

## ELECTRONIC DISSEMINATION EXPERIENCES OF THE U.S. BUREAU OF ECONOMIC ANALYSIS

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This paper describes the experiences of the Bureau of Economic Analysis (BEA) in the electronic dissemination of its statistical products. Section I describes the institutional setting. Section II, the heart of the paper, is based on a review BEA recently undertook with a view to improving its procedures and policies for disseminating its information to the public. Section III draws conclusions from the review and raises some questions as a basis for comparisons among agencies.

### I. THE SETTING

BEA is an operating unit of the U.S. Department of Commerce, organized as part of the Economics and Statistics Administration. BEA's mission is to prepare, develop, and interpret:

- the national income and product accounts,
- the wealth accounts,
- the input-output accounts,
- measures relating to environmental change within the framework of the national economic accounts,
- personal income by state and county, gross product by state, and related economic series by geographic area,
- the U.S. balance of payments accounts, and
- direct investment, associated income and other flows, and other aspects of operations of multinational enterprises.

The work on the economic accounts is supplemented by the preparation and analysis of other measures of business activity, including a system of leading, coincident, and lagging economic indicators.

This work is carried out by a staff of almost 500, about two-thirds of whom are economists, statisticians, or related professionals. The staff is organized into 11 divisions, most of which fall within the national, regional, and international program areas. BEA is housed in a building by itself, and maintains its own mainframe computer.

With the exception of data on foreign direct investment and selected other international data, the source data for the accounts are collected by others, mainly other U.S. Government agencies. (See the annex for an overview of the decentralized statistical system of which BEA is a part.)

*Note:* The review was undertaken as part of the Department of Commerce's Information Resources Management Review Program. The review team consists of Kenneth Berkman, Douglas Fox, George Green, Barbara Howenstine, James Spalding, and Lisa Westerback (chairperson). The team prepared a set of conclusions (not included). This report was originally presented at the Twenty-second General Conference of the IARIW in Flims, Switzerland, August, 1992.

In the past, the estimates and analyses prepared by BEA were disseminated mainly through its monthly journal, the *Survey of Current Business*, news releases, and other publications.<sup>1</sup> The *Survey* has about 11,500 paid subscribers (and another 2,000 copies are exchanged or distributed free).<sup>2</sup> BEA publishes about 60 news releases a year. The publications cover the range of BEA programs, typically providing more detail than in the *Survey*. Increasingly, various electronic media have been added to the media used. BEA published its first catalog of products in 1981, and in that catalog listed only print media and computer tapes. Publication of the *User's Guide to BEA Information*, which is updated and issued annually, began in 1987. It describes the range of electronic media discussed below as well as print media.

BEA's dissemination program has been shaped by the guidelines and regulations from the U.S. Department of Commerce and the U.S. Office of Management and Budget. Among the most important are the following: Sales of BEA products are to cover only the cost of dissemination, not the cost of preparing the estimates and analysis; all products are to be prepared in ways that provide pre-release security and promote access by the public.

BEA's publications (except those out of print) are sold through the U.S. Government Printing Office. Computer tapes, diskettes, the BEA CD-ROM, and a few hardcopy products (such as printouts) are sold by BEA. Other agencies' products containing BEA data are available through those agencies or their sales agents.

## II. CURRENT AND PAST ELECTRONIC DISSEMINATION PRACTICES

### *Magnetic Tapes*

BEA began its formal magnetic tape dissemination system during the late 1960s through its Computer Systems and Services Division. This system provided for the systematic creation and verification of the tapes, recording of recipients, an accounting of the number and type of data sent, and charging to reflect the cost of preparing the tapes (but not the cost of preparing the data) and the cost of distributing them.

From fiscal year (FY) 1976 through FY 1989, the Division distributed over 2,870 tapes, averaging more than 200 per year. The period since FY 1989 shows a decrease in tape distribution. In the three fiscal years since 1989, the average tape distribution has been approximately 25 per year.

