform large amounts of research and development.

- How much of a particular domestic industry is owned by foreign companies?

BEA and the Bureau of the Census have linked BEA's enterprise-level data on foreign direct investment in the United States to the Census Bureau's data on all U.S. establishments, and this data set has resulted in detailed estimates showing the proportion of domestic industries that are owned by foreign companies.¹⁸ Also, in a parallel project, BEA data were linked to data of the Bureau of Labor Statistics for 1989-1992 covering a number of employment-related variables, including data on the occupational structure of foreign-owned U.S. manufacturing establishments. These linked data sets provide information on the share of each domestic industry (at a detailed level of industry classification) that is owned by foreign companies.

These are but a few of the many questions that have been posed about foreign direct investment. As can be seen, the existing data have been useful in answering these questions to a significant extent. However, as detailed below, there also are many questions that have not been as fully or clearly answered. Some questions that will require additional data or research to fully answer are:

- How many jobs have been offshored?

16. Hanson, Mataloni, and Slaughter 2001.

17. Howenstine and Zeile 1994.

18. To date, BEA and the Census Bureau have published data for 1987, 1992, and 1997 on the number, employment, payroll, and value of shipments of both foreign-owned manufacturing and nonmanufacturing establishments. Data for 2002 are scheduled for publication in 2006. In addition, data for the above and other items for foreign-owned manufacturing establishments for 1988-91 were published based on data from the Census Bureau's Annual Survey of Manufactures.

The offshoring debate has led to substantial interest in data on the number of jobs that have shifted from the United States to other countries. However, it is important to recognize that this question, and some other commonly asked questions about MNCs and offshoring, cannot be readily answered through business surveys alone, but also require the use of economic theories and statistical inferences.

Offshoring has often been defined as the “shifting” of jobs or production offshore, but measuring this activity is extremely difficult. In many cases, the companies involved may not be able to provide any information on offshoring because they may not be aware that they are involved in offshoring. For example, if a U.S. company decides to outsource an activity to another U.S. company, and that second U.S. company, in turn, uses a foreign subcontractor to fulfill the contract, U.S. production and jobs would be lost to a foreign country. However, these impacts may not be attributed to offshoring, because no single U.S. company “shifted” production or jobs to a foreign country even though, from the perspective of the U.S. economy as a whole, production and jobs were moved abroad. In other cases, a decision by a U.S. company to expand overseas may result in no decrease in U.S. employment or production. Indeed, there could even be an increase in U.S. employment and production if the overseas expansion is a complement to, rather than a substitute for, U.S. activity.¹⁹ Workers may take up new activities and that are more productive and profitable than the activities that were offshored.²⁰

“In-shoring” presents similar problems of interpretation. If a foreign company decides to outsource an activity to the United States, U.S. production and jobs will be gained whether the investment in the United States represented a “shifting” from abroad or whether it represented new global production rather than shifting.

19. This is not a rare case. A recent NBER paper (Desai, Foley, and Hines 2005) utilizing BEA’s confidential micro-data confirms results from earlier studies in suggesting that employment and production at U.S. parent companies and their foreign affiliates tend to be complements rather than substitutes.

20. Bhagwati, Panagariya, and Srinivasan 2004.

Another difficulty in quantifying and analyzing the effects of offshoring is the lack of a “counterfactual case” to which present day circumstances can be compared. That is, even if a business survey could quantify the direct employment effect of an offshoring decision, it could not capture information about what would have happened to employment if the particular company had decided not to offshore. If, for example, a U.S. manufacturer decided not to offshore and later went out of business, many more jobs could be lost than if it had offshored some activities. In this case, an assessment of whether jobs were saved or lost is partly a matter of theories and inferences. Thus, statistical data collections are a necessary tool, but they do not substitute for careful analyses.

- What do we know about offshoring by looking at BEA’s MNC data?

A recent paper looked at BEA’s MNC data on employment, trade, and sales through affiliates to analyze trends in the data related to offshoring. The data showed that U.S. parents have increased their reliance on purchased goods and services, but that there is no significant association between this increased reliance on purchased inputs and decreases in parent employment. The paper showed that while parents’ reliance on imports of goods from foreign affiliates is negatively associated with changes in parent employment, this relationship was not significant for imports of services. Growth at U.S. parents and at their foreign affiliates is closely, and positively, linked. On average, the share of sales by foreign affiliates to local markets increased over time, suggesting that market access is an increasingly important reason for investing overseas. The increase in the share of sales that were to local markets coincides with an increase in the share of affiliate employment in low-income countries. This result suggests that for investment in low-income countries, market access, and not just factor cost differences, is an important consideration.²¹

