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Can the fundamental principles of official statistics and the political process co-exist?

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Abstract. Since 1991, the Fundamental Principles have been a foundation of official statistics. In this paper we examine the interactions between them and a nation's political processes. In particular, we consider the extent that political processes militate against attainment of the fundamental principles. We examine the importance of institutional independence and examine how the political process either enables or militates against the attainment of the principles. After describing the relevant aspects of the United States federal statistical system we consider some examples where professional independence has been compromised or threatened. We use the recent controversy in the United States over the proposed addition of a question on citizenship to the decennial census to illustrate the challenges in holding to the Fundamental Principles. Finally, we consider extension of these issues internationally.

Keywords: National statistical systems, fundamental principles, governance, independence

1. Fundamental principles, credibility, public trust and independence

As described by the United Nations [1], the need for a set of principles governing official statistics became apparent at the end of the 1980s, when countries in Central Europe began to change from centrally planned economies to market-oriented democracies. It was essential to ensure that national statistical systems in such countries would be able to produce appropriate and reliable data which adhered to certain professional and scientific standards. Towards this end, the Conference of European Statisticians developed and adopted the Fundamental Principles of Official Statistics in 1992 [2]. Statisticians in other parts of the world soon realized that the principles were of much wider, global significance. Following an international consultation process, a milestone in the history of international statistics was reached when the United Nations Statistical Commission at its Special Session of 11–15 April 1994 adopted the very same set of principles – with a revised preamble – as the United Nations Fundamental Principles of Official Statistics [3].

At its forty-second session in 2011, the Statistical Commission recommended adoption of the draft resolution on the Fundamental Principles of Official Statistics to the Economic and Social Council. In accordance with that recommendation, the Council endorsed the Fundamental Principles and recommended the principles to the General Assembly for endorsement [4]. Pursuant to the recommendation, the representative of Hungary, together with 48 co-sponsors, introduced a draft resolution on the matter at the sixty-eighth session of the General Assembly and subsequently the General Assembly endorsed the Fundamental Principles of Official Statistics [5].

The Fundamental Principles highlight the importance of agency credibility and public trust in official statistics, specifically principle number 2 states:

[1]This article is a revision and extension of a paper entitled *US Statistical System, the Congress, Fundamental Principles-How Does It Work*; Hermann Habermann, Katherine Wallman, Misha Belkindas; presented at the 2018 ISI Conference.

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> "To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data."

In our opinion, this principle is one of the most critical. We focus on the United States context, but are quite sure that the issues we address are in play in other countries. The use and value of federal statistics – including the U.S. decennial census – depend on their being, and being seen as, accurate, and unbiased with excellent coverage. If the statistics aren't trusted, they won't be used and will be of little value. Statistics are trusted when the agencies that produce them are seen as making decisions based on professional not political considerations. For the data to be credible, statistical agencies must gain and hold the trust of the nation. Intrusion of political considerations into the professional/scientific ones compromises attainment of the fundamental principles. The Office of Management and Budget (OMB), is the agency within the Executive Office of the President which is responsible for the leadership, coordination and development of standards for the federal statistical system. OMB recognized the importance of credibility and public trust in OMB Statistical Policy Directive No. 1 [6], which states that the four "Fundamental Responsibilities" of a federal statistical agency are: "(1) produce and disseminate relevant and timely information, (2) conduct credible and accurate statistical activities, (3) conduct objective statistical activities, and (4) protect the trust of information providers by ensuring the confidentiality and exclusive statistical use of their responses [7]." It is both a statement by the statistical leadership of the United States, and, importantly, a policy directive at the highest level of the US government. While not using the concept of independence directly, the directive specifies that:

> "Accordingly, Federal statistical agencies and recognized statistical units must function in an environment that is clearly separate and autonomous from the other administrative, regulatory, law enforcement, or policy-making activities within their respective Departments. Specifically, Federal statistical agencies and recognized statistical units must be able to conduct statistical activities autonomously when determining what information to collect and process, the physical security and information systems security employed to protect confidential data, which methods to apply in their estimation procedures and data analysis, when and how to store and disseminate their statistical products, and which staff to select to join their agencies [8]."

