

4. STRENGTHENING FEDERAL STATISTICS

Federal statistical programs produce key information to inform public and private decision makers about a range of topics of interest, 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.

The Federal statistical community remains on alert for opportunities to strengthen these measures of our Nation's performance. For example, during 2005, Federal statistical agencies accelerated the release of Gross State Product by one year and released for the first time local area employee compensation by industry (BEA); published for the first time a price index for U.S. imports of goods from China (BLS); implemented the American Community Survey at its full level of three million addresses nationwide to provide detailed population data every month instead of once every 10 years (Census Bureau); presented primary information about the economic well-being of America's farmers and farm households from the Agricultural Resource Management Survey via an easy-to-use web-based delivery tool (ERS and NASS); and undertook the first data-sharing project under the Confidential Information Protection and Statistical Efficiency Act to improve under-

standing of international research and development investment activities of multinational corporations (BEA, Census Bureau, and NSF's SRS). During 2006, the Bureau of Justice Statistics will sponsor a new survey of businesses to estimate their exposure to and the consequences of computer crime, while the National Center for Health Statistics will field the National Survey of Ambulatory Surgery for the first time since 1996 to provide more comprehensive data on surgical procedures—many of which have moved from inpatient to outpatient settings.

For Federal statistical programs to effectively benefit their 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 data. As the collectors and providers of these basic statistics, the responsible 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 use to assess their performance and presents highlights of their 2007 budget proposals.

Performance Standards

Statistical programs 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 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 dimensions of accuracy and timeliness that are most amenable to quantitative measurement. Rel-

evance, 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.

Product quality and program performance standards are designed to serve as indicators when answering specific questions in the Administration's PART process. Chart 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. During the past year, four agencies (BTS, EIA, NASS, and SRS) have completed development of their last few

indicators. With the exception of cost indicators, where three agencies (ERS, NCES, and NCHS) are still planning their measures, the ICSP agencies have now developed performance measures for all six dimensions. Use of the indicators may be for internal management, strategic planning, or annual performance reporting. The dimensions shown in the chart reflect an overall set of indicators for statistical activities, but the specific measures vary among the individual programs depend-

ing on their unique characteristics and requirements. Annual performance reports and PARTs provide 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.

Chart 4-1. ICSP Statistical Quality and Program Performance Dimensions, 2007

Dimension	BEA	BJS	BLS	BTS	Census	EIA	ERS	NASS	NCES	NCHS	ORES	SOI	SRS
Product Quality													
Relevance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Accuracy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Timeliness	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Program Performance													
Cost	✓	✓	✓	✓	✓	✓	P	✓	P	P	✓	✓	✓
Dissemination	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mission Achievement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓ Indicator Available P Indicator Planned													

Description of Dimensions

Product Quality

Relevance: Qualitative or quantitative descriptions of the degree to which products and services are useful to users and responsive to users' 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.

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 effect 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

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 and services are useful and responsive to users’ needs. Relevance of data products and analytic reports may be monitored 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 or 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 and validity of their products, and encourage data users and other stakeholders to contribute to the agencies’ data collection and dissemination programs. 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 may be defined as the degree of closeness to the target value and measured as sampling error and various aspects of non-sampling 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 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 timing of information releases. Timeliness may be measured as time from the close of the reference period to the release of information, or customer satisfaction with timeliness. 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 to produce data products or services. The development and use of financial performance measures within the Federal Government is an established goal; 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 web sites, 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 effect of, or satisfaction with, statistical programs. For Government 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 and the general public. For statistical programs, this broad dimension involves meeting recognized societal information needs; it also addresses the linkage between statistical outputs and programmatic outcomes.

However, identifying this linkage is far from straightforward. It is frequently difficult to trace the effects of information products on the public good. Such products often are necessary intermediate inputs in the creation of high visibility information 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 universally 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 can claim credit for contributing to the GDP and/or the CPI and to the many uses of these information products. In addition, statistics produced by Federal agencies are used to track the performance of programs managed by their parent or other organizations related to topics such as crime, education, energy, the environment, health, science, and transportation.

Moreover, beyond the direct and focused uses of statistical products, the statistical agencies and their programs serve a diverse and dispersed set of data users working on a broad range of applications. Users include 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, the relationship between program outputs and their beneficial uses and outcomes is often complex and difficult to track. Consequently, agencies use both qualitative and quantitative indicators to make this linkage as explicit as feasible.

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 statistical information's effects on measuring agency

policy or change of policy, supporting research focused on policy issues, informing 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.

Of the 14 principal Federal statistical agencies that are members of the ICSP, nine agencies have programs that have been assessed using the PART process. Most of these agencies' programs have received PART summary ratings of Effective or Moderately Effective, as shown in Chart 4-2. While recognizing the strength of the Energy Information Administration's purpose and management, EIA received a rating of "Results Not Demonstrated" for two key reasons. As part of its 2004 strategic planning, EIA had begun to reassess its performance measures. As a result, EIA had not yet adopted new measures, nor established baselines and targets for the new measures. Also, EIA had no recurring independent evaluation of its entire program. EIA is working to establish these measures, targets, and baselines. In addition, in FY 2005 EIA initiated an independent Expert Study Team to review and assess EIA's entire information program. This team is scheduled to provide its report to EIA in spring 2006. As additional ICSP agencies have an opportunity to undergo the PART process, the agencies plan to continue to use the results of the collaborative performance standards development effort to help maintain and extend their generally favorable assessments.