A recent study used BEA’s data to estimate how many jobs may have been lost due to

offshoring. This study found that job losses in the United States were in large part due to productivity gains. Job losses due to the shifting of jobs by U.S. parent companies to their affiliates from 1999 to 2001 were estimated to be 195,000 jobs per year, a small portion of the 13 million jobs that were lost for all reasons in the American economy. The study also looked at the increase in U.S. imports of business, professional, and technical services (with affiliated and unaffiliated foreigners combined), and estimated that job losses from this factor would likely be no larger than 50,000 to 70,000 per year in the 2001-2003 period.²²

- Do multinationals contribute to, or help mitigate, international financial crises, such as currency crises?

Some recent studies have shown that multinational company investment tends to be more stable than other types of investment.²³ Indeed, during an international financial crisis, there is evidence that MNCs may more heavily invest in the economies that are distressed, helping to mitigate the crises. Such investments are perceived by the MNCs as also benefiting themselves over the longer term, because the value of their investments may increase substantially after the crisis subsides.

- Is intra-firm trade conducted at arm's length prices, or are prices set to shift profits and avoid taxes?

Although this area has been extensively studied, no consensus opinion has been reached. Research must continue, and additional data probably must be collected, before a consensus can be reached.

21. Borga 2005.

22. Schultze 2004.

23. Lipsey 2001.

- What is the role of multinationals in international financial flows?

The answer to this question is not entirely clear. Although financial flows that affect the U.S. balance of payments accounts are generally well tracked, many factors (including the use of complex organizational structures, unusual types of financial arrangements, and a decentralized data collection network) have made it impossible to isolate the flows that pertain just to multinationals. In many cases, they have also made it difficult to associate those flows with the operations that they ultimately finance.

- How do multinationals affect major domestic aggregates, such as GDP, productivity, inflation, and corporate profits?

While the amount of GDP and other aggregates that is accounted for by MNCs is known, the full impact of MNCs on major domestic aggregates is unknown. As noted earlier, evidence shows that output in both the home and host countries is positively correlated with new direct investments. Nonetheless, further research is necessary to fully understand the impact of multinationals on domestic aggregates. MNCs affect domestic aggregates directly and through their transactions with other domestic and foreign businesses, including suppliers, and these latter transactions are not identifiable as being MNC-related.

- In regard to the environment, is there a “race to the bottom” where governments competing for increased investment are willing to accept very low (or lowered) environmental standards?

Some studies have looked at the impact of MNCs on environmental quality, and evidence suggests that, in general, MNCs employ advanced environmental management techniques. Indeed, many MNCs have issued environmental policy statements and made

public commitments to employ management practices that exceed legal mandates.²⁴ However, there also are examples of MNCs that contribute to increased air or water pollution. Further data collection and research would be needed to examine this question more fully. At present, there is very little data collected directly from MNCs that can be used to address this question.

C. Although we can answer many of the key questions, even for these questions there nonetheless remains substantial additional work

It is clear that several of the questions posed earlier can be at least partly addressed utilizing data currently available from BEA and other sources. However, there are reasons for not accepting these research findings as definitive. The answers to questions may change as direct investment and international trade in services continue to expand, as tax laws change, and as business cycles progress.

It is noteworthy that there are large bilateral asymmetries in data that purport to measure the same or similar positions or transactions. The answers to some questions could change, as more complete or more accurate data are obtained. Unfortunately, some of the observed differences in bilateral estimates are likely to be the result of estimation errors. Partly in recognition of this prospect, the International Monetary Fund and others have moved aggressively to improve world statistical data quality, but this is a monumental task that will take considerable time and resources to accomplish.

Other bilateral asymmetries are probably attributable to differences in the definitions and concepts that individual countries employ in producing estimates or in designing survey questionnaires. As mentioned earlier, in this era of globalization, comparability of data—both to data on the domestic economy and to data of other countries—is an important goal.²⁵

24. Christiansen and Garcia 2004.

25. To work toward attaining that goal, the United States recently identified numerous borderline cases

While addressing current challenges, we need to be mindful of new and emerging issues. The forces of globalization are probably serving to worsen difficulties that compilers are encountering with the accounts, as new types of business arrangements, the growth of high technology industries, the increasing importance of services (and the related questions of how to define and measure services activities), and new ways of financing operations or hedging exposures, are being introduced. Innovations prompted by the forces of globalization may lead to gaps and imbalances in the accounts. For example, some businesses may lock in exchange rates through the use of derivative instruments, and this may lead to imbalances in the accounts if the two entries (in the trade data and in the financial account of the balance of payments) do not exactly offset. Also, manufacturers may cease to operate in the conventional way—by taking title to the goods that they process—and instead become agents that receive fees for processing goods that they never own; this could lead to measurement and classification challenges. These are but a few examples of challenges that compilers must meet if they are to continue to satisfy the needs of data users adequately.