Since 1992, the Committee on National Statistics (CNSTAT) of the U.S. National Academies of Sciences, Engineering and Medicine has issued a periodic report on Principles and Practices for a Federal Statistical Agency. These reports emphasize the importance of the Fundamental Principles and the OMB principles to the US statistical system, noting [9]:

> "To be credible and unhindered in its mission, a statistical agency must maintain a widely acknowledged position of independence from undue external influences. It must avoid even the appearance that its collection, analysis, or reporting processes might be manipulated for political purposes or that individually identifiable data collected under a pledge of confidentiality might be turned over for administrative, regulatory, or law enforcement uses."

Both the Policy Directives issued by OMB and the Principles and Practices developed by CNSTAT introduce the concept of professional independence, a concept not found in the Fundamental Principles. Professional independence is a foundation for building public trust and ensures that decisions about statistical matters are free of any real or perceived political interference.[2,3] It can be argued that Fundamental Principle 2, relating to decisions by statistical agencies based solely on scientific and professional considerations, implies independence. However, both OMB and CNSTAT found it important to make that requirement explicit; CNSTAT directly and OMB through the concept of conducting statistical activities autonomously.

The United States is not alone in identifying statistical principles. The *European Statistics Code of Practice*

[2]The Office of Management and Budget, which coordinates the federal statistical system, has identified several fundamental responsibilities of federal statistical agencies, including that they maintain both impartiality and the perception of impartiality. Office of Management & Budget, *Statistical Policy Directive No. 1: Fundamental Responsibilities of Federal Statistical Agencies and Recognized Statistical Units*, Federal Register Vol. 79, No. 231, pp. 71610–71616 (December 2, 2014).

[3]The Committee on National Statistics of the National Academies of Sciences has also identified independence from political and other undue external influence as a core principle for federal statistical agencies. National Academies of Sciences, Engineering, and Medicine. (2017). *Principles and Practices for a Federal Statistical Agency, Sixth Edition*, Washington, DC: The National Academies Press. https://doi.org/10.17226/24810.

guides statistical systems by affirming the European Union member nations' commitment to ensuring high quality in the statistical production process, protecting the confidentiality of the information they collect, and disseminating statistics in an objective, professional, and transparent manner. Of the fifteen enumerated principles, we emphasize the first [10]:

> 1. Professional independence of statistical authorities from other policy, regulatory or administrative departments and bodies, as well as from private sector operators, ensures the credibility of European Statistics.

Professional independence is important for the credibility of a statistics agency and for the credibility of data-based decisions made by political appointees. While some official statistics are descriptive and vital for that purpose, much of official statistical data are used by policy officials to inform their decisions. An important aspect of defending a policy decision is the (credible) assertion that the statistics used were relevant, science-based and free of purposeful political bias. Professional independence of a statistical agency and its staff is critical to achieving this goal. Indeed, it is in the best interests of the statistical agencies, politicians and the general public for statistical agencies to have the benefit – either by law or regulation – of professional independence.

2. What kind of independence?

Apparent widespread support for the idea that credibility and trust must be based on professional independence of statistical agencies highlights the question as to whether it is possible. Statistical agencies are a part of the government, and in all cases known to the authors, their charter, funding and conferred legitimacy come from the government. Consequently, it isn't possible for an agency to be absolutely independent, and within the international statistical system, different statistical agencies possess a wide spectrum of independence. For example, the statistical agencies in the United States are considerably circumscribed in their freedom of action. In other statistical agencies, such as in Australia, the chief statistician has considerably more autonomy in prioritizing activities, and deciding which surveys to pursue. While there is substantial variability in operational independence between agencies, in the end, decisions on, for example, who should be the chief statistician, agency funding and the ultimate responsibility for agency operations depend on the political process.

Statistical agencies then, for structural reasons, cannot be independent of the political process. As described above, however, it is in the best interests of the statistical agencies, their political superiors and the general public for statistical agencies to have the benefit – either by law or regulation – of professional independence. This is the type of independence which is described by both the Fundamental Principles and the European Code of Practice.

