

4. STRENGTHENING FEDERAL STATISTICS

Federal statistical programs produce key information about a range of topics of interest to public and private decision makers, including the economy, the population, agriculture, crime, education, energy, the environment, health, science, and transportation. The ability of governments, businesses, and citizens to make appropriate decisions about budgets, employment, investments, taxes, and a host of other important matters depends critically on the ready availability of relevant, accurate, and timely Federal statistics.

Moreover, for Federal statistical programs to meet the needs of a wide range of users, the underlying data systems must be viewed as credible. In order to foster this credibility, Federal statistical programs seek to adhere to high quality standards and to maintain integrity and efficiency in the production of statistics. As the collectors and providers of these basic data, Federal agencies act as data stewards—balancing public and private decision makers' needs for information with legal and ethical obligations to minimize reporting burden, respect respondents' privacy, and protect the confidentiality of the data provided to the Government. This chapter discusses the development of standards that principal statistical programs can use to assess their performance and presents highlights of their 2005 budget proposals.

Performance Standards

Agencies maintain the quality of their data or information products as well as their credibility by setting high performance standards for their activities. The statistical agencies and statistical units represented on the Interagency Council on Statistical Policy (ICSP) have collaborated on developing an initial set of common performance standards for use under the Government Performance and Results Act and in completing the Administration's new Program Assessment Rating Tool (PART). Federal statistical agencies have agreed that there are six conceptual dimensions within two general areas of focus that are key to measuring and monitoring statistical programs. The first area of focus is Product Quality, encompassing the traditional dimensions of relevance, accuracy, and timeliness. The second area of focus is Program Performance, encompassing the dimensions of cost, dissemination, and mission achievement.

Statistical agencies historically have focused on measuring performance in the area of product quality, especially the dimensions most amenable to quantitative measurement, specifically accuracy and timeliness. Relevance, also an accepted measure of quality, can be either a qualitative description of the usefulness of products or a quantitative measure such as a customer

satisfaction score. Relevance is more difficult to measure, and the indicators that do exist are more varied.

Program performance standards form the basis for evaluating effectiveness. They address questions such as: Are taxpayer dollars spent most effectively? Are products made available to those who need them? Are agencies meeting their mission requirements or making it possible for other agencies to meet their missions? The indicators available to measure program performance for statistical activities currently are less well developed than those for product quality.

Product quality and program performance standards are designed to serve as indicators when answering specific questions in the Administration's PART process. (Please refer to Chapter 2 of this volume for a description of the PART.) Figure 4-1 presents each principal Federal statistical agency's assessment of the status of its current and planned use of indicators on the six dimensions. Use of the indicators may be for internal management, strategic planning, or annual performance reporting. The dimensions shown in the figure reflect an overall set of indicators for statistical activities but the specific measures vary among the individual programs depending on their unique characteristics and requirements. Annual performance reports and PARTs contain these specific measures as well as additional information about performance goals and targets and whether a program is meeting, or making measurable progress toward meeting, its performance goals. The examples below illustrate different ways agencies track their performance on each dimension.

Product Quality: Statistical agencies agree that product quality encompasses many attributes, including (but not limited to) relevance, accuracy, and timeliness. The basic measures in this group relate to the quality of specific products, thereby providing actionable information to managers. These are "outcome-oriented" measures and are key to the usability of information products. Statistical agencies or units establish targets and monitor how well targets are met. In some sense, relevance relates to "doing the right things," while accuracy and timeliness relate to "doing things right."

Relevance: Qualitative or quantitative descriptions of the degree to which products are useful and responsive to users' needs. Relevance of data products and analytic reports may be assessed through a professional review process and ongoing contacts with data users. Product relevance may be indicated by customer satisfaction with product content, information from customers about product use, demonstration of product improvements, comparability with other data series, agency responses to customer suggestions for improvement, new or

customized products/services, frequency of use, or responses to data requests from users (including policy makers). Through a variety of professional review activities, agencies maintain the relevance, accuracy, and validity of programs, and encourage data users and other stakeholders to contribute to the agency's data collection and dissemination program. Striving for relevance requires monitoring to ensure that information systems anticipate change and evolve to appropriately measure our dynamic society and economy.