III. What should BEA or other statistical organizations be doing, to provide more and better data to our users?

There are many different steps that BEA and other statistical organizations should consider undertaking to improve the accuracy, consistency, and quality of their data. For example, data consistency across countries would be improved if international statistical data standards were updated and expanded, so that key categories of positions and transactions were defined in ways that are appropriate for data users and that are practical. (Practicality refers to the ease in which transactors or survey respondents may be able to report the data, or the ease of estimating data that are not directly reported.)

between direct investment and other types of investment, where there were no broadly accepted treatments or definitions. A primary purpose of identifying these borderline situations was to promote international consistency of treatment, by informing others of the treatments followed by the United States, and

BEA has worked to help establish more uniform international standards by authoring discussion papers identifying key borderline direct investment areas, and by contributing to committees now updating the world's economic statistical standards. This work was prompted by the IMF's announcement of its intention to update the International Monetary Fund's *Balance of Payments Manual*. Efforts by the United Nations to update the *System of National Accounts* provided another opportunity for developing and updating methodological standards and classification systems.

Data would be augmented and improved if statistical organizations undertook additional collaborative projects, to improve data accuracy and to increase the utility of their data. Bilateral data comparisons can result in substantial data improvements, and it is clear that more of these could and should be undertaken.²⁶

In addition, data output would be enhanced if statistical organizations made fuller use of the data that they already collect. For example, as mentioned earlier, BEA has integrated MNC financial and operating data with its balance of payments data, by periodically issuing a supplemental, ownership-based framework of the U.S. current account. In addition, BEA has used data collected on various charges against production (compensation of employees, depreciation, etc.) to derive estimates of value added of MNCs. Finally, BEA conducts a variety of research and analytical activities in support of its data on MNCs. Research is conducted to interpret the data and place it in context, and to develop new methodologies and measures. Nonetheless, BEA recognizes that there is more work to perform, and it continues to explore opportunities to enhance the usefulness of the data it has already collected.

providing justifications for those treatments where they may be unclear. See Kozlow 2002.

26. One example of a successful data reconciliation project is the annual United States-Canada current account reconciliation. This project - which has been performed annually since 1970 - demonstrates the benefits that ensue from detailed bilateral data reconciliations. However, this project also has shown that high quality reconciliation projects may be resource intensive. Viewed from a practical perspective, bilateral reconciliation projects probably must be limited to those where significant gains are expected, or that do not unduly burden statistical agency resources. Perhaps partly in recognition of this consideration, international organizations including the IMF and Eurostat have been facilitating recent data comparison

Also, statistical agencies should work aggressively toward closing gaps in coverage, both in their coverage of cross border transactions and in their coverage of affiliate financial and operating data. For example, BEA currently collects very little information that might be used to assess the impact of MNCs on environmental quality.²⁷

IV. Conclusion

Although a great deal of statistical information is available to help answer many of the questions now being asked about globalization and offshoring, clearly much work remains. There are reasons for not accepting current government statistics as the final answer. Not all questions have been answered, and the impact of globalization will surely change as direct investment and international trade in services continue to expand, as tax laws are revised, and as business cycles progress. Further, not all questions can be answered by statistics that are based on business surveys alone, as some also require the use of economic theories and statistical inferences, some of which are still being developed or refined. Finally, the forces of globalization are creating new or emerging issues that are tending to worsen some of the difficulties that compilers have traditionally faced in compiling the accounts.

BEA is committed to continuing its progress in updating its measurement techniques, and in providing more timely and comprehensive data, to assist policymakers and others who rely on BEA's data to obtain insights about the impact of globalization

and reconciliation projects.

27. BEA also strives to address data gaps in areas of the accounts that are not specifically MNC-related. For example, many of BEA's surveys of unaffiliated services transactions were conducted only annually, and there was virtually no data on U.S. international financial derivatives. In 2004, BEA introduced new quarterly surveys for the largest and most volatile categories of services transactions, and, in 2005, with support from BEA, the U.S. Department of Treasury began conducting a survey of financial derivatives. Efforts to close data gaps on MNCs need to be part of a broader effort by statistical agencies, to identify and work on closing all major data gaps, whether in coverage of cross-border transactions or of MNC

and offshoring.

financial and operating data.