3. Characteristics of the US federal statistical system

Before discussing examples where professional independence may have been compromised, we outline the United States federal statistical system. The U.S. has a decentralized statistical system with over 100 agencies that conduct statistical activities, of which 13 are designated "principal statistical agencies" by the OMB. These agencies are located in their respective Departments (e.g., Bureau of Labor Statistics in the Labor Department, Census Bureau in the Commerce Department); the Statistical Policy Office within OMB has leadership, oversight and coordinating responsibilities. The head of each statistical agency can be a career official (e.g., National Centre for Health Statistics) or a Presidential Appointee with Senate Confirmation (e.g., Census Bureau). Heads of agencies report to senior officials in their respective Departments.

In addition to being more decentralized at the federal level than most other national statistical systems, the US system also differs from many in the degree of oversight by the legislative branch and the extent of authority vested in the statistical agency head. Some background helps clarify the issues. The U.S. Constitution requires three branches of government: legislative, executive and judicial. This separation of powers was created because of the suspicion of the founders of an all too powerful executive which could become tyrannical and on the need to balance power in the government. The legislative branch (the Congress of the United States) enacts laws and both authorises domestic activities and appropriates funds – including those for statistics agencies. The statistics agencies reside in executive branch which is responsible for implementing the laws and regulations enacted by the Congress. Finally, the judicial branch interprets the laws and adjudicates disputes between the other branches. Congress also has oversight responsibilities over the operations of the executive branch.

Tensions exist over the extent and appropriateness of these oversight functions, and these are exacerbated when different political parties control the Congress and the executive branch. Each statistical agency must obtain yearly approval for its budget and proposed activities, and any significant (and sometimes not very significant) changes in the agency's program during the year often must be approved by designated Congressional committees. As a result, decisions which might logically be "professionally made" and best left to the statistical agencies and career staff in the Statistical Policy Office of the OMB, often also involves political appointees in the executive branch and elected members of Congress. For example:

- The questions to be asked on the decennial census and the operational details of it have to be approved by Congressional committees,
- Approval to suspend a survey or make significant changes in the sample size must be approved by political appointees in the Executive Branch and often by Congressional committees,
- Race and ethnicity classification standards are developed in consultation with Congress.

The United States is predominately a two party political system (Republicans and Democrats), and often the party that controls the Executive differs from the one that controls one or both of the legislative branches. In theory, the Judiciary stands above the political process. The process works best when all the branches of government recognize the co-equal nature of the other branches; in fact, the health of the democracy depends on this. In practice, however – particularly when different parties control one or more of the branches – tension and acrimony are often the case. While more extreme than usual, the current situation in the U.S. illustrates the tensions that can arise. The President, who is a Republican, was impeached by the House of Representatives; he was then tried in the Senate and declared "not guilty" with only one party crossover.

It is this highly partisan environment that precipitates our particular concern with professional independence of statistics agencies. Because of the importance of official statistics, it is inevitable that elected politicians and their political appointees want a degree of influence over the activities of the statistics agencies and the information they disseminate. There are benefits to a process that involves professional statisticians and elected politicians, including enhancing the relevance of statistical product and thereby credibility and unity to decisions based on them. The potential drawbacks include the risk that procedural and analytic decisions are based in part on partisan goals. As we show in the next section, there is evidence that this is, in fact, occurring. There is no easy solution to the struggle between statisticians asserting professional independence and politicians who see their authority as having primacy. But, transparency of the decision process and publicizing the views of professional statisticians are important safeguards.

4. Citizenship questions and other controversies

The framers of the US Constitution made population the basis of apportioning the seats in the House of Representatives. To accomplish this, the Constitution mandates that a census be conducted every ten years to determine the population of each state and of the nation as a whole. The census – sometimes referred to as the decennial census – is the largest and arguably the most important data collection of the federal government. It is used to apportion seats in the House of Representatives and to allocate billions of dollars of federal assistance. Also, it provides a sampling frame for most other federal surveys and, along with the American Community Survey, is the nation's premier source of small area information. The pivotal importance of the census often makes a decision to add a question contentious.