Accuracy: Qualitative or quantitative measures of important features of correctness, validity, and reliability of data and information products measured as degree of closeness to target values. For statistical data, accuracy measures include sampling error and various aspects of nonsampling error (e.g., response rates, size of revisions, coverage, edit performance). For analysis products, accuracy may be the quality of the reasoning, reasonableness of assumptions, and clarity of the exposition, typically measured and monitored through review processes. In addition, accuracy is assessed and improved by external and internal reviews, comparisons of data among different surveys, linkages of survey data to administrative records, redesigns of surveys, or expansions of sample sizes.

Timeliness: Qualitative or quantitative measure of the timing of information releases. May be measured as time from the collection of data or the close of the reference period to the release of information, or customer satisfaction with timeliness. May also be measured as how well agencies meet scheduled and publicized release dates, expressed as a percent of release dates met.

Program Performance: Statistical agencies agree that program performance encompasses balancing the dimensions of cost, dissemination, and mission accomplishment for the agency as a whole; operating efficiently and effectively; ensuring that customers receive the information they need; and serving the information needs of the Nation. Costs of products or programs may be used to develop efficiency measures. Dissemination involves making sure customers receive the information they need via the most appropriate mechanisms. Mission achievement means that the information program makes a difference. Hence, three key dimensions are being used to indicate program performance: cost (input), dissemination (output), and mission achievement (outcome).

Cost: Quantitative measure of the dollar amount used to produce data products and services. The development and use of financial performance measures within the Federal Government is an established goal, and the intent of such measures is to determine the "true costs" of various programs or alternative modes of operation at the

Federal level. Examples of cost data include full costs of products or programs, return on investment, dollar value of efficiencies, and ratios of cost to products distributed.

Dissemination: Qualitative or quantitative information on the availability, accessibility, and distribution of products and services. Most agencies have goals to improve product accessibility, particularly through the Internet. Typical measures include: on-demand requests fulfilled, product downloads, degree of accessibility, customer satisfaction with ease of use, number of participants at user conferences, citations of agency data in the media, number of Internet user sessions, number of formats in which data are available, amount of technical support provided to data users, exhibits to inform the public about information products, issuance of newsletters describing products, usability testing of websites, and assessing compliance with Section 508 of the Rehabilitation Act which requires Federal agencies to make their electronic and information technology accessible to people with disabilities.

Mission Achievement: Qualitative or quantitative information about the impact of or satisfaction with statistical programs. For Federal statistical programs, this dimension responds to the question—have we achieved our objectives and met the expectations of our stakeholders? Under this dimension, statistical programs document their contributions to the goals and missions of parent departments and other agencies, the Administration, the Congress, and information users in the private sector. For statistical programs, this broad dimension involves meeting recognized societal information needs and also addresses the linkage between statistical outputs and programmatic outcomes.

However, identifying this linkage is far from straightforward. It is sometimes difficult to trace the impact of information products on the public good. Such products often are necessary intermediate inputs in the creation of a high visibility product whose societal benefit is clearly recognized. For example, the economic statistics produced by a variety of agencies are directly used by the Bureau of Economic Analysis in the calculation of the Gross Domestic Product (GDP), which analysts use to assess changes in the level of domestic economic activity. Similarly, statistics from specific surveys are directly used by the Bureau of Labor Statistics in the calculation of the Consumer Price Index (CPI), which is widely used in diverse applications, such as indexing pensions for retirees. As a result, a number of statistical agencies contribute to the GDP and/or the CPI and to the many uses of these information products. In addition, the data produced by statistical agencies are used to track the performance of programs managed by their parent agencies or other

organizations in areas such as crime, education, energy, the environment, health, science, and transportation.

Moreover, beyond the direct and focused uses of statistical products and programs, the statistical agencies and their products serve a diverse and dispersed set of data users working on a broad range of applications. Users include senior government policy makers at the Federal, State, and local levels, business leaders, households, academic researchers, analysts at public policy institutes and trade groups, marketers and planners in the private sector, and many others. Information produced by statistical agencies often is combined with other information for use in the decision-making process. Thus, as with many non-statistical programs, the relationship between statistical program outputs and their beneficial uses and outcomes is often complex and difficult to track.