The above information reflects only those tapes created and distributed by the Computer Systems and Services Division. Prior to the installation of BEA's mainframe interactive system and the start of a closed tape library, computer users could and did create tapes that they individually sent to requestors. Program

<sup>1</sup>In the remainder of the paper, the word "data" is used, rather than "estimates," to fit what seems to be international usage. BEA usually uses "estimates" in speaking of its own output to distinguish its output from its input, that is, data largely from other agencies.

<sup>2</sup>The number of subscriptions is about the same as a decade ago. However, beginning in April 1990 *Business Conditions Digest*, another monthly publication that focused on the system of leading, coincident and lagging (cyclical) indicators, was discontinued, and subscriptions to it were converted to *Survey* subscriptions.

divisions had control and responsibility for maintaining and storing their output tapes. Even now several divisions—especially those preparing regional estimates and input-output accounts—create output tapes for requestors using software developed by the Computer Systems and Services Division.

BEA provides half-inch, round, 9-track, magnetic tapes at 1,600 or 6,250 bpi. Users can choose among ASCII, EBCDIC labeled, and EBCDIC unlabeled formats. Each tape costs \$100.

The advantages that tape had (computer readable data, low cost per item of data, large storage capacity so that historical data could be supplied) have been equaled and, in the case of CD-ROM, surpassed by the availability of microcomputer media. It is probable that in the next few years computer tape for data dissemination will be used less and less.

### *Automated Telephone Response System*

BEA installed an Automated Telephone Response System in October 1985. The system was designed to reduce the hours spent by economists answering questions from users about the data in news releases. The system is available 24 hours a day, 7 days a week, and has no service access fee.

The system's four announcers can handle up to 12 calls each simultaneously and can deliver messages from a tape cartridge that is prerecorded. Recorded messages are usually three to five minutes in length.

From FY 1988 through FY 1991, BEA received on average from 650 to 800 calls per month, and the number steadily increased over the years. There were more than 9,000 calls in FY 1991. The system has or has had information on the following: Gross National Product (now Gross Domestic Product); Personal Income; Composite Indexes of Leading, Coincident, and Lagging Indicators; Plant and Equipment Expenditure Survey (now discontinued); Merchandise Trade, and Summary of International Transactions (balance of payments).

The data are available on the system at the time of release (8:30 or 10:00 AM Eastern time, depending on the release). The data remain on the system for differing lengths of time depending on the frequency at which they are updated. The Composite Indexes are changed weekly, the Gross Domestic Product, Personal Income, and Merchandise Trade remain for one month, and the Summary of International Transactions is changed every two months.

The Automated Telephone Response System has worked reasonably well for both BEA and its users. The major benefits have been the hundreds of hours saved by economists who before essentially read numbers to the caller; fewer busy signals to our users because there are 48 incoming lines rather than the previous 2 or 3 lines staffed by economists; and 24-hour availability, which is a great benefit for users in different time zones (the West Coast of the United States is three hours behind the East Coast). The consensus is that the vast majority of our users like the system.

A drawback to the technology is that if a user breaks into a recording in progress, the user has to listen through the end of the recording before hearing the information at the beginning of the tape. Other disadvantages to the system include the user's inability to ask follow-up questions without making a second

call and the need to listen to more than is necessary if the user is only interested in one or a few data items.

### *Diskettes*

BEA's diskette distribution started in 1985. At that time, the national income and product accounts tables that appear monthly in the *Survey* were made available on diskette. Sales of diskettes grew rapidly in the first few years of distribution. In FY 1988, BEA distributed approximately 6,500 diskettes. Diskette sales paralleled the widespread growth in the use of microcomputers; more BEA program areas made diskettes available, and more copies per set were sold. However, preliminary figures for FY 1992 (approximately 1,700 for the first half of the fiscal year) indicate that diskette sales have stabilized or may have even declined.