The Congress and the Executive Branch have developed laws and procedures to reduce the burden of federal information collection on respondents and to ensure that questions proposed for a survey instrument (including the decennial census) have a practical utility. These laws and procedures generally require statistical agencies to demonstrate that a particular data collection is necessary to properly perform a given agency function. The Census Bureau is required to use its professional judgment in assessing the practical utility of any data request made by an agency (such as that for implementation of the Voting Rights Act) and determine if there are alternative procedures which could be employed. Agencies that wish to collect information from the public are required by law to provide an evaluation of the need for the collection of information, a test of the collection of information through a pilot program, the reasons for which the information is being collected, and the way such information is to be used to further the proper performance of the functions of the agency.

In a March 26, 2018 memorandum the Secretary of Commerce stated [11] that a citizenship question should be added to the 2020 Decennial Census. He asserted

that doing so was needed to produce accurate information on citizenship at the census block level.[4] The information was said to be necessary for implementation of the Voting Rights Act. A variety of approaches are available to obtain the information. Indeed, at the time of his decision, and continuing to the present, citizenship information is collected at the census block group level by an annual survey of approximately three million people via the American Community Survey. The Census Bureau can provide estimates of block data from block group data by using statistical modelling techniques. And, administrative records can be used. Importantly, there are laws and procedures to reduce the burden of federal information collection on respondents and to ensure that questions on a survey instrument have a practical utility. The Census Bureau is required to use its professional judgement in assessing the practical utility of any data request made by an agency and determine if there are alternative procedures which could be employed. Given the many potential uses of decennial census data, and its high geographic detail, great care must be taken in determining whether to use this vehicle to meet a particular information need. However, the assertion by the Secretary of Commerce that a citizenship question should be added to the decennial census did not provide a convincing justification for that decision.

The Census Bureau took the position that based on consideration of factors of quality, cost and feasibility the citizenship data for Department of Justice Voting Rights Act enforcement be obtained through the ACS and use of administrative records, not through adding a question to the decennial census instrument. The Acting Director of the Census Bureau informed the Department of Justice that the findings of the Bureau's professional staff, "suggest that the best way to provide block-level data with citizen voting population by race and ethnicity would be through utilizing a linked file of administrative and survey data the Census Bureau already possesses. This would result in higher quality data produced at lower cost [12]." The Acting Director went on to propose a meeting with technical experts to discuss the details of the Department of Justice (DOJ) proposal. Such a meeting is normal Census Bureau procedure, allowing the technical experts to better understand how the Census Bureau can meet the needs of the proposers. It also allows for a discussion of alternative ways of meeting the stated goals. In this case the Census Bureau suggested that modelling of the American Community Survey data would meet the DOJ's needs at less cost than adding a question to the decennial census. Without such a meeting it would not be possible to know if the modelling approach would in fact meet the DOJ's needs.

A meeting was scheduled but the Department of Justice subsequently cancelled it and declined to further justify or elaborate on its requirements. One of the reasons given by the Commerce Secretary for rejecting the modelling approach was that the Census Bureau could not confirm that such modelling would have a sufficient degree of accuracy. However, without greater degree of specificity from the DOJ on its goals for using block-level data, it was impossible to evaluate whether modelling would satisfy the requirements.

The Commerce Secretary rejected the professional judgment of the Census Bureau on the grounds that choosing to not add citizenship question and using modelling techniques does not provide actual, complete number counts and that there is no guarantee that data could be improved using small-area modelling methods. The Census Bureau pointed out that actual complete counts would not be accomplished with adding a citizenship question and that the accuracy of responses to the citizenship question was unreliable.

The census bureau was also concerned about the deleterious impact on response rates of adding a citizenship question, particularly in the Latin community. Randomized, experimental data weren't available on the effects of adding the question, but it was the professional, not political judgment of the Census Bureau based on their research and experience that deleterious effects would occur. For example, evidence introduced at the trial challenging the Secretary's decision pointed to losses of at least one seat in California and New York as the result of adding a citizenship question to the decennial census.