In the absence of preferred quantitative indicators, qualitative narratives can indicate how statistical agency products contribute to and evaluate progress toward important goals established for government or private programs. In particular, narratives can highlight how statistical agencies measure the Nation's social and economic structure, and how the availability of the information influences changes in policies and programs. These narratives contribute to demonstrating mission accomplishment, particularly in response to questions in Section I of the PART, "program purpose and design." Narratives may describe the impact of measuring agency policy or change of policy, supporting research focused on policy issues, furnishing information to inform debate on policy issues, or providing in-house consulting support.

In addition to narratives, quantitative measures may be used to reflect mission achievement. For example, customer satisfaction with the statistical agency or unit indicates if the agency or unit has met the expectations of its stakeholders.

Figure 4-1. Availability of Indicators Reported by Principal Statistical Agencies, 2005

Dimension	BEA	BJS	BLS	BTS	Census	EIA	ERS	NASS	NCES	NCHS	ORES	SOI	SRS
Product Quality													
Relevance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Accuracy	✓	✓	✓	P	✓	✓	✓	✓	✓	✓	✓	✓	✓
Timeliness	✓	✓	✓	P	✓	✓	✓	✓	P	✓	✓	✓	✓
Program Performance													
Cost	✓	✓	✓	P	✓	—	P	P	P	P	✓	✓	—
Dissemination	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	P
Mission Achievement	✓	✓	✓	P	✓	✓	✓	✓	P	✓	✓	✓	✓
✓ Indicator Available P Indicator in development — No Indicator													

Description of Dimensions

Product Quality

Relevance: Qualitative or quantitative description of the degree to which products and services are useful to users and responsive to their needs.

Accuracy: Qualitative or quantitative measure of important features of correctness, validity, and reliability of data and information products measured as degree of closeness to target values.

Timeliness: Qualitative or quantitative measure of the timing of information releases.

Description of Dimensions—Continued

Program Performance

Cost: Quantitative measure of the dollar amount used to produce data products and services.

Dissemination: Qualitative or quantitative information on the availability, accessibility, and distribution of products and services.

Mission Achievement: Qualitative or quantitative information about the impact of, or satisfaction with, statistical programs.

Key to Statistical Agencies

BEA = Bureau of Economic Analysis, Department of Commerce

BJS = Bureau of Justice Statistics, Department of Justice

BLS = Bureau of Labor Statistics, Department of Labor

BTS = Bureau of Transportation Statistics, Department of Transportation

Census = Census Bureau, Department of Commerce

EIA = Energy Information Administration, Department of Energy

ERS = Economic Research Service, Department of Agriculture

NASS = National Agricultural Statistics Service, Department of Agriculture

NCES = National Center for Education Statistics, Department of Education

NCHS = National Center for Health Statistics, Department of Health and Human Services

ORES = Office of Research, Evaluation, and Statistics, Social Security Administration

SOI = Statistics of Income, Internal Revenue Service, Department of the Treasury

SRS = Division of Science Resources Statistics, National Science Foundation

Of the 14 principal Federal statistical agencies that are members of the ICSP, four agencies have programs that have been assessed using the PART process. These agencies' programs have received PART summary ratings of Effective or Moderately Effective, as shown in Figure 4-2. As additional ICSP agencies have an opportunity to undergo the PART process, the agencies plan to use the results of the collaborative performance standards development effort to help maintain and extend their generally well-received assessments.

Figure 4-2. 2005 PART SUMMARY RATINGS FOR STATISTICAL PROGRAMS

	Summary Rating
Bureau of Economic Analysis	Effective
Bureau of Labor Statistics	Effective
Census Bureau	
Current Demographic Statistics	Moderately Effective
Decennial Census	Moderately Effective
Intercensal Demographic Estimates	Moderately Effective
Survey Sample Redesign	Effective
National Center for Education Statistics	
Statistics	Effective
Assessment	Effective

Highlights of 2005 Program Budget Proposals

The programs that provide essential statistical information for use by governments, businesses, researchers, and the public are carried out by some 70 agencies spread across every department and several independent agencies. Approximately 40 percent of the funding for these programs provides resources for twelve agencies or agency units that have statistical activities as their principal mission. (Please see Table 4-1.) The remaining funding supports work in 60-plus agencies that carry out statistical activities in conjunction with other missions such as providing services or

enforcing regulations. More comprehensive budget and program information about the Federal statistical system will be available in OMB's annual report, *Statistical Programs of the United States Government, Fiscal Year 2005*, when it is published later this year. The following highlights elaborate on the Administration's proposals to strengthen the programs of the principal Federal statistical agencies.