Now nearly all data for recent periods and from all BEA program areas are available on diskette. Information presented on diskette duplicates published data and documents (sometimes in a different format). In addition, some diskettes include unpublished detailed series and/or historical data. For example, complete historical files are available for the national income and product accounts and for the cyclical indicators now presented in the C-pages of the *Survey of Current Business*. Data files on diskettes may present a complete published table or a standard set of variables in a section or program.

Internal BEA standards for diskettes were first issued in April 1989; the standards included requirements for documentation, data file structure, file attributes, and diskette organization, software, labels, and control. Standard diskettes distributed by BEA are double-density 360KB 5-1/4" formatted for IBM-compatible microcomputers. The charge for each diskette is \$20, with discounts for annual subscription orders. (Alternatively, users may request information on 720KB or 1.44MB 3-1/2" diskettes priced at \$25 and \$30 respectively; these requests are handled as exceptions.) Some files on diskettes are distributed in compressed format that can be decompressed using an IBM-compatible microcomputer.

Each BEA division decides what information is available on diskettes and its format. Formats vary across divisions and across program areas. The division may either make the sales copies itself or prepare a "master" diskette for the Computer Systems and Services Division, which—depending on the number of copies—uses its own diskette-copying equipment or works through a commercial vendor with whom there is a standing contract.

Advantages of diskette dissemination for BEA are that BEA can set standards and choose the data and formats to be used (in contrast to situations where BEA is part of another agency's dissemination program, several of which are described below). A set can be quickly duplicated and so is cost efficient for BEA.

For users, advantages of diskettes are that they provide access to the latest Government-produced information in an electronic format that avoids rekeying of data by the user. Diskettes are generally available 24 or 48 hours after release—at least two weeks before receipt of monthly issues of the *Survey of Current Business*. However, files are usually available on the Department of Commerce Electronic Bulletin Board (see below) before users can get diskettes.

Disadvantages from the users' perspective are that current standardized products present a collection of tables of series chosen by BEA, not the user. This is

not a problem for users who need a great deal of data and have good computer skills, but the cost of diskettes may be excessive for users who want only a few data series. Further, the user may not have the computer knowledge required to work through a series of tables. Data files distributed by the various BEA divisions are not compatible. They require the user to have several different procedures to use the various diskette files produced by BEA.

Also, most diskettes present data for recent periods; presentation of historical data is limited. Files on diskettes are sometimes in a compressed format that can only be decompressed if an IBM-compatible microcomputer is available to the user.

### *Bulletin Board Systems*

*The Department of Commerce Economic Bulletin Board (EBB).* The EBB is a microcomputer-based electronic bulletin board system operated by the Office of Business Analysis (OBA), a sister agency within the Economics and Statistics Administration. The system can be reached from most microcomputers equipped with a modem (300, 1,200, 2,400, or 9,600 bps) and standard communications software. Users must subscribe to the system and also are billed by the minute for their connect time (above the 2 hours covered by the subscription fee): A one-year subscription fee is \$35 for 300, 1,200, and 2,400 bps service and \$100 for 9,600 bps service. The system currently has approximately 4,000 subscribers.

The EBB specializes in the latest statistical releases of Federal agencies. It provides economic data from several Federal agencies besides BEA, including the Census Bureau, Federal Reserve Board, Bureau of Labor Statistics, International Trade Administration, and the Treasury Department. Each BEA division places its own data onto the EBB, either by sending a diskette or by uploading. News releases, such as for the national income and product accounts, are available within 3–5 minutes of their release.

The EBB began as a pilot project in 1985. BEA's news releases were the first BEA products available through the EBB; other BEA data products, such as the national income and product accounts and the C-pages and S-pages (a diverse collection of over 1,900 monthly business series from public and private sources) of the *Survey of Current Business*, followed. Both historical and current data from several BEA divisions are now available through the EBB.

