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Concluding Observations

Robert E. Baldwin
Jack Bame
Ralph C. Bryant

Robert E. Baldwin

In my comments, I should like to focus on a few issues of measuring international transactions; in particular, on measuring U.S. merchandise trade and on relating the data collected to other domestic and international economic variables. First, I want to emphasize the importance of collecting accurate and timely trade figures and of being able to integrate these figures with other economic and social data. Next, I will comment on the manner in which trade data are collected, as well as the frequency and detail with which they are assembled. This leads into a discussion of the comparability of trade data with other economic and social data needed for understanding the operation of the world trading system. Finally, I will briefly consider foreign trade data needs in the future and the best methods of collecting the information.

There is increasing interest on the part of both government officials and private business leaders in ways the United States can best maintain a strong competitive position in the international market for goods and services. This interest has led to all sorts of proposals for improving the U.S. competitive position, ranging from extensive government intervention in shaping the nature of production to a completely "hands-off" role for the government.

One important reason for the disparity in views as to how best to promote international competitiveness based on real comparative advantage rather than on artificial factors such as continuing government subsidies, is that we do not understand the sources of comparative advantage very well, to say nothing of their measures. For many years, international economists emphasized the role

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of relative endowments of productive factors, such as capital, skilled and unskilled labor, and natural resources, in relation to the technological production requirements for these factors, as the main basis of a country's long-run international competitive position. Empirical testing of the factor-proportions hypothesis, using the imperfect data that are available, has clearly demonstrated, as Leamer points out, that "the main currents of international trade are well understood in terms of a remarkably limited list of resources."[1] However, the testing has also shown that the relationships are by no means exact ones, in the sense that holds in a rigorous Heckscher-Ohlin model.[2]

While many investigators have suggested that there are numerous other factors shaping comparative advantage, such as increasing returns, differences in technology, and market imperfections, especially in manufacturing, both the inability to quantify the importance of these factors and the lack of adequate theories explaining how they influence comparative advantage have hampered efforts to gain a better understanding of the forces influencing a country's international competitive position. Fortunately, there has been a breakthrough at the theoretical level in recent years in better understanding how increasing returns in manufacturing production can arise and how these can affect patterns of trade. What is now needed, and is already underway to some extent, are careful investigations that can cast light on how important increasing returns are empirically in shaping comparative advantage. In other words, if we are to understand better how increasing returns and other factors influence international competitiveness, we need not only theoretical models that put forth reasonable relationships between these factors and competitiveness, but good data that will enable investigators to determine the importance of these relationships in the real world. It is only with the understanding that comes from the interaction between theorizing and empirical testing that one can begin to formulate public policies that can better contribute to a country's competitive ability.

Unfortunately for public and private officials and for researchers interested in better understanding the forces shaping international competitiveness, the data on foreign trade has been collected for purposes quite different from the testing of various theories and the formulating of policies relating to international competitiveness. The main motivation for collecting import data has been, of course, to be sure that the government collects the duty revenues levied on imports. U.S. law requires the collection of import data on a monthly basis by tariff item. Collection of detailed export data seems to be legally required only quarterly; but aggregate exports and imports must be reported monthly.

As the paper by Bruce Walter points out, there have been impressive im-

1. Edward E. Leamer, *Sources of International Comparative Advantage* (Cambridge, Mass: MIT Press, 1984).

2. Harry P. Bowen, Edward E. Leamer, and Lea Sveikauskas, "Multicountry, Multifactor Test of the Factor Abundance Theory," *American Economic Review* 77.5 (1987): 791–809.

provements in the quality of U.S. trade data in recent years. While increasing the degree of automation on the part of traders, exchanging data among countries, and other efforts on the part of Census and Customs are operating to improve the quality of trade data, there are some developments working in the opposite direction. As tariffs continue to fall to minimal levels for most traded goods and the trend toward new and expanded free trade areas accelerates, the incentive for collecting accurate trade data, especially on the import side, is weakened. One wonders, for example, whether the quality of U.S.-Canada trade statistics will deteriorate as tariffs are removed on most items. The most striking example of this problem is in the European Community, where border controls are being abolished. Intra-EC trade will only be reported on a voluntary basis, after this has taken place. If U.S. experience with exports is any indication, the data obtained under this method is likely to be of very poor quality.