Bureau of Economic Analysis: Funding is requested to complete work begun in 2003 to: (1) accelerate the release of some of the Nation's most important economic statistics to dramatically increase their usefulness to policy makers, business leaders, and other users; (2) meet U.S. statistical obligations to international organizations on the Special Data Dissemination Standards and complete the incorporation of the North American Industry Classification System into BEA accounts; (3) improve the economic accounts by acquiring monthly real-time data from private sources to fill data gaps in current measures as well as conduct a quarterly survey of large and volatile international services such as telecommunications, finance, and insurance; and (4) produce more current business investment data that include associated employment and compensation estimates on an annual basis in order to provide data needed to conduct analyses of tax policy, business investment, and productivity in manufacturing and service industries.

Bureau of Justice Statistics: Funding is requested to continue conversion of the National Crime Victimization Survey from primarily a paper and pencil operation to a fully automated data collection process. The BJS base program increase will provide for the maintenance of BJS's core statistical programs, including: (1) the National Crime Victimization Survey, the Nation's primary source of information on criminal victimization; (2) cybercrime statistics on the incidence, magnitude,

and consequences of electronic and computer crime to households and businesses; (3) law enforcement data from over 3,000 agencies on the organization and administration of police and sheriffs' departments; (4) nationally representative prosecution data on resources, policies, and practices of local prosecutors; (5) court and sentencing statistics, including Federal and State case processing data; and (6) data on correctional populations and facilities from Federal, State, and local governments.

Bureau of Labor Statistics: Funding is requested to support current program operations to measure the economy through producing, disseminating, and improving BLS economic measures, including: (1) modernizing the computing systems for monthly processing of the Producer Price Index (PPI) and U.S. Import and Export Price Indexes, and producing new data outputs, such as experimental PPIs for goods and services that will provide the first economy-wide measures of changes in producer prices; (2) maintaining continuous updating of the Consumer Price Index (CPI) by updating the expenditure and population weights biennially, the superlative index annually, outlet samples on a four-year cycle, and item samples in key categories on a two-year cycle, in lieu of performing major revisions about every ten years; and (3) continuing with a multi-year effort to enhance core BLS information technology infrastructure through a central Department of Labor appropriation.

Bureau of Transportation Statistics: Funding is requested to: (1) develop the American Freight Data Program, a continuous source of freight data from shippers, carriers, and receivers, to replace the current five-year Commodity Flow Survey; (2) move the Airfare Price Index, an input to GDP and CPI indices, from experimental to production mode; and (3) develop more timely and comprehensive local and long-distance travel data.

Census Bureau: Funding is requested for the Census Bureau's economic and demographic programs and for a re-engineered 2010 Census. For the Census Bureau's economic and demographic programs, funding is requested to: (1) support the release of all remaining data products from the 2002 Economic Census; (2) begin planning for the 2007 Economic Census and Census of Governments; (3) continue efforts begun in 2003 to eliminate data gaps by measuring migration across U.S. borders; (4) improve measurement of services by expanding key source data for critical quarterly and annual estimates of our Nation's Gross Domestic Product; (5) continue efforts to offer electronic reporting for almost 100 current economic surveys; and (6) support the Automated Export System and accelerate release of trade statistics. For 2010 Census planning, funding is requested to continue to: (1) conduct extensive planning, testing, and development activities to support a re-engineered 2010 Census; (2) complete map feature accuracy within 7.6 meters of true GPS location for

48 percent of all counties in the U.S., Puerto Rico, and island areas; and (3) conduct the first full year of the American Community Survey program to provide data on an ongoing basis rather than waiting for once-a-decade censuses.