Use of the EBB to obtain BEA information is growing rapidly: In FY 1989 there were 15,530 downloads of BEA information; in FY 1991 there were 24,594 (up 58 percent from FY 1989). Currently (FY 1992), BEA files are downloaded an average of 2,735 times a month (up from 2,050 a month in FY 1991). BEA news releases are still the most often downloaded files from the EBB; in December 1991, when the comprehensive revision of the national income and product accounts was released, 50 percent of the downloads of BEA files were for news releases (the percentage varies from 25–50 percent each month).

Advantages of the EBB to BEA include the fact that BEA does not have to develop or maintain the EBB. BEA does not have to maintain subscription lists and send renewal notices, bill and collect payments, and budget or plan for it. BEA can select what it puts on the EBB. BEA staff use routinely prepared files and diskettes to enter data on the EBB and have free and unlimited use of the system.

Disadvantages include limited control of the overall system. Some files stay on the system too long (though more attention from BEA divisions could alleviate this problem) and files sometimes receive unwieldy titles or are mislabeled. It is harder to work with and maintain the system when it is not physically in BEA's building and under BEA's control. From a public relations standpoint, there are some drawbacks—for example, users blame BEA when the agency is unable to help them solve problems with the EBB.

For users, advantages include quick and timely access to the latest Government-produced information. Users can readily download data for inclusion in their own computer processes. The EBB is easy to use and covers a broad range of related information from several U.S. Government agencies. Further, it is available 24 hours a day.

One disadvantage is that the system does not provide users with enough selectivity: Users must download a whole file (increasing cost and time) even if they only need part of a file. Occasionally users experience difficulty getting into the system just when information is needed. OBA's resources permit only limited support of the system; users must also contact BEA for detailed help with files.

Concerns include the fact that a user is subject to whatever BEA puts on the EBB: Initially there was some effort to standardize the files being put onto the EBB. Now, however, each BEA division determines what is put on the EBB and in what format. Further, little documentation exists on how to use the information, and very little software has been developed to use the BEA files on the EBB.

*Census State Data Center Bulletin Board System.* Over four years ago, the Census Bureau, another sister agency within the Economic and Statistics Administration, established an electronic bulletin board system for its State Data Centers. To expand its usefulness, the Census Bureau invited BEA to establish a sub-board (that is, conference) with its own BEA system operator. This sub-board would only be open to the BEA User Group, a group to whom BEA regularly provides its regional estimates with the understanding that they will make the estimates readily available and whose members include state agencies, universities, and Census Bureau Primary State Data Centers (and their affiliates).

BEA uploads quarterly and annual estimates of personal income for the 50 states to the board the morning of their release. Summary information for the more than 3,000 counties are also put on the board. The use of the State Data Center board parallels BEA's use of the EBB. The same data sets are available on both boards as soon as possible after their official release.

In many respects the BEA conference can act as BEA's own bulletin board system. BEA has control over access to the conference, the structure of menus, and the contents of data files and bulletins that appear in the conference.

The board allows BEA to maintain improved communications with its User Group and with the State Data Centers and their affiliates. BEA receives queries about data availability, methodology, and other issues through the electronic mail capabilities of the board. Special data requests from this group have also been met by putting the required files on the board, thus making them available for downloading.

Disadvantages of this bulletin board system parallel those of the EBB: lack of control of the overall system, limited availability of software to allow selection

of data subsets, and occasional technical problems that reflect on BEA but are not under the control of BEA.

### *CD-ROM*

*Multi-Agency collections.* BEA data are available through the National Trade Data Bank (NTDB) CD-ROM and a pilot National, Economic, Social, and Environmental Data Bank (NESE-DB) CD-ROM, both produced by OBA. For the NTDB, BEA makes available its estimates on international transactions, foreign direct investment, national income and product accounts, and others. About 50 information programs from 15 Federal agencies are also on the CD-ROM, which is a first attempt at what is described as "one stop" shopping for Federal agency data. The NESE-DB will be made available quarterly starting in the fall of 1992 with, as the name implies, a more domestic orientation.