Contemplation of this problem, along with the severe budgetary constraints under which collectors of trade data are operating and the growing importance of other types of international transactions, suggests that we should ask whether we need the level of detail and the frequency with which data on merchandise trade are currently being reported. Few people are likely to argue with the value of monthly data on the value of total exports and imports and of major commodity-group exports and imports, although the volatility of the data suggests that they must be interpreted cautiously. But one wonders about the value of processing import data for the 14,000 import items under the Harmonized System by country of origin and customs district. The Panel on Foreign Trade Statistics is about to conduct a survey to find out how the data is used, but, on the surface, it is hard to imagine how data in such detail and frequency can be very useful to either the government or the private sector. No other economic data are reported in such detail and so frequently. Obviously, there may be some instances where very detailed data on a monthly basis are very valuable to businesses or the government, but it would seem that a special effort could be made to collect these data without collecting all the other levels of detail now available. In such cases, consideration should be given to requiring the users of the data to bear the costs of the data collection.

One suggestion that seems to have merit is to apply sampling procedures to collect monthly data on total trade and its broad components and to provide the commodity and country detail now made available on a monthly basis only on a quarterly basis. Such an approach would require a change in the law, but in view of the current budgetary tightness, it might be welcomed by the executive branch as well as by Congress. Even if the current system is retained, the use of sampling to obtain figures on total trade would greatly shorten the present six-week delay in reporting monthly figures.

Trade data by themselves may be of interest to some data consumers, but these data are not very useful for analyzing economic trends and relationships unless they are related to other economic and social data. For example, to help

assess an industry's international competitive performance, it is necessary to present trade data in constant dollars and relate them to such variables as domestic output, world output, and world exports of the product. However, the dispersion of authority for collecting and integrating economic and social data, coupled with the lack of an integrated governmental view of the purposes for which data-bases are collected and related to each other, has meant that the level of detail and frequency at which various sets of U.S. economic information can be related to each other varies enormously. For example, the 10,500 7-digit import items in the old U.S. tariff schedule are grouped into about 2,500 5-digit SIC product sectors. Price deflators are available only at a much more aggregative level and, until recently, only on a quarterly basis. Production data at the 4-digit SIC level is available only on an annual basis. Input-output tables are available only every five years, and there usually is a long delay before they are published; they also have the drawback that the imports consumed by each industry are not available.

Not only are U.S. trade and related data collected by several different agencies and classified differently by these agencies, but no agency seems to have the responsibility for trying to bring the data together on a comparable basis. Furthermore, the various collecting agencies generally do not publish time series of their data. Occasionally, some agency such as the International Trade Commission or the Labor Department will pull available data together into a data-base covering a number of years and make it available to a private researcher, but usually it is up to the private researcher to construct the needed data-set or to buy it from a private firm. Those within the government have access to the computerized data-set of government data, termed COMPRO, but the various bodies of data in this set do not appear to be integrated very well. When it comes to trying to collect comparable data on an international basis, the problems are much worse, as the paper by Keith Maskus shows.

Thus, if we are to be able to understand better the various forces that shape international competitiveness and to make better policy decisions, we should begin by doing a much better job of integrating the data we already collect. Simply allocating differently the funds already available could bring about a significant improvement in the data system.