Economic Research Service: Funding is requested to develop an integrated and comprehensive data and analysis framework of the food system beyond the farm-gate to provide a basis for understanding, monitoring, tracking, and identifying changes in food supply and consumption patterns.

Energy Information Administration: Funding is requested to: (1) continue the improvement of natural gas and electricity survey data; (2) undertake development work on a liquefied natural gas storage survey and a natural gas production survey; (3) enhance the National Energy Modeling System's transportation modeling; and (4) revise the Voluntary Greenhouse Gases survey to support the President's Initiative on Greenhouse Gases.

National Agricultural Statistics Service: Funding is requested to: (1) continue restoration and modernization of the agricultural estimates program to ensure State, regional, and national level agricultural estimates of sufficient precision, quality, and detail to meet the needs of a broad customer base; and (2) support Government-wide and departmental E-Government initiatives.

National Center for Education Statistics: Funding is requested to: (1) support the second wave of data collection of the Early Childhood Longitudinal Study—Birth Cohort and data release in Spring 2005; (2) continue efforts to improve electronic data collection and data dissemination; (3) support the ongoing data collection efforts for the Schools and Staffing Survey, the principal collection on national and State level indicators of teacher and school quality; (4) continue U.S. participation in data collections, analyses, and reporting on international assessments that compare educational performance and progress across countries; and (5) continue support for the National Assessment of Educational Progress (NAEP) program and its role in benchmarking national and State performance.

National Center for Health Statistics: Funding is requested to: (1) maintain and transform HHS' core health statistics capacity; (2) preserve and modernize the Nation's vital statistics system; (3) fortify and transform basic operations for the National Health and Nutrition Examination Survey; (4) maintain and redesign systems for tracking the health care delivery system; and (5) redesign the sample for the National Health Interview Survey.

Science Resources Statistics Division, NSF: Funding is requested to: (1) implement ongoing programs on the science and engineering (S&E) enterprise; (2)

continue implementing quality improvements to surveys on the S&E workforce; (3) begin research on methods to implement necessary enhancements to the Industry Research and Development survey; (4) develop an ongoing data collection program on research instrumentation stocks, as mandated by Congress; and (5) continue activities to establish an ongoing data series on postdoctorates.

Statistics of Income Division, IRS: Funding is requested to: (1) maintain and modernize core data collection systems, including several major statistical pro-

grams for the Treasury Department, the Congressional Joint Committee on Taxation, the Bureau of Economic Analysis, and SOI's many other customers; (2) implement a databank repository for SOI and IRS population file data to more efficiently build longitudinal databases and enable sub-national estimates; (3) examine means to more effectively mask individual records to minimize the possibility of identification in the Individual Public Use sample files; and (4) modernize and expedite dissemination of data and publications, including a reengineered Internet website.

Table 4-1. 2003-2005 BUDGET AUTHORITY FOR PRINCIPAL STATISTICAL AGENCIES
(in millions of dollars)

	2003 Actual	Estimate	
		2004	2005
Bureau of Economic Analysis	66	67	82
Bureau of Justice Statistics	32	32	39
Bureau of Labor Statistics	492	518	534
Bureau of Transportation Statistics	30	31	34
Census Bureau ¹	571	632	848
Salaries and Expenses ¹	202	213	240
Periodic Censuses and Programs	369	419	608
Economic Research Service	69	71	80
Energy Information Administration	80	81	85
National Agricultural Statistics Service ²	138	128	138
National Center for Education Statistics	184	187	187
Statistics	89	92	92
Assessment	95	95	95
National Center for Health Statistics	126	128	150
PHS Evaluation Funds	126	128	150
Budget Authority	0	0	0
Science Resources Statistics Division, NSF	31	32	32
Statistics of Income Division, IRS	32	36	36

¹ Includes mandatory appropriations of \$20 million for each year for the Survey of Program Dynamics and collection of data related to the allocation to States of State Children's Health Insurance Program funds.

² Includes funds for the periodic Census of Agriculture of \$41, \$25, and \$23 million in 2003, 2004, and 2005, respectively.