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Comment

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1. Introduction

These comments to Dillman's stimulating and thought provoking article are based on similar types of observations, i.e., they are neither representative nor systematic with respect to the issue under discussion. Dillman maintains that his article is based on his own and others' observations of four large U.S. government survey organizations (GSOs) and an unspecified number of small non-governmental survey organizations (NGSOs). My own comments are based on contacts with many GSOs and some NGSOs outside the U.S.A., including the GSO with which I had about 15 years of active service. Whether the GSOs observed by me qualify as "large" is impossible to say as no size criterion has been given by Dillman. Many of them are certainly "small" compared to U.S. bureaus, but most of them are large organizations in their own national contexts.

My comments are divided according to the following issues: (i) Is it likely that innovation is more difficult in large GSOs than in (small) NGSOs? (ii) Is Dillman's description of the other "cultures" of the GSOs complete? (iii) Are his proposals for a solution likely to lead to more and better innovations? Formulation of suggestions for other strategies that might stimulate innovations by GSOs is beyond the scope of my comments.

2. Is Innovation More Difficult in GSOs Than in NGSOs?

There are, in my opinion, strong arguments against Dillman's assertion on this point. Regarding the size of the organization, we can observe that all empirical studies on research and development (R&D) activities show that over a wide range of sectors both the absolute and the relative scale of such activities increases with the size of the organization. Furthermore, ideas and knowledge upon which innovations can be based are also easier to find (or encounter) the larger the number of persons working in relevant positions in the organization. Certainly, acquiring knowledge and ideas is not the same as making use of them, but it is a necessary precondition for innovations. My overall impression is, however, that there is a strong tendency for smaller (countries') GSOs to adopt survey procedures with qualities that have been proven by the larger ones. However, outliers certainly exist, cf. the pioneering work done by the Canadian, Finnish, Dutch and Norwegian central statistical offices in the area of environmental statistics. The problem is that the number of possible observations seems too small to draw general conclusions.

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Also regarding the "government" part of the argument, it is easy to find examples which support a position that GSOs may be more innovative than NGSOs, rather than less, e.g., with respect to the use of random sampling methods and the introduction of computer assisted interviewing. However, the use of bar codes and scanners has been pioneered by private sector organizations not normally considered as survey organizations.

It does seem reasonable to argue that highly hierarchical organizations will be less innovative than organizations where decisions are made at a level close to the knowledge needed to understand the technical and operational possibilities of the proposed innovation. Even in strongly hierarchical organizations, it seems possible for motivated R&D managers to circumvent the opposition of top management, at least if it is split on the issue, cf. the development of the ASCO EXPERT computer assisted coding system for occupational coding in the 1986 Australian population census. Nevertheless, certain types of hierarchies can potentially be as inhibiting to innovations in NGSOs as in GSOs, regardless of size.

3. The Cultural Landscape of GSOs

While attractive in its simplicity, Dillman's description of the landscape of GSOs in terms of two cultures with conflicting values is rather simplistic and therefore misleading, at least with respect to the forces which will tend to promote or inhibit R&D and innovation activities.

Dillman neglects that GSOs have to answer to users of their statistics – users whose demand for continuity in statistical series not only prevents innovations which can increase the validity and reliability of the observations, but also those innovations which are necessary to avoid that these qualities are undermined by the developments over time in the phenomena measured.

Furthermore, it is misleading to talk about a single research culture in a GSO. Surveys capable of producing valid and reliable statistics are prepared on the basis of contributions from (i) subject matter specialists; (ii) (mathematical) statisticians; (iii) specialists on human communication; and (iv) operations specialists, as most innovations to them. I agree, however, with Dillman's position that the issues to which group (iii) can contribute solutions have been and are being underestimated in most GSOs. But that is probably also the case in most NGSOs.

Dillman's discussion of data quality ignores that users assess the quality of the statistics produced with respect to timeliness, frequency, geographic resolution and the variable content, as well as the validity and resolution of those variables, in addition to the reliability of their measurement. Nor does he consider the implications these quality characteristics have for the measurement of direction and extent of change over time, as well as with respect to the structure at a point in time. This and the fact that most estimates of change must be based on differences between two measurements of a structure can go a long way towards explaining why innovations which may improve the reliability and validity of measurements at a point in time may not be seen as leading to improvements in the total quality of the statistics. The conservatism of GSOs may therefore be attributable not only to the concern of

operational specialists for budgets and deadlines but also with the concern of users and topic specialists for useable data, which for them often means reliable change estimates.

4. The Proposed Steps Towards Solutions

I tend to agree that Dillman's proposed steps will improve the capacity of GSOs to reduce measurement and non-response problems.

The first step is to increase the number of type (iii) specialists. However, rather than bringing in new types of professionals in large numbers, it may be better to make sure that persons representing the other specialties have been (re)trained to understand the nature and the importance of effective communication as well as appreciate its importance and the need to call on this type of expertise. The second step, i.e., to build the capacity to handle these problems into operations, is really the justification for the first, and the two should go hand in hand.

I also agree with the third step, to change organizational structures which impede communication. This communication needs to be two-way both vertically between management and specialists and horizontally between different types of expertise. Organizational structure should ensure the integration of the contribution from the different specialties in working on the preparation for and implementation of surveys. They should be jointly responsible for the final result, and should not be segregated in different departments.

The different specialists should understand that they have the same opportunity for reward and promotion, as well as professional development.

The fourth step proposed by Dillman is to increase people's understanding of the multidimensional nature of survey error. This I also agree with, but emphasise that "people" in this context refer not only to those involved with the production of statistics but also to the users of the statistics. One big part of this step would be to stop talking about "sampling errors" and start talking about "sampling precision." It is not an *error* to estimate the distance between A and B as 3 kilometer plus or minus 200 meters when a more precise method estimates that distance as 2,873 meters plus or minus 5 meters. The term *error* should be limited to the other types of inadequacies listed by Dillman, namely those which are caused by inadequate survey coverage, non-response and weaknesses in the actual method of obtaining the observations.

I tend to doubt, however, that these steps will take us all the way to an ideal survey organization and perfect survey results.

5. Concluding Remarks

Dillman's article is an important contribution to the identification of areas in which innovations are particularly important and of strategies which can ensure that innovation will be undertaken and have positive effects. I share his belief that there is not enough innovation in GSOs, but tend to disagree with his premise that this is more of a problem in GSOs than elsewhere. However, it seems clear that both organizational measures and improved methodological understanding and tools are needed for the

right innovations to be implemented at the right place. It also seems clear that the users of the statistics must be brought into discussions about the needs for and forms of innovations, to be educated as well as listened to.

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