The last issue I want to consider briefly is how organizational and technological developments over the next few decades will affect the type of international transactions on which we want statistics and the optimal ways of collecting the data. One trend that is continuing, at what seems to be an accelerating pace, is the internationalization of business. More and more major producers of traded goods are jointly owned by citizens of several countries, produce a wide variety of goods and services, conduct their business in many different countries, and produce their final products with components made in several countries. The statistics on exports and imports, as now collected, do not convey much of the information policymakers and researchers wish to know about these businesses. For example, they would like to know the types,

values, and sources of the various manufactured components that enter into the final value of exported and imported goods. In addition, they would like information on the foreign activities of companies controlled by U.S. citizens and domestic activities of foreign controlled companies that do not enter into the balance of payments statistics. Data are also needed on the international movements of people and technology, as well as capital, that occur in connection with the business activities of these firms.

The continuing technological improvements in electronics, telecommunications, and transportation are another development that is beginning to have profound effects on the way international transactions are conducted. These changes are further blurring the distinction between goods and services. They have already significantly increased the international mobility of financial capital, and by enabling certain types of services that flow from goods and individuals to be transferred across borders electronically, are likely to have a major impact on the way traditional international trade is conducted.

The above and other developments suggest that more and more of the information about international transactions desired by business officials, public policymakers, and researchers will have to be collected directly from firms and other economic actors. Collecting data as goods and services cross international borders is not only becoming increasingly difficult but a smaller part of the information that is desired. Consequently, shifting toward the collection of trade data by sampling techniques like those used to collect information on most other economic variables should be seriously considered. The complete enumeration of trade in goods might be reserved for those goods where the revenues from import duties are high or where quantitative import controls or national security considerations make a complete monitoring of trade necessary. Such an approach would provide the opportunity to collect more of the type of data needed for good policy making in the 1990s, to better integrate trade data and other related economic and social information, and probably to reduce present data collection costs.

Jack Bame

It has been a pleasure to participate in a conference concerned with international issues and with measurement and empirical issues. All too many "experts," both here in Washington and in academia, don't want to be burdened by data considerations or by empirical work, which are viewed as too dull and too difficult, respectively. This aversion is particularly evident when these "burdens" might not support preconceived notions or particular ideologies. So, taking my cue from a Canadian report of a few years back, *two* cheers for

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us. I have several comments on what was and was not covered here in the past two days.

First, in reference to a comment that Ed Leamer made at the August preconference meeting—he suggested that data providers color-code data in red, amber, and green, according to their "quality"—I would respond that perhaps the same might apply to research papers. In any event, it might be more productive for data users and readers of research papers to delve into the data involved and designate color codes for the data and research conclusions, respectively.

Second, it became quite apparent, from the first paper presented on through the conference, that much work remains to be done in the area of harmonizing, improving, and refining international data so that consistent comparisons can be made over time. Researchers carry the responsibility to utilize whatever data is available intelligently and innovatively (some of the best researchers are represented in this volume and have done so). One caveat: we can't expect too much too soon. Priorities must be established by both national and international data providers and users, hopefully reflecting a happy compromise between the two groups.

We must also keep in mind the fact that different sectors of the user community have quite different time horizons. For the foreign-exchange trader, thirty minutes to one hour can be long-term; *instant* data are the necessary ingredient for operations. Researchers, on the other hand, often require long and consistent time series; even ten years can be "short-term." The time horizon of policymakers lies in between the two extremes, often within the time span of whatever election cycle is involved. They provide or administer the appropriations for data providers.

Measurement problems in several specific areas are noted time and again in the papers in this volume and in work in progress that is alluded to. High on the list are computer prices (and the lack of reliable import price indexes), international services (where much has been and is being done to improve the data, especially in the United States), linkage of inputs and outputs, international classification, exchange-rate conversion (where virtually all acknowledged a huge debt to Lipsey, Kravis, Summers, et al.), and, notably, price deflators for exports and imports (which in some cases may be so questionable that current totals may be more "real" than deflated totals).