Chart 4-2. Most Recent PART Summary Ratings for Statistical Programs

	Summary Rating
Bureau of Economic Analysis	Effective
Bureau of Justice Statistics	Effective
Bureau of Labor Statistics	Effective
Census Bureau	
Current Demographic Statistics	Effective
Decennial Census	Moderately Effective
Intercensal Demographic Estimates	Moderately Effective
Survey Sample Redesign	Effective
Economic Census	Effective
Current Economic Statistics/Census of Governments	Moderately Effective
Economic Research Service	Effective
Energy Information Administration	Results Not Demonstrated
National Agricultural Statistics Service	Moderately Effective
National Center for Education Statistics	
Statistics	Effective
Assessment	Effective
National Center for Health Statistics	Moderately Effective

Highlights of 2007 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 13 agencies or units that have statistical activities as their principal mission. (Please see Table 4–1.) The remaining funding supports work in 60-plus agencies or units 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 2007*, 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: (1) complete BEA's five-year program to improve the accuracy and timeliness of the National Income and Product Accounts, including acquiring and incorporating real-time data into the accounts to provide more current and reliable estimates and accelerating the release of gross state product and metropolitan personal income; (2) augment the scope of the international economic accounts by improving the comprehensiveness of international service statistics; (3) continue to update the input-output accounts and industry estimates; and (4) improve and enhance regional economic statistics.

Bureau of Justice Statistics: Funding is requested to provide for BJS's core statistical programs, including: (1) sample restoration for the National Crime Victimization Survey to support estimates of annual rates of change in most types of violent crime; (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 program operations to measure the economy through producing, disseminating, and improving BLS economic measures, including activities to: (1) begin updating continuously the housing and geographic area samples in the Consumer Price Index (CPI), which will improve the accuracy and timeliness of the CPI; (2) continue to modernize the computing systems for

monthly processing of the Producer Price Index (PPI) and U.S. Import and Export Price Indexes (IPP); and (3) expand the Business Employment Dynamics data within the Quarterly Census of Employment and Wages to cover State level measures of gross job gains and gross job losses.

Bureau of Transportation Statistics: Funding is requested to: (1) conduct the Commodity Flow Survey, a major national benchmark survey of shippers; (2) release monthly trade statistics on the commodities and mode of transportation used with our largest trading partners; (3) produce a core set of economic data and indicators including the Government Transportation Financial Report, multi-factor productivity measures, the State Transit Expenditure Survey, the Transportation Services Index, and the Air Travel Price Index; (4) produce and release the National Transportation Atlas Data Base, a compendium of national geospatial transportation data; (5) provide statistics in reference reports such as the Annual Report to Congress, the Pocket Guide to Transportation, the National Transportation Statistics Report, and the Transportation Services Index; and (6) carry out a national transportation information needs assessment, a new Congressional mandate to prioritize transportation data needs and data collections, and estimate their implementation costs.

Census Bureau: Funding is requested for the Census Bureau's ongoing 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) develop the collection instruments and processing systems for the 2007 Economic Census; (2) collect and process data in the organization phase of the Census of Governments, prepare and initiate data collection and processing in the employment phase, and collect and process data for the start of the finance phase; and (3) design a new data collection system on income and wealth dynamics that will meet the policy and operational needs of the country and replace the Survey of Income and Program Participation. For 2010 Census planning, funding is requested to continue to: (1) conduct planning, testing, and development activities to support a re-engineered 2010 Census; (2) improve the accuracy of map feature locations for an additional 690 counties; and (3) continue to conduct the American Community Survey program to provide small area demographic data on an ongoing basis rather than waiting for once-a-decade censuses.

Economic Research Service: Funding is requested to: (1) implement an Agricultural and Rural Development Information System, a comprehensive data collection and research program to ensure that sufficient data will consistently be available to monitor the changing economic health and structure of the farm and rural economies and to assess the economic well-being of

farm and non-farm households in rural areas; and (2) extend ERS's integrated and comprehensive data and analysis framework, the Consumer Data and Information System, to include data on the consumption of food away from home, which will improve the ability of policy officials to understand, monitor, track, and identify changes in food supply and consumption patterns.

Energy Information Administration: Funding is requested to continue ongoing operations to: (1) maintain critical energy data coverage, analysis, and forecasting; (2) increase global oil and gas data and modeling capabilities through EIA's International Oil and Gas Markets and Energy Security Initiative, which will provide the basis for an enhanced global dialogue on the development and use of these key energy resources; (3) improve data reliability and statistical accuracy through EIA's Energy Data Quality Improvements Initiative, which will redesign key petroleum and natural gas surveys whose data drive investment and trade decisions, improve market function, and lead to efficient pricing; and (4) improve the ability to assess and forecast supply, demand, and technology trends affecting U.S. and world energy markets through the U.S. Energy Model Replacement Initiative.

