

**U.S. Bureau of Labor Statistics and U.S. Bureau of Transportation Statistics**  
**Comments on Review of National Quality Assurance Framework (NQAF)**

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**Review of National Quality Assurance Framework (NQAF)**  
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Overall comment: The topics raised in the paper are fascinating, and would warrant many pages of further discussion. In the interest of time, I will restrict comments to the following. However, please feel free to contact me if you are interested in additional discussion.

General comments:

1. A systematic approach to statistical quality assurance fundamentally involves a balance among many factors that influence standard quality measures, operational risk and cost structures. The current document focuses primary attention on the first two of these three factors. I would recommend additional careful attention to the third factor - cost structures - since practical managerial decisions regarding data quality often depend heavily on the empirical information available on survey cost structures, often centered on very specific components of the variable costs. If an NSO does not have this information at a sufficient level of quality and refinement, many quality efforts will be seriously limited in their practical impact.
2. Successful implementation and maintenance of a National Quality Assurance Framework depends crucially on linkage of the desired outcomes with (a) internal management incentive and risk-management structures; (b) internal agency allocation of resources; and (c) external funding and governance mechanisms.
3. Reinforcing some of the ideas covered in the report, it is very important to link data quality criteria with the primary information needs of one or more key stakeholders.

Specific comments:

Page 5, line 1: Mutually beneficial supplier relationships. For statistical work with administrative records, this topic is crucial, and would warrant a substantial amount of discussion, e.g., specific mechanisms that have been found successful in creating the "mutually beneficial supplier relationships."

Page 5, line -9: "The core production processes are transformations...." This appears to imply that data collection is largely an exercise in identification and transcription of the relevant data. In some cases, this may be true, but for many cases involving complex concepts, research in the cognitive sciences suggests that the interview process is much more complicated. These complications in turn have important practical implications for the ways in which we can understand survey data quality.

Page 12, line -1: I am sympathetic with the decision to focus on some topics other than human resources and communications, but it would be worth highlighting the importance of HR and communication in the overall data quality effort. Specifically, effective competition for highly qualified personnel, and a strong program of continuous training, are critical for the long-term success of any quality assurance effort.

**Comments by Clyde Tucker**  
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This paper is very similar to the Total Quality Management (TQM) frameworks developed a generation ago. It is largely a restatement of those quality principles. Unfortunately, the NQAF gives no indication of progress made in the development of quality indicators and offers little in the way of technical advice on the creation of these indicators.

The authors point to a "relevance gap" and a "quality gap" in statistical agencies. These gaps must be dealt with separately by different agency experts. In the case of relevance, substantive experts (e.g., economists) must assess whether the current data products meet the needs of users given ever-changing circumstances. That is, are we producing statistics that are both accurate and right for the times. To the extent new products are needed, these experts will have to develop them.

As for the quality gap, indicators are needed of adequate leadership development and succession planning so that quality can be maintained over time. The measurement of quality itself requires having other groups of experts that can create indicators of not only sampling error but also nonsampling error (e.g., nonresponse bias, coverage error, measurement error, and processing error). Nonsampling errors, especially nonresponse bias, are the greatest threat to quality in government surveys, because most of these surveys have large samples or collect data from an entire universe. Quantitative measures of nonsampling error, however, are hard to come by. Even qualitative ones must be systematically collected in a manner that can be replicated. Processing errors cannot be measured at the process or even the subprocess level. Instead, a careful examination of individual procedures in the process is needed. For instance, the greater reliance on secondary data such as administrative records assumes procedures for

assuring quality are in place and properly being applied. Thus, to ensure quality, measures that address total survey error (TSE) must be developed.

Of course, as the paper points out, all of this work will require precious resources. But these resources involve more than money. They include skilled technical staff and development time (lots of it). In that regard, I have attached a paper on the challenges of performance measurement, which applies not only to program evaluation but also quality assurance.

### **Comments from the U.S. Bureau of Transportation Statistics (BTS)**

- Document is well written.
- Non-response section on p. 24 offers a very good description of the reasons behind declining response rates.
- Suggest improving or deleting the graph on page 13. Intent or meaning of the graph is a bit confusing.
- In Motivation section beginning on page 2, suggest adding an item or modifying an existing item to include the following issue of the balance between quality and productivity or responsiveness. Not all statistical agencies control or collect data they are called upon to use. Statistical agencies can be asked to report on high priority issues using data that may not meet established quality standards. This point could be included in item 4.
- In Figure 3: QAF Implementation Guide, should one of the Implementation Steps include informing/involving staff? This may be critical once roles and responsibilities are defined and before quality targets are set. This point was mentioned in other parts of the document, but we suggest also including this point in Figure 3.

The BTS Statistical Standards Document developed in 2005 is offered for consideration. It is found at [http://www.bts.gov/programs/statistical\\_policy\\_and\\_research/bts\\_statistical\\_standards\\_manual/pdf/entire.pdf](http://www.bts.gov/programs/statistical_policy_and_research/bts_statistical_standards_manual/pdf/entire.pdf) and is attached.