I note a lack of attention in this project—and at too many other conferences—to nondirect investment financial capital flows, emanating from what I consider to be an artificial divorce between international economic and financial transactions. Measurement and empirical research issues are discussed in depth for merchandise trade, international services, and direct investment income, capital flows, and stocks. The importance accorded current-account balance of payments components and, in the capital account, only direct investment, is in sharp contrast to the virtual nonrecognition of other financial flows and stocks, together with serious problems concerning the

measurement of those items. These flows often are the dominant factor driving exchange rates and their volatility in global markets. There is an interplay between current- and capital-account developments, but the days when financial flows were considered to be merely "accommodating" to current account developments are long since gone.

In a more positive vein, I would spotlight ongoing international cooperative efforts to achieve improved data concordance and harmonization on a number of fronts. The significance of these efforts should not be ignored, especially in light of the need for better international data comparability noted in a number of the papers presented here. Together with national experts, leading international agencies, including the United Nations Statistical Office, World Bank, International Monetary Fund, Organisation for Economic Cooperation and Development, and Eurostat, have achieved substantial progress toward standardization of international services components; toward the first revision in the U.N. System of National Accounts (SNA) since 1968; and toward increased harmonization between national accounts and balance of payments accounts concepts and practices. A new harmonized system of merchandise trade statistics already is in place. Finally, preparations for a fifth edition of the IMF balance of payments manual are underway (the fourth edition was published in 1977), with one of the major objectives being to achieve increased concordance with the new SNA.

Unfortunately, along with this progress, new problems have arisen and will continue to complicate international transactions measurement issues. I will mention just two areas of concern here: merchandise trade and financial flows. First, the abolition of customs frontiers in Western Europe in 1992, although certainly a most positive development for trade, poses a question as to how trade statistics will be collected. Evidently, this problem was not addressed early on in the complicated negotiations leading to the single 1992 customs area, but hopefully it is being dealt with now. Should customs procedures at some time in the future be abolished at the U.S.-Canadian border, I am confident that, even if the United States is remiss in anticipating data collection problems, Statistics Canada will be there!

Second, as for international financial flows, the emergence of new players, innovations, and instruments—with new acronyms added to the international financial vocabulary almost daily—creates actual and potential data collection and measurement problems. Increased use of off-balance sheet vehicles and of asset securitization, together with the tailoring of securities to meet specialized needs of investors, complicates the world of reporting forms that were designed for a few basic types of securities. Some specialized financial instruments also may lead to potential reporting difficulties involving the separation of income and capital flows in recording international transactions. Nonetheless, at least some problems can be mitigated by modifications in existing reporting forms, and many new instruments can be integrated into existing or somewhat modified methodological frameworks.

As a concluding comment, I believe that this conference (and the preconference, where there were a few lively exchanges of ideas that resulted in enhancements to several papers) has made an important contribution to a better understanding of measurement and empirical issues in international transactions. The participation of those who provide data and those who use it should contribute to a more rational agenda and a better setting of priorities to help direct efforts towards improvements in data that are needed by responsible policymakers and researchers. And as a final suggestion, I believe that there may be significant benefits for all from increased participation by economists and others from the business community at conferences such as this one.

Ralph C. Bryant

The two days of this conference have been for me—and I suspect for almost all the participants—a productive exchange of ideas. I have attended many conferences where the fare has been tantamount to several light souffles. I departed from those occasions feeling undernourished, even though the souffles had an undeniable elegance and I had admired the prestidigitation of the chefs. At such conferences, I often found myself doubting that the papers were addressing the untidy and inelegant world as it actually exists. In contrast, this conference has been a full-scale banquet. We have had numerous appetizers and several main courses—including the roast beef and potatoes and Brussels sprouts, and even the Yorkshire pudding. The fare has been meaty. It has suggested many valuable avenues for future research and policy analysis.

There has not been a stability condition, a vector autoregression, a unit root, or a cointegration test in sight. Nor have we greatly missed such discussions. I do not mean, of course, that the most advanced techniques of theory and econometrics should play no role in the analysis of the topics under study here. Rather, I interpret the bulk of the work presented at this conference as an effort to analyze the data preconditions that must be satisfied before such advanced techniques can be fruitfully applied.