References

- Bhagwati, Jagdish, Arvind Panagariya, and T.N. Srinivasan. 2004. "The Muddles Over Outsourcing." *Journal of Economic Perspectives*. Fall.
- Borga, Maria. 2005. "Trends in Employment at U.S. Multinational Companies: Evidence from Firm-Level Data." Brookings.
- Brainard, S. Lael, and David A. Riker. 1997. "Are U.S. Multinationals Exporting U.S. Jobs?" NBER Working Paper 5958. March.
- Carr, David L., James R. Markusen, and Keith E. Maskus. 2001. "Estimating the Knowledge-Capital Model of the Multinational Enterprise." *American Economic Review*. June.
- Christiansen, Hans and Esther Garcia. 2004. "An Overview of Corporate Environmental Management Practices." Organization for Economic Cooperation and Development and Ethical Investment Research Services Ltd.
- Desai, Mihir A., C. Fritz Foley, and James R. Hines, Jr. 2003. "Chains of Ownership, Regional Tax Competition, and Foreign Direct Investment." in Herrman, Heinz and Robert Lipsey, eds. *Foreign Direct Investment in the Real and Financial Sector of Industrial Countries*. Springer-Verlage.
- Desai, Mihir A., C. Fritz Foley, and James R. Hines, Jr. 2005. "Foreign Direct Investment and Domestic Economic Activity." NBER. October. <www.nber.org/papers/W11717>.
- Graham, Edward M. and Paul R. Krugman. 1995. "Foreign Direct Investment in the United States." Institute for International Economics. January.
- Graham, Edward M. 2000. "Fighting the Wrong Enemy." Institute for International Economics. September.
- Hanson, Gordon H., Raymond J. Mataloni, Jr., and Matthew J. Slaughter. 2001. "Expansion Strategies of U.S. Multinational Firms." Brookings. April.
- Howenstine, Ned G., and William J. Zeile. 1994. "Characteristics of Foreign-Owned U.S. Manufacturing Establishments." *Survey of Current Business*. January.
- Kester, Anne Y., ed. 1992. *Behind the Numbers: U.S. Trade in the World Economy*. Washington: National Academy Press.
- Koncz, Jennifer L., and Daniel R. Yorgason. 2005. "Direct Investment Positions for 2004: Country and Industry Detail." *Survey of Current Business*. July.

- Kozlow, Ralph. 2002. "Exploring the Borderline Between Direct Investment and Other Types of Investment: The U.S. Treatment." BOPCOM-02/35. Presented to the IMF's Committee on Balance of Payments Statistics, Canberra, Australia. October. <www.bea.gov/bea/papers.htm>.
- Landefeld, J. Steven, Obie G. Whichard, and Jeffrey H. Lowe. 1993. "Alternative Frameworks for U.S. International Transactions." *Survey of Current Business*. December.
- Lipsev, Robert E. 1994. "Foreign-Owned Firms and U.S. Wages." NBER Working Paper 4927. November.
- Lipsev, Robert E. 2001. "Foreign Direct Investors in Three Financial Crises." NBER Working Paper 8084. January.
- Lowe, Jeffrey H. 2005. "An Ownership-Based Framework of the U.S. Current Account, 1992-2003." *Survey of Current Business*. January.
- Mataloni, Jr., Raymond. 2005. "U.S. Multinational Companies: Operations in 2003." *Survey of Current Business*. July.
- Schultze, Charles L. 2004. "Offshoring, Import Competition, and the Jobless Recovery." Brookings. August.
- Slaughter, Matthew J. 1995. "Multinational Corporations, Outsourcing, and American Wage Divergence." NBER Working Paper 5253. September.
- United Nations Conference on Trade and Development. 2005. *World Investment Report 2005: Transnational Corporations and the Internationalization of R&D*. New York and Geneva: United Nations.
- U.S. Department of Commerce. 1993 and 1997. "Foreign Direct Investment in the United States, An Update."
- Whichard, Obie G. 2003. "Measuring Globalization: The Experience of the United States of America." prepared for the 22nd CEIES Seminar, Copenhagen, Denmark. June.
- Zeile, William J. 1998. "The Domestic Orientation of Production and Sales by U.S. Manufacturing Affiliates of Foreign Companies." *Survey of Current Business*. April.