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) finalize preparations for data collection associated with the 2007 Census of Agriculture, including collection of data to measure coverage of the mailing list and the preparation of all materials for data collection in 2008.

National Center for Education Statistics: Funding is requested to support: (1) on-going longitudinal studies, including the Early Childhood Longitudinal Study Birth and Kindergarten Cohorts and the Educational Longitudinal Study of 2002; (2) the Common Core of Data, which collects information on enrollment, completions, and finances from public elementary and secondary institutions; (3) the Integrated Postsecondary Education Data System, which collects information on enrollment, completions, and finances from postsecondary institutions; (4) the National Postsecondary Student Aid Survey, a comprehensive study that examines how students and their families pay for postsecondary education; (5) U.S. participation in international assessments that compare educational achievement in the United States with that in other countries; (6) the Schools and Staffing Survey, which provides informa-

tion on public and private schools, the principals who head these schools, and the teachers who work in them; (7) a new longitudinal study that will follow an eighth grade cohort through the year following timely high school completion, and (8) expansion of the National Assessment of Educational Progress (NAEP), the only nationally representative and continuing assessment of what American students know and can do, to produce State estimates for grade 12.

National Center for Health Statistics: Funding is requested to: (1) continue data collection, analysis, and release for key national health data systems including the National Vital Statistics System, National Health Interview Survey, National Health and Nutrition Examination Survey, and National Health Care Survey; (2) continue gains in timeliness by implementing systems improvements in data collection and processing; (3) complete efforts to expand the content of surveys, particularly those addressing the health care delivery system; (4) implement the sample redesign for the National Health Interview Survey, NCHS' largest population survey; and (5) work collaboratively with States and other agencies on upgrading the technology for collecting data from State birth and death certificates.

Office of Research, Evaluation, and Statistics, SSA: Funding is requested to: (1) continue a strategic planning project to modernize ORES' processes for developing and disseminating data from the agency's major administrative data files for statistical purposes, (2) support outside surveys and linkage of Social Security Administration (SSA) administrative data to surveys, (3) create a new public-use file of administrative data on earnings histories and benefits for a sample of Social Security Numbers, and (4) evaluate the usefulness and confidentiality protection of a file being developed for public use that synthesizes data from the Survey of Income and Program Participation that is linked to SSA administrative records.

Science Resources Statistics Division, NSF: Funding is requested to: (1) improve the relevance, accuracy, timeliness, and accessibility of SRS statistical products, including the suite of research and development surveys; (2) extend the data, tools, and knowledge needed to develop, on an internationally comparable basis, a new set of science metrics in order to evaluate reliably the returns from past research and development investments and to forecast, within tolerable margins of error, likely returns from future investments; and (3) gather additional data on postdoctorate positions to address a major gap in Science and Engineering personnel data.

Statistics of Income Division, IRS: Funding is requested to: (1) maintain and modernize tax data collection systems, including developing interfaces with modern electronic tax return filing systems; (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 enhancement of products and features on the www.irs.gov/taxstats website.

Table 4–1. 2005–2007 BUDGET AUTHORITY FOR PRINCIPAL STATISTICAL AGENCIES

(in millions of dollars)

	2005 Actual	Estimate	
		2006 ¹	2007
Bureau of Economic Analysis ²	73	76	76
Bureau of Justice Statistics ³	47	46	60
Bureau of Labor Statistics	529	537	563
Bureau of Transportation Statistics	26	27	27
Census Bureau ⁴	765	822	898
Salaries and Expenses ⁴	216	216	204
Periodic Censuses and Programs	549	606	694
Economic Research Service ⁵	74	75	83
Energy Information Administration	84	85	90
National Agricultural Statistics Service ⁶	128	139	153
National Center for Education Statistics	185	183	190
Statistics	91	90	93
Assessment	89	88	92
National Assessment Governing Board	5	5	5
National Center for Health Statistics ⁷	109	109	109
Office of Research, Evaluation, and Statistics, SSA	17	19	17
Science Resources Statistics Division, NSF	31	33	36
Statistics of Income Division, IRS	38	41	41

¹ Reflects any recissions.

² 2005 figure includes \$2 million for a NAPA study of off-shoring.

³ The 2005 and 2006 figures include funds for management and administrative costs that were previously displayed separately.

⁴ 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.

⁵ 2007 funding assumes the reallocation of \$350,000 provided in 2006 for a comprehensive report on the economic development and current status of the sheep industry in the United States. Funding for that purpose will not be needed in 2007.

⁶ Includes funds for the periodic Census of Agriculture of \$22, \$29, and \$37 million in 2005, 2006, and 2007, respectively. The 2007 estimate includes an increase of \$7.25 million due to cyclical activities for the Census of Agriculture.

⁷ All funds from the Public Health Service Evaluation Fund. Administrative costs for NCHS that previously were displayed as part of the NCHS budget line are now reflected in two consolidated CDC-wide budget lines for management and administrative costs.