The banquet has not been faultless. There appear to have been a few slipups in the kitchen; for my taste the Brussel sprouts were a bit overcooked, and the service for one or two of the courses was on the sluggish side. Nonetheless, all told it has been a satisfying and nourishing repast.

Perhaps the biggest problem is the concluding panel. At the end of a fine meal, the organizers are supposed to hand around the vintage port. I fear that today you have a decided anticlimax: the appropriate metaphor may be tired

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wine (whine?) that has been open too long. Or, should we say, just a small bowl of nuts?

To be serious: the volume resulting from this conference will be a highly useful one for international economists who care about the quality of statistical data and who wish to use them for careful empirical research and policy analysis. Richard Marston remarked that economists working with the data for trade prices and costs should be forced to read the Alterman paper, especially the appendix. Other discussants made similarly favorable comments about the papers they were discussing. I feel inclined to make an analogous statement about most of the papers prepared for the conference: empirical researchers in international economics should treat the papers as required reading.

I take my hat off to the organizers for successfully arranging the conference. They deserve more than the usual credit, because it is so difficult to generate attention for these data issues. It is not popular in the economics profession to do the hard work of carefully focusing on empirical data. One sometimes hears economists maligned with the familiar slur: "An economist is someone who likes to work with numbers but doesn't have enough personality to be an accountant." But as economists, we know that such a slur is altogether inappropriate. As Richard Haas (quoting Harry Johnson) has reminded us, an economist [in these times] is someone who does *not* like to work with numbers but who is quite willing to stand up and explain what is wrong with the research of someone else who has *tried* to work with the numbers!

In his comments yesterday, Edward Leamer argued that there was a tendency in the economics profession to identify data deficiencies as a problem, perhaps even to use the data problems as an excuse, but then to carry on as before. These economists are like the preacher described by Ken Arrow, who comes to the portion of his sermon that turns on a subtle theological point. Instead of dealing with the point, he tells the congregation, "Brethren, here there is a great difficulty; let us face it firmly and pass on!" Leamer does not like that kind of bypassing. He wants to encourage a tradition in econometric work that emphasizes issues of data accuracy and that makes the data deficiencies condition the econometric procedures. His view resonates with me. To be sure, it smacks a bit of the counsel of perfection. We cannot obtain the standard error of the standard errors, as he wants us to do, until we have obtained the standard errors themselves. Nonetheless, for all of us, I believe, there is much food for thought in the theme that Leamer is emphasizing.

The portfolio capital account of the balance of payments has not received much attention in the discussion at this conference.[1] Because of that oversight, I want to put on the record here an obvious point: for the study of a

1. We cannot fault the organizers for this deficiency; they were not successful when trying to commission a paper on the subject.

variety of analytical questions in international economics, one needs to have much better data on the portfolio capital account than we actually have.

In principle, one would like to have a breakdown of the balance sheets of financial institutions in all the important national jurisdictions, cross-classified by currency of denomination, residence of customer, and type of customer. One certainly would need better data on cross-border security transactions and the corresponding stock asset and liability positions. Because off–balance sheet items are becoming increasingly important, one would need substantial information about them as well. Further, one needs systematic international compilations of these data.

The actual status falls very far short of what is desirable in principle. For many countries, significant parts of the requisite data are not collected at all. Some of the data collected by governments are not published. The statistical definitions used by countries are sometimes noncomparable (e.g., what is a "bank"?). These problems are analogous to the noncomparabilities across countries in computer price indexes mentioned in Ellen Meade's paper. The international institutions in the 1970s and 1980s have provided more comprehensive compilations of financial data (e.g., the Bank for International Settlements and the International Monetary Fund for the banking data, and the World Bank for data on external debt). Even so, "concordance" problems remain; users of the international-institution data confront many difficulties in trying to use these compilations in conjunction with the national statistical sources.[2] When we focus on international data problems and construct wish lists for improvements, therefore, let us not neglect the portfolio capital account and the stocks of cross-border and cross-currency financial assets and liabilities.