These CD-ROM's include software that allows a user to browse through the data to select the information desired. The NTDB disk is available monthly for a charge of \$35, or \$360 for an annual subscription. Currently, there are approximately 700 paid subscribers to the NTDB; in addition, free copies of each monthly CD-ROM are sent to approximately 700 Federal depository libraries. OBA expects subscriptions to grow as more users install CD-ROM readers.

*BEA regional data.* BEA also produces its own CD-ROM of data from its Regional Economic Information System (REIS), a large economic database covering the States, metropolitan areas, and counties of the Nation.<sup>3</sup> Currently the REIS includes data from 1969 forward. In May 1992, county data through 1990 and preliminary state data for 1991 were released.

Work on the REIS CD-ROM began in 1990, and a prototype was produced (400 CD-ROM's at a cost of approximately \$6,000) in January 1991. The CD-ROM's were sent free of charge to the BEA User Group and anyone else who would promise to evaluate them. The first production CD-ROM was distributed in July 1991. For this distribution, 1,900 CD-ROM's were produced; all were disseminated by the end of April 1992. Of these, about 125 were sent to the BEA User Group and 700 were sent to Federal depository libraries; these were free of charge. Most of the remaining CD-ROM's were sold for \$35. The University of Wisconsin availed itself of a bulk discount and bought 30 CD-ROM's for distribution to various businesses and agencies around the state. CD-ROM sales for the first half of FY 1992 were approximately 290. Anticipated distribution of the latest update, produced in July 1992, is 3,300.

Response to the REIS CD-ROM has been enthusiastic. It has had a significant impact on the extent and nature of the user community. Prior to its availability, BEA distributed fewer than 20 copies annually of the entire REIS database. Now, almost 2,000 copies have been distributed to users as diverse as community health clinics, magnet high schools, graduate and undergraduate students at colleges and universities, commercial vendors, and small businesses.

<sup>3</sup>REIS is the name applied to the data files, computer programs, and staff established for the maintenance, management, and distribution of the regional database. REIS operates an information retrieval service that provides a variety of standard and specialized analytic tabulations for counties and specified combinations of counties.

The primary disadvantage of using the CD-ROM media for data dissemination is that the number of installed CD-ROM drives, while increasing, is relatively small compared to that for diskettes.

The other disadvantage of using the CD-ROM media is the time required to premaster, master, and produce the disks. CD-ROM production takes considerable lead time and includes a lengthy learning curve. This year BEA will premaster the REIS CD-ROM on a machine located in OBA. Next year, it is likely that the premastering will be done on microcomputers at BEA. The ability to do the premastering in-house allows for quick recovery from minor errors and problems. Still, for practical purposes, manufacturing the disks involves a two-to-three week delay after the data files have been prepared.

The advantages of the CD-ROM media are many.

- Capacity: The disk holds up to 680 megabytes of data.
- Ease of use: Anything the user can do with a hard disk can be done with the CD-ROM except that it is a read-only medium.
- Durability: The disk is not subject to magnetic fields (as are diskettes and magnetic tapes) or other environmental dangers except extreme heat and mechanical breakage.
- Low cost: The average out-of-pocket cost for the manufacture of a CD-ROM disk is less than \$10 (\$0.02 per megabyte assuming only 500 megabytes are actually used).
- Access speed: Although slower than a hard disk, the CD-ROM is much faster than a diskette drive. This allows the user to access large quantities of information in a reasonable amount of time.
- Integrity: Since the medium is read-only, tampering with the data is not possible.

### *Facsimile Transmissions*

*Ad hoc dissemination.* BEA bought its first facsimile (FAX) machine in FY 1988 and installed it for general BEA use. By FY 1992, BEA had purchased 12 additional FAX machines and installed them throughout the building to give additional users convenient access to a machine. Five microcomputer FAX boards supplement these stand-alone systems.

BEA uses FAX services to receive or send a document when time is critical or to receive a document that the sending party prefers to send via FAX. BEA policy prohibits FAX users from providing free of charge data for which BEA is normally reimbursed. This is particularly true of data that are provided to users regularly, such as news releases and other information dissemination products that must be made available to multiple recipients simultaneously. BEA currently has no clear policy on FAX charges; each division makes its best judgment as to what to charge data users and how to bill them.

