The Federal Statistical System and the Four "I"s

By
STEPHEN E. FIENBERG

This article addresses the process through which the federal statistical system may be restored to its appropriate place for providing high-quality data and information, in response to the damage caused by the budgetary woes that agencies have suffered in recent years. The article describes how this work will facilitate moving the country forward, both on its path to economic recovery and to a position of leadership internationally. Four crucial topics are examined: independence, integrity, integration, and innovation. In combination these characteristics will ensure the availability of statistical data of high quality and integrity for informed policy decisions and legislative action.

Keywords: Council of Statistical Advisors; Central Statistical Board; Commission on Federal Statistics; statistics in government

While attention has been given to the value of the output of the federal statistical system and the damage that has been wrought by the budgetary woes that agencies have suffered, especially beginning in the 1980s up through the present time, this article addresses the process through which we can restore the system to its appropriate place for providing high-quality data and information. The aim is to facilitate moving the country forward, both on its path to economic recovery and to a position of leadership internationally. There are four crucial topics: independence, integrity, integration, and innovation. In combination, these characteristics will ensure the availability of statistical data of high quality and integrity that may be used for informed policy decisions and legislative action.

Stephen E. Fienberg is the Maurice Falk University Professor of Statistics and Social Science in the Department of Statistics, the Machine Learning Department, Cylab, and i-Lab at Carnegie Mellon University. His principal research interests lie in the development of statistical methodology, especially for problems involving categorical variables.

DOI: 10.1177/0002716210373893

Independence

The independence of statistical agencies has been a topic of discussion within the professional statistical community and on Capitol Hill for much longer than my professional career, which now spans five decades. During this period we have seen the substantial decline of the central statistical functions housed in the Office of Management and Budget (OMB), although the office has valiantly attempted to function since the late 1980s. And while there have been new agencies created in the Departments of Energy, Justice, and Transportation, they, along with the more established agencies, have been subjugated to increasing political pressures and a sublimated position in the political hierarchy. Few, if any, of these agencies report to the top-level political appointees in their relevant departments. However, there have been some recent attempts to reverse this trend. For example, legislation introduced in 2009, which would elevate the Census Bureau to the status of an independent agency and appoint the bureau director for a fixed five-year term (H.R. 1254, Restoring the Integrity of American Statistics Act), is clearly consistent with the goal of increasing the independence and scientific integrity of federal data.

Integrity

Commentators often speak of trust in government. The day that government statistical data cannot be trusted, the entire federal statistical system will begin to crumble, because those data play such an important function in the legislative and policy world. Fortunately, despite the threats to the quality of federal statistical data that have occurred over the past half century, the broad view of those in Congress, other government agencies, and the public at large is that government statisticians are professionals who should resist efforts to tamper with their data and results. These statisticians have developed methods for data collection, analysis, and reporting that are constantly subjected to careful professional scrutiny by statisticians, demographers, economists, and others. Their work is generally guided by substantive and professional judgment, not by politics. Much of what is described in the Committee on National Statistics volume *Principles and Practices for a Federal Statistical Agency* (Citro, Martin, and Straf 2009) is focused on ways to ensure not only that statistical agencies exhibit integrity but also that they are perceived as doing so.

Integration

Virtually every country in the world has a central statistical office. In the United States, beginning with the creation of the Central Statistical Board in 1933, we have recognized the need for such an office to provide government-wide planning and coordination of statistical programs. However, this office plays a different role from similar offices in other countries because of the decentralized nature of the American statistical system. From 1937 until the present, this coordinating unit has been located in OMB and its predecessor agency, the Bureau of the Budget, except for a four-year hiatus from 1977 to 1981, when it was lodged in the Department of Commerce. In 1947, the unit had sixty-nine employees and was staffed by statistical professionals who managed clearance of forms as well as coordination. Today, while the OMB has doubled or tripled in size, along with a subsequent increase in the relevant statistical budgets, the coordinating unit in the OMB has been reduced to around six people.

This unit still carries out important projects such as preparing annual reports on the status of federal statistics, including a budgetary analysis of statistical agencies; organizing and staffing the Federal Committee on Statistical Methodology, which has prepared reports on topics such as the uses of administrative records, the matching of statistical data files, and developing error profiles for sample surveys; developing a directory of federal statistical data files; and reporting on the use of statistical data for fund allocation. See Wallman (1993) for a discussion of the coordinating function of this office that is still relevant today.