Another data problem has received little discussion here. While not first-order in nature, this problem is a significant second-order issue. The government of the United States and other governments to an even greater degree possess some useful data that are not made publicly available for analysis and research. Because these data have already been assembled, no further collection and processing costs would be incurred if they were made available. In several such cases, I believe, the benefits would substantially exceed the costs if the data could be made available to the public, or at least on request to those wishing to use them. The examples that come most readily to mind are three: release of further details about cross-border direct investments, so that researchers can incorporate these data into their work; publication of some classifications in the international banking statistics that are not now made available; and release of the actual daily data on exchange-market intervention conducted by monetary authorities. Sometimes (though not always!) there are

2. These concordance problems are analogous to the difficulties with the trade and trade-price data emphasized by Keith Maskus and Bob Lipsey.

manifest difficulties about confidentiality of the data, such as with exchange-market intervention. Yet confidentiality concerns are often exaggerated. And with such data, delayed release may be possible (e.g., with intervention data, release with a one- or two-year lag). Where confidentiality is a legitimate constraint but inhibits important research, the onus should be on governments and central banks to carry out the research themselves and to make the conclusions publicly available.

One other important point has not, in my opinion, received adequate attention at the conference. The growing economic integration of the world economy has been gradually increasing the salience of collective goods—"public goods"—with international dimensions (and, of course, collective "bads" that require international cooperation to mitigate). The traditional rationale for government is to provide collective goods that cannot be, or will not be, provided with decentralized decision making by private-sector agents. An obvious extension of this rationale, which has conventionally been applied to nations in isolation, leads to the conclusion that international institutions will have to play enhanced roles in catalyzing the requisite supply of international collective goods.[3]

The need for better data on the functioning of the world economy is a prototypical example of an international collective-goods problem. National statistical agencies, if they make decentralized noncooperative decisions, will find their individual efforts eroded by the growing importance of cross-border transactions of all types. Conceptual standardization across nations, joint design of surveys and of regular data collection procedures, the preparation of international compilations of comparable statistics—these activities, and others associated with them, become increasingly essential for correct analysis, even of an individual economy.

A significant illustration of the lack of international standardization in statistics was brought out in Ellen Meade's paper. The major countries do not follow comparable procedures when estimating price deflators for computers and other electronic office equipment. Indeed, they do not even place production, exports, and imports of such equipment in comparable categories. We know from recent investigations of the computer prices used in U.S. national income and trade data that this issue can substantially influence analytical conclusions. The lack of internationally comparable data is a serious handicap.

It is not difficult to find other examples of international collective-goods problems in available statistics. I conjecture that many others could be cited in connection with current-account transactions, for goods trade and, perhaps

3. I have elaborated on this general theme elsewhere, in *Money and Monetary Policy in Interdependent Nations* (Washington, D.C.: The Brookings Institution, 1980) and *International Financial Intermediation* (Washington, D.C.: The Brookings Institution, 1987).

even more prevalent, for statistics on services and investment income. I know that examples can readily be found in the data on banking assets and liabilities and on securities transactions.

I mentioned earlier the need for improvement in the published international compilations of data on capital flows and asset stocks. The point has a more general applicability. Over time, governments and analysts will have to rely still more heavily on the compilations of data assembled and published by international organizations such as the IMF, World Bank, BIS, and OECD. We should be able to look to these organizations for intellectual and administrative leadership on the data issues. Rather than waiting for their marching orders from national governments, the staffs of the international organizations should be initiating suggestions for data improvements and doing what they can to promote evolutionary progress.