The use of FAX services at BEA has grown with the expansion of use of FAX by other organizations and individuals. Often users request FAX service, citing that other agencies provide it. BEA sends approximately 2,500 and receives approximately 3,500 pages per month by FAX. In the first half of FY 1992, BEA



sold 110 FAX transmissions. Plans are to obtain a FAX server for BEA's local area network, which should make microcomputer FAX services conveniently available to all BEA network users.

The principal advantage of the FAX services is the timeliness of the transaction. Data users can receive hard copy information within minutes of a request. Further, users need not know computer technology or have computer capabilities to receive data electronically.

Costs include those for the purchase of the devices, maintenance and supplies for the machines, telephone fees, and production of copies of documents that do not originate on individual sheets of paper that can be fed through the hopper of the FAX machines. A disadvantage of the FAX machines is the often degraded quality of the facsimile document over that of the original. Quality is a lesser issue with microcomputer FAX-board-to-FAX-board transmission, but a constraint is that the documents transmitted must already be in electronic form. FAX documents are graphics images and are not inherently readable as ASCII files. FAX documents must go through an interpretation process, much like that associated with scanners, to convert the graphics images to ASCII format.

*Fax services.* As of May 1992, selected BEA news releases were made available through a FAX service associated with the EBB. A data user calls a 900 number (a telephone number with a 900 prefix accesses charged-for services); listens to a prerecorded message that provides information on the news releases available, their length, and approximate transmission cost; selects the news release of choice via touch-tone telephone; and sets the FAX machine to receive mode. The cost is \$0.65 per minute, which is charged to the caller's telephone bill. For example, to receive the typical monthly release of the national income and product accounts costs about \$8.00.

This service, operated by OBA, has many of the advantages and disadvantages of the EBB. BEA has limited control over the process, but also has no responsibility to maintain it. Expectations are that users will be pleased with the service and that it will cut down the need for staff at BEA to FAX news releases to users on an individual basis. In the first month of operation, the service received approximately 100 calls per week. With advertising, it is anticipated that this volume will increase significantly.

### III. CONCLUSION

This review of BEA's experience has revealed some of the criteria for a successful electronic dissemination system: Cost and control of the system seem to be primary considerations for data producers, while cost of, and speed of access to, the data seem to be primary considerations for the data users. The review has also suggested that timely response to new technologies, in conjunction with careful tracking of the advantages and disadvantages of present systems, can facilitate success from both the producer's and the users' perspectives. For example, BEA's installation of the Automated Telephone Response System was in response to both the identification of a problem—the inefficient use of economists' time—and the recognition of an available technology. This improved the system for BEA by

increasing efficiency, and for the data users by allowing greater access to data in less time.

Finally, the review has identified questions that may be fruitful to discuss with other statistical agencies. These include the following.

- It is not clear from BEA's experience that electronic dissemination has replaced print media. What experience have others had regarding replacement of print media? Does others' experience indicate a pattern relating kinds of data use and media desired?
- Test marketing and user surveys have not been used extensively by BEA. How have other agencies learned about users' data needs and data-handling capabilities? What approaches have been most successful?
- BEA's experience so far has largely related to electronic dissemination of data. Have other agencies included other products—such as methodologies, concepts and definitions, “user beware statements”—in electronic dissemination products? Is there evidence of whether users made use of these products in electronic form?

As a result of this review, BEA is examining the possibility of organizing its electronic dissemination along the same lines as its publication efforts have long been organized to provide more standardization and quality control across media. Also, BEA will try more systematically to learn about its users' needs, both by using a newly installed reporting system to track requests for BEA products, both those sold and those provided free, and by pursuing more energetically the possibility of so-called outreach efforts.

