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. The Federal statistical community remains on alert for opportunities to strengthen these measures of our Nation's performance. For example, during 2004, Federal statistical agencies launched the first new economic indicator survey in 40 years—the Quarterly Services Survey (Census Bureau); expanded regional economic data from 318 to 934 American communities (BEA); successfully adopted new collection and processing technologies that will greatly accelerate the release of data from the National Health Interview Survey (NCHS); and completed the first data collection on the cyberinfrastructure of academic and biomedical facilities (NSF's SRS).

For Federal statistical programs to effectively benefit such 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 statistical 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 2006 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 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.

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, NCES, and SRS) have improved the status of their indicators. 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.

Chart 4-1. ICSP Statistical Quality and Program Performance Dimensions, 2006

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	P	P	P	✓	✓	✓
Dissemination	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	P
Mission Achievement	✓	✓	✓	P	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ Indicator Available P Indicator in development

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/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 their products, and encourage data users and other stakeholders to contribute to the agency's 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 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 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 used to produce data products or 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 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 and 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, the statistics produced by statistical 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 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 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, six 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's PART evaluation found that it lacks specific annual performance measures, baselines, and targets and should consider enhancing independent expert evaluation of its major program areas. EIA is correcting both of these shortcomings, which should bring its PART rating into line with those of its sister agencies. 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 Labor Statistics	Effective
Census Bureau	
Current Demographic Statistics	Effective
Decennial Census	Moderately Effective
Economic Census	Effective
Intercensal Demographic Estimates	Moderately Effective
Survey Sample Redesign	Effective
Energy Information Administration	Results Not Demonstrated
National Agricultural Statistics Service	Moderately Effective
National Center for Education Statistics	
Statistics	Effective
Assessment	Effective

Highlights of 2006 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 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 2006,* when it is published later this year. The following highlights elaborate on the Administration's

Table 4–1. 2004–2006 BUDGET AUTHORITY FOR PRINCIPAL STATISTICAL AGENCIES

(in millions of dollars)

	2004 Actual	Estimate	
		2005 [1]	2006
Bureau of Economic Analysis [2]	68	73	81
Bureau of Justice Statistics [3]	32	34	63
Bureau of Labor Statistics	518	529	543
Bureau of Transportation Statistics	30	30	33
Census Bureau [4]	629	765	897
Salaries and Expenses [4]	213	216	240
Periodic Censuses and Programs	416	549	657
Economic Research Service	71	74	81
Energy Information Administration	81	84	86
National Agricultural Statistics Service [5]	128	128	145
National Center for Education Statistics	187	185	208
Statistics	92	91	91
Assessment	95	94	117
National Center for Health Statistics [6]	90	109	109
Science Resources Statistics Division, NSF	31	32	32
Statistics of Income Division, IRS	36	39	39

[1] Reflects any recissions.

[2] 2005 estimate includes $2 million for a National Academy of Public Administration study of off-shoring.

[3] The 2006 estimate includes funds for the Felony Arrestee Drug Use Reporting program (previously funded as the Arrestee Drug Abuse Monitoring program within the National Institute of Justice) as well as funds for management and administrative costs that were displayed separately in 2004 and 2005.

[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 Chidren's Health Insurance Program funds.

[5] Includes funds for the periodic Census of Agriculture of $25, $22, and $29 million in 2004, 2005, and 2006, respectively. The 2006 Budget includes an increase of $6.5 million due to cyclical activities including finalizing content, developing mail lists, and streamlining and upgrading processing systems in preparation for the 2007 Census of Agriculture.

[6] All funds from the Public Health Service Evaluation Fund. Funds for 2004 are shown comparably with 2005 and 2006. 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.

proposals to strengthen the programs of the principal Federal statistical agencies.

Bureau of Economic Analysis: Funding is requested to: (1) make selected improvements to the timeliness and comprehensiveness of the Nation's international statistics on multinational corporations and trade in services; (2) complete work to accelerate the release of gross state product, metropolitan personal income, and county-level personal income; (3) enhance the accuracy of BEA statistics by acquiring and incorporating real-time data into core BEA accounts; (4) improve data on international financial transactions by working with the Department of the Treasury and the Federal Reserve Board to incorporate newly developed estimates of derivatives and other financial instruments; and (5) produce up-to-date, annual estimates of business investment spending by industry in order to more accurately discern where high-tech and other investments are being made in the manufacturing and service sectors.