Someone at the conference mentioned to me an example of possible leadership that struck me as constructive. Suppose the IMF staff were to include in *International Financial Statistics* some of the purchasing power parity indexes that have emerged from the ICP program?[4] This ready availability of the indexes could help to promote a wider understanding of country comparison issues (and would probably reach many more individuals than could be reached by circulation of the data on computer diskettes, as Robert Summers suggested).

Several times at the conference I found myself asking whether the economics profession is better off than it was a decade ago with respect to the data issues we have been discussing. On the whole, I am coming away from the conference with an upbeat impression. Lots of evidence about improvement has emerged at the conference. The national statistics for the United States have progressed in a variety of ways. The Maskus and Walter papers, those identifying many remaining problems, recorded significant improvements in the trade data. Jack Triplett observed that the Maskus view might not be optimistic enough. The Alterman paper documents many improvements in the data for prices and cost of trade. Just think of how much better off we are today, in being able to use the BLS trade-price indexes, than we were when we were forced to use only the unit-value data! Whichard's paper shows that the data for cross-border service transactions are substantially improved. The ICP project has continued to make progress. A panel to review international economic statistics was appointed in 1989 under the auspices of the National Academy of Sciences. The Council of Economic Advisers under Michael Boskin's leadership has established a working group on statistics.

One can also cite evidence that intergovernmental cooperation on statistics has made progress. The collaboration between Canada and the United States on the trade data has gone very far. Jack Bame indicates that intergovernmen-

4. IMF would not, of course, endorse the estimates as correct, but merely publish them and refer readers to ICP sources for further details and discussion.

tal consultations on services data are making headway. BIS and IMF have substantially expanded and strengthened their compilations of the data on cross-border banking. The IMF staff's recent report on the global discrepancy in current accounts is a valuable document.[5] Among other contributions, its appendixes contain informative compilations of the international banking data and the associated flows of interest payments and receipts. I have been told that there are even signs of a new innovative and aggressive spirit at IMF's Bureau of Statistics.

Notwithstanding all the progress, much remains to be done. On the first day of the conference, I started to make a list of important gaps in the data. But during the course of our discussions on this second day, I gave up the task as too lengthy and difficult. If an analyst is inclined to be discouraged about the quality and availability of data, there are ample stimuli! Richard Marston did not have his puzzle about the BLS price series resolved. Catherine Mann rightly remains dissatisfied with the data on the terms of trade between manufacturing and primary commodities. No one is comfortable with the measures we have for the stocks of physical capital, in particular the comparability of the measures across countries. The large statistical discrepancies in the national balance of payments accounts of the United States and several other major countries are flashing neon advertisements of what we do not know. One can get still worse headaches thinking about the statistical discrepancies in world accounting identities (on the order of $40 billion per year for trade and some $90 billion for services and investment income).

Are enough resources allocated to the collection, evaluation, and publication of data? Should governments and international organizations allocate still more to remedy the gaps in the data? I have not thought systematically about this question, but will nonetheless venture my prejudices.

It is probably true, I conjecture, that it is more difficult to identify the benefits of public expenditure on collection and publication of data than it is to identify the benefits of most other types of public expenditure. It is true that we need to guard against collecting data that are not beneficial and not much used. Robert Lipsey, Samuel Pizer, and others at the conference noted correctly that the collection of international trade data by state would probably be an example; such data could easily pander to the worst instincts of state mercantilism. The National Trade Data Bank could be a low-priority use of resources; I am poorly informed about this effort, but inclined to be skeptical about it. Robert Baldwin spoke eloquently about the excessive disaggregated detail that characterizes the trade data of the United States and many other countries. The old Mae West axiom, "Too much of a good thing can be wonderful!" is not an appropriate motto for statistical agencies.

Better data collection by itself, moreover, is not enough. We should bear in

5. International Monetary Fund, *Report on the World Current Account Discrepancy* (Washington, D.C., September 1989).

mind the wise comments of Alan Deardorff and Koichi Hamada that we need better theory, too—and better interaction between the theorists and the empirical researchers. Nor does the economics profession always utilize well the data it does have. The ICP data, for example, does not receive widespread use despite what appears to be a professional consensus about its importance.