The Census Bureau had determined that:

- There was insufficient justification of the need for citizenship data at the block level,
- Even if one accepted the need for block level data there was a less-costly and better-quality alternative based on administrative records, and
- There was evidence that minority response on the decennial census would be adversely affected.

[4] A census block is the smallest geographic unit used by the Census Bureau for tabulation of 100-percent data (data collected from all houses, rather than a sample of houses). A census block group is a geographical unit used by the Census Bureau which is the next largest geographic area than a block. It is the smallest geographic unit for which the bureau publishes sample data, i.e. data which is only collected from a fraction of all households. A block-group generally contains between 600 and 3000 people.

In summary, a political decision with respect to the preeminent data collection of the federal government had been made with little justification for it. Attempts by the Census Bureau to obtain more information or provide alternative options which would not be harmful to the decennial census were rejected, again with little or no explanation.

What, then, is a statistics agency to do in such a situation? The Director of the Census Bureau reports to the Secretary of Commerce and at the time, both chambers of Congress were controlled by the President's party. Many state governments and non-governmental organizations determined that their only option was to turn to the judiciary, and several lawsuits[5] were filed to overturn the Secretary's decision. These lawsuits were filed by a variety of interested parties including multiple states, organizations such as the American Civil Liberties Union, private parties with *amicus briefs* filed by the American Statistical Association and many other professional organizations. They alleged, inter alia, that adding the question would cause a reduction in participation in the census by minorities. This would result in a less equitable political representation for some groups and an unjust disparity in the allocation of federal funds. As a result of disclosure forced by the lawsuits, it was learned that prior to the Secretary making his decision the Census Bureau had counselled the Secretary against adding the citizenship question.

All lawsuits have concluded, and in each case a Federal judge has ruled for the plaintiffs and determined that partisan political factors influenced the Secretary's decision to add a question on citizenship, ordering that the question be removed from the decennial census. The United States government appealed to the Supreme Court of the United States and it found for the plaintiffs on a 5-4 ruling [13]. It is interesting to note that four dissenting judges found that since the Congress had delegated the conduct of the decennial census to the Commerce Secretary, he was within his rights to add a citizenship question regardless of his reasons and notwithstanding any reservations for scientific reasons. The tie was broken by the Chief Justice who found that the Court could not ignore the disconnect between the decision that was made and the explanation that was given.

We believe that the Secretary's decision to add a citizenship question against the advice of Census Bureau professionals, and his decision to further create a current, comprehensive statistical reference list on citizenship, risks undermining the credibility of the Census Bureau and the 2020 Decennial census as well as the professional staff of the Bureau. We have focused on the United States and problems in the United States, providing an international comparison is beyond scope. However, issues similar to those in our census example have been found in other countries, as described in the article in Significance [14].

5. Conclusions

The question remains open as to whether statistical agencies have, or indeed can have, the necessary degree of independence from a partisan political process. Certainly, independence by statistical agencies must have limits. They are funded in whole or primarily by tax payer funds, and so it is inevitable (and to some degree desirable) that there will be high-level oversight and accountability, but in many situations also interest in their operations and procedures. Globally, statistical systems differ depending on their laws and customs, and we predict that in the future there will be increasing influence from the political process, including the partisan political process. In some countries, including the US, the respect for truth in government data is attenuating.

We believe that the remedies we identify in the Significance article are still the appropriate and can be effective. They include strengthening international codes such as the Fundamental Principles, relying more on peer to peer reviews and strengthening the role of the United Nations Statistical Commission. However, we also know, that the situation in the United States has reinforced the importance of leadership and the actions that leaders take when faced with ethical dilemmas. As the Significance piece mentions:

> "Statisticians cannot be expected to navigate the growing ethical intricacies of the political system unless they prepare themselves for the dilemmas they may encounter."

[5] One of the authors of this paper – Hermann Habermann – served as a testifying expert in two of the law suit and the other author – Thomas Louis – collaborated with The American Statistical Association, the American Sociological Society, the Population Association of America, and the American Library Association in preparing *amicus briefs* supporting the two lawsuits and the Supreme Court filing.

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