Bureau of Justice Statistics: Funding is requested to 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; (6) data on correctional populations and facilities from Federal, State, and local governments; and (7) the Felony Arrestee Drug Use Reporting program (previously funded as the Arrestee Drug Abuse Monitoring program within the National Institute of Justice).

Bureau of Labor Statistics: Funding is requested to support 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 (IPP), and producing new data outputs, such as indexes based on the North American Industry Classification System for the IPP; (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; and (3) releasing the 2004–2014 Employment Projections and publishing the 2006–2007 edition of the *Occupational Outlook Handbook*.

Bureau of Transportation Statistics: Funding is requested to: (1) enhance the Freight Data Program, a continuous source of data from shippers, carriers, and receivers, to replace the current Commodity Flow Survey; (2) move the Air Transportation 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 reengineered 2010 Census. For the Census Bureau's economic and demographic programs, funding is requested to: (1) plan for the 2007 Economic Census, (2) plan and implement the organizational phase of the 2007 Census of Governments and plan for the employment and finance phases, (3) improve measurement of services by expanding key source data for critical quarterly and annual estimates of our Nation's Gross Domestic Product, (4) support improved coverage and electronic reporting of trade statistics, (5) support the development of a database infrastructure to integrate State administrative data and Census Bureau data products in order to fill critical data gaps at the State and local levels, (6) continue efforts begun in 2003 to eliminate data gaps by measuring migration across U.S. borders, and (7) purchase furniture and relocate operations and employees to the new headquarters facility to avoid disruption of mission-critical operations necessary for the successful completion of Census Bureau surveys. For 2010 Census planning, funding is requested to continue to: (1) conduct planning, testing, and development activities to support a reengineered 2010 Census; (2) complete map feature accuracy within 7.6 meters of true GPS location for 700 of the Nation's counties; and (3) continue to conduct 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 support ongoing programs and to continue the development of an integrated and comprehensive data and analysis framework of the food system beyond the farmgate to provide a basis for understanding, monitoring, tracking, and identifying changes in the food supply and consumption patterns.

Energy Information Administration: Funding is requested to continue ongoing operations, with a focus on: (1) improving petroleum and natural gas data security, reliability, and quality; (2) conducting the commercial, manufacturing, and residential energy consumption surveys; (3) implementing the enhanced Voluntary Reporting of Greenhouse Gases program to support the President's Climate Change Initiative; and (4) developing a program performance prototype to assess EIA's data collection and operations costs at a more disaggregated level.

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; (2) continue development and implementation of a locality-based agricultural county estimates/small area estimation program; and (3) continue preparations for the 2007 Census of Agriculture.

National Center for Education Statistics: Funding is requested to: (1) support the ongoing data collection and analysis of the Early Childhood Longitudinal Study Birth and Kindergarten Cohorts, which provide data to inform child development practices and early education; (2) continue the Integrated Education Postsecondary Data System, which collects information on enrollment, completions, and finances from postsecondary institutions; (3) sustain the ongoing data collection efforts for the Beginning Postsecondary Students Longitudinal Study; (4) maintain U.S. participation in international assessments that compare educational achievement in the United States with that in other countries; and (5) continue the National Assessment of Educational Progress (NAEP) program, including funding to support the expansion of State NAEP to grade 12.

National Center for Health Statistics: Funding is requested to: (1) increase timeliness by upgrading electronic systems for data collection and processing; (2) expand the content of surveys, particularly those addressing the health care delivery system; (3) redesign the sample for the National Health Interview Survey, NCHS' largest population survey; and (4) work collaboratively with States and other agencies on upgrading the technology for collecting data from State birth and death certificates.

Science Resources Statistics Division, NSF: Funding is requested to: (1) continue to implement the results of prior methodological, analytical, and planning activities directed toward improving the relevance, accuracy, timeliness, and accessibility of SRS products, including the suite of Research and Development surveys and the Survey of Graduate Students and Postdoctorates in Science and Engineering; and (2) lead a cross-agency effort to examine and revise current

taxonomies used for classifying academic fields of study, including the development of crosswalks between existing taxonomies and any potential new taxonomy, as well as strengthen methods to enhance the identification and description of cross-disciplinary and multi-disciplinary fields.

Statistics of Income Division, IRS: Funding is requested to: (1) maintain and modernize core data collection systems, including several major statistical programs for the Department of the Treasury, 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.