Nonetheless, on balance is is my prejudice that data problems do tend to get short shrift in this world. Not only do economists pay inadequate attention, but governments tend to skimp on the budgetary resources that support statistics collection and publication. Conjure up in your mind the waste and abuse in the defense budget, or in subsidies to the Rural Electrification Administration or sugar growers, and on and on. Any waste or excess in statistical programs seems very small indeed in relation to these other misallocations. Given the gaps in the data and given the difficulty of identifying the diffused benefits associated with high quality data, therefore, my prejudice is that societies ought to be wiling to allocate modestly larger amounts of resources to the collection, improvement, and evaluation of statistics. This prejudice of mine is probably shared by many of those who attended this conference. (I say probably, because this theme was only implicit in most of the discussion.)

The preceding general thought leads me to raise the specific issue of whether the public sector in the United States is currently giving adequate attention and budgetary support to economic statistics. This is a question with delicate political aspects, but too important to leave unmentioned at this conference.

Attention and leadership from the executive branch of the U.S. government is crucial for a vigorous and effective national statistical program. For most of the last decade, I have felt rather discouraged about the incumbent administration's attitudes. I did not feel similarly discouraged in the 1960s and 1970s. In the 1960s as I remember them, the Office of Statistical Standards in the Bureau of the Budget had substantial clout. There was strong support for efforts such as the Bernstein Review Committee on the balance of payments statistics. The administration gave explicit backing to efforts to improve data. This favorable climate seems to me to have waned during the 1980s. In recent years, scrutiny of statistical programs by the Office of Management and Budget has primarily emphasized the costs and burdens, not the potential benefits. Some statistical efforts have been starved for budget resources. Long delays have occurred in the release of some data (e.g., the 1984 survey of portfolio assets held in the United States by foreign residents). In the midst of this relatively unfavorable climate in the 1980s, the staffs of the statistical agencies themselves have been doing fine work with their limited resources. From my perspective, many individuals in agencies such as the Bureau of Economic Analysis, the Bureau of Labor Statistics, and the Bureau of the Census deserve high praise.

Have things changed for the better in 1989? Some hopeful signs can be gleaned from statements by officials in the Bush administration. I am thinking

in particular of the emphasis Michael Boskin has placed on the working group on statistics that he chairs and of references to the Cabinet Council report that it is hoped will shortly be approved by the President. Perhaps OMB will no longer pay such exclusive attention to the "burdens" of statistical reporting.

What about the role of the Congress in supporting statistical programs? If things have not gone well in the 1980s, one cannot blame the Congress as much as the executive branch. But there is ample blame for Congress, too. Most Congressmen cannot seem to focus on the statistical programs either in good or bad times. And Congress at times has managed to make things worse than they would otherwise be (recall the unfortunate practice, now abandoned, of requiring that the data for imports c.i.f. be emphasized in the monthly trade release several days prior to the release of the f.o.b. data). The attention given in the Congress to the statistical programs reminds me of an old Asian proverb: When the elephants fight, the grass gets trampled; when the elephants make love, the grass also gets trampled. I am unsure what could be done to improve Congressional awareness of the statistical programs and their importance. One idea I heard mentioned plaintively at the conference is a revival of the role played in earlier times by the Joint Economic Committee.

In any event, we need more active leadership and a more far-sighted perspective on statistical issues, especially from the executive but also from the legislative branch of the U.S. government. The international collective-goods aspects of statistical issues also require better leadership from the U.S. government. The international institutions should show more initiative themselves but cannot make good progress without complementary leadership from the major countries' governments.

All of us here no doubt welcome the improved rhetoric from the Bush administration about the U.S. statistical programs. We want to believe what we have heard in the recent statements. But the proof has to come in actions that are strongly supportive of improvement efforts by the agencies that have to do the work. Getting the rhetoric right is not enough.