## ANNEX I STATISTICAL PROGRAMS OF THE U.S. GOVERNMENT

Major statistical programs are found in over 70 agencies throughout the U.S. Government. Some of them, such as the Bureau of Labor Statistics and the Energy Information Administration, are agencies in themselves. Most bureaus or agencies with major statistical programs, however, are not solely statistical but have one or more divisions or offices devoted to collecting or analyzing data in support of the agency's mission.

The U.S. Government carries out major statistical activities in five broad categories:

- Health Statistics,
- Safety Statistics,
- Social and Demographic Statistics,
- Statistics on Natural Resources, Energy, and the Environment,
- Economic Statistics.

Within the economic statistics are the following.

*Economic Accounts:* The *Bureau of Economic Analysis* (BEA) in the Department of Commerce is responsible for the national income and product accounts, the wealth accounts, the input-output accounts, the balance of payments accounts, and a number of other economic measures.

BEA supplements work on these accounts by other economic indicators and analyses.

*Periodic Censuses:* The *Census Bureau* in the Department of Commerce conducts several censuses every five years. These surveys provide comprehensive benchmark data describing domestic economic activity. The Economic Censuses include censuses of manufacturing and mineral industries, construction industries, retail and wholesale trade, service industries, and transportation. The Census of Governments collects state and local data on public finance, public employment, governmental organization, and taxable property values. The Census of Agriculture collects information on the agricultural sector of the U.S. economy, including number of farms, farm acreage, operating expenditures, value of farmland, land use, statistics on crops and livestock, and equipment.

*Current Statistics:* The *Census Bureau* provides survey-based information on several aspects of the economy, including retail and wholesale trade and selected service industries; construction activity such as housing permits and starts, value of new construction, residential alterations and repairs, and quarterly price indexes for new, single-family houses; quantity and value of industrial output; and state and local government activities.

*Labor:* Most statistics on labor markets and the labor economy are developed by the *Bureau of Labor Statistics* (BLS) of the Department of Labor. BLS produces estimates of employment and unemployment using data collected by the *Census Bureau* in the Current Population Survey (CPS), one of the largest household surveys sponsored by the Federal government. Other significant BLS collections are the Survey of Professional, Administrative, Technical, and Clerical Pay; the Employment Cost Index; and Local Area Unemployment Statistics. Smaller Departmental programs include the *Employment Standards Administration*, which produces construction wage data, and the *Employment Training Administration*, which develops labor market information for state and local planning purposes.

*Trade:* A number of agencies are involved in collecting international trade data. The *Bureau of the Census* and the *Customs Bureau*, part of the Department of Treasury, cooperate to produce data on imports and exports. The *Foreign Agricultural Service* in the Department of Agriculture collects data on foreign agricultural export markets. BLS maintains the International Price Program, which is used to measure the effect of other countries' prices and exchange rates on price levels in the U.S.

*Agriculture:* Statistical programs in this area are almost exclusively managed by agencies within the Department of Agriculture. The *National Agricultural Statistics Service* collects and analyzes agricultural production and marketing data on 120 crops, 45 livestock items, and a number of other topics. The *Economic Research Service* forecasts the outlook for major agricultural exports, agricultural finance, agricultural resources,

and world agriculture. The *Foreign Agricultural Service* collects data on agricultural production outside the United States.

*Other Economic Statistics*

A number of statistical programs focus on aspects of the economy that are not covered above.

*BLS* provides measures of prices and inflation through the Consumer Price Index (CPI) and the Producer Prices Index (PPI).

The *Department of Housing and Urban Development* maintains many statistics on the housing market and sponsors the American Housing Survey conducted by the *Census Bureau*.

A number of agencies within the *Department of Transportation* collect data to support agency functions.

The *Internal Revenue Service* of the Treasury Department maintains the statistics of income program, which analyzes tax return data.

The *Board of Governors of the Federal Reserve System* maintains several series, most notably the monthly index of industrial production and the flows of funds accounts.

This list was adapted from Office of Management and Budget, "Statistical Programs of the United States Government, Fiscal Year 1992."