During his work as chairman of the president's Statistical Reorganization Project in the 1970s, James Bonnen of Michigan State University asked a former senior OMB official for his opinion on why statistical policy had slowly atrophied in the OMB. The response: "When you are up to your armpits in alligators, you don't worry much about statistics" (Bonnen 1983, 181).

In this period of financial stress, it is vital that the administration have at its disposal high-quality statistics to monitor the progress of the economy and to aid in planning and decisions on topics such as health care and energy. A strong central statistical presence in the Executive Office of the President is still required to fulfill the proper national function of coordinating, maintaining, and improving the quality of federal statistics.

Statistics are like trees. They provide the infrastructure used for governmental decisionmaking; the statistical information required for our central national debates is rooted in a myriad of statistical programs that have helped to fill our forest. But an adequate staff is needed to guide the careful harvesting of such potentially useful data from these statistical trees and to prevent the clear-cutting of statistical series. And as with trees, once the stands of statistical series fall under the budgetary ax, it can take years for others to be planted and mature in their place. Thus, we may well ask, "Who speaks for statistics?" and hope that someone other than a character from a Dr. Seuss fable responds (Seuss 1971).

Innovation

Along with better coordination and a more creative approach to federal statistical programs, we need to preserve the research and development activities of federal statistical agencies and to devote more rather than fewer resources to the innovative analysis of data already being collected for other purposes.

We also need to have budget planning that allows for continuity and gradual changes in ongoing federal sample survey programs, so that the impact of changes can be measured and more accurate estimates can be produced. When survey sample sizes go up and down like a yo-yo, the maintenance of quality is difficult, and the measurement of the impact of policy and other changes becomes virtually impossible. But we desperately need new ideas on how to carry out surveys and censuses, and the development of radically new approaches rarely fares well as part of the operating budgets for continuing programs.

Council of Statistical Advisors

Some 25 years ago, when the statistical policy division of OMB,[1] which had moved back from the Department of Commerce to OMB, was in the process of being eviscerated, Bonnen (1983) proposed the creation of a new Central Statistical Office (CSO) within the Executive Office of the President but outside of OMB. At that time, I suggested that such a CSO needed to be bolstered through the creation of a Council of Statistical Advisors (CSA), whose members—including the chair (who might also serve as the chief statistician directing the CSO)—would have appointments "for terms of fixed length by the President, subject to Senate confirmation. The advisors would be nationally known and respected professional statisticians, with knowledge of or background in federal statistical activities, and they would provide leadership for the new CSO office, which would be staffed by technically trained statistical methodologists and personnel experienced in federal statistical programs" (Fienberg 1983, 196).

The CSA, if located in the Executive Office of the President, would have access to policy-makers and direct reporting responsibility to the White House. The name suggests that the CSA would be akin to the President's Council of Economic Advisors, but the requirement for Senate confirmation and fixed terms would help to ensure the apolitical nature of the council. Such a CSA, were it created today, could elevate the profile of government statistical work and "go a long way to bridge the chasm between the two major components of our profession: those concerned with the collection and reporting of statistical data under government auspices, and those concerned with the development of basic statistical theory and methodology for data analysis" (Fienberg 1983, 196).

The CSA that I proposed in 1983 resembles in many ways the independent Statistics Advisory Board proposed in 1971 by the President's Commission on Federal Statistics. Maybe it is an idea that has come of age.

Note

1. This office was the heir to the Central Statistical Board and is now called the OMB Statistical and Science Policy Office.

References

Bonnen, James T. 1983. Federal statistical coordination today: A disaster or a disgrace? (with discussion). *The American Statistician 37* (3): 179–92.

Citro, Constance F., Margaret E. Martin, and Miron L. Straf, eds. 2009. *Principles and practices for a federal statistical agency*. 4th ed. Washington, DC: National Academies Press.

Fienberg, Stephen E. 1983. Federal statistical coordination today: A disaster or a disgrace? Comment. *The American Statistician 37* (3): 192–96.

President's Commission. 1971. *Federal statistics, volumes I and II*. Washington, DC: Government Printing Office.

Seuss, Dr. [Theodore Seuss Geisel]. 1971. *The Lorax*. New York, NY: Random House.

Wallman, Katherine K. 1993. Federal statistical coordination today: An epilogue as prologue. *The American Statistician 37* (3): 177–78.