OFFICE OF MANAGMENT AND BUDGET

Standard Occupational Classification Revision Policy Committee Proposal To Revise the SOC

AGENCY: Office of Management and Budget, Executive Office of the President.

ACTION: Notice of solicitation of comments.

SUMMARY: Under title 44 U.S.C. 3504, the Office of Management and Budget (OMB) is announcing its process for revising the Standard Occupational Classification (SOC), and is soliciting public comment on its proposal to develop a new occupational classification system based on a unified concept. OMB plans future public comment periods after completion of major milestones in the revision process including: 1. The Standard Occupational Classification Revision Policy Committee’s (SOCRPC) recommendations to OMB on the principles and unified conceptual framework to use to guide the revision (fall 1995) and 2. The SOCRPC’s recommendations for changes to the existing SOC at the 4-digit level based on the agreed-upon principles and unified conceptual framework (fall 1996). The SOC revision is tentatively scheduled for implementation beginning in July, 1997. All Federal agencies that collect occupational data are expected to utilize the new system.

REQUESTS FOR COMMENTS: The Standard Occupational Classification Revision Policy Committee welcomes comments with respect to any topic related to occupational classification, including: 1. The uses of occupational data, 2. The purpose and scope of occupational classification, 3. The principles underlying the current SOC, 4. Conceptual options for the new SOC, and 5. The SOC Revision Policy Committee process.

DATES: To ensure consideration in the development of the principles and unified conceptual framework to guide the revision of the SOC, all comments must be in writing and received on or before March 31, 1995.

ADDRESSES: Please send comments to Thomas J. Plewes, Chairman, Standard Occupational Classification Revision Policy Committee, U.S. Bureau of Labor Statistics, Suite 4945, 2 Massachusetts Avenue, NE, Washington, DC 20212. Interested parties may also send comments via e-mail, to Ross.L.PSB@Cmail.bls.gov.


SUPPLEMENTARY INFORMATION: The following sections of this notice provide a brief history of the SOC and further elaboration of topics on which comments are explicitly sought.

History

The development of a Standard Occupational Classification (SOC) began in December 1966 on the recommendation of the Interagency Committee on Occupational Classification. The Committee’s recommendation was based on the results of an inquiry on occupational information circulated to Government agencies in August 1965 by the then Bureau of the Budget. This inquiry asked 28 agencies for their views on the desirability of establishing a Standard Occupational Classification, similar to the Standard Industrial Classification, for general use in classifying occupational data. Most of the agencies favored establishing such a system. The desirability of establishing a Standard Occupational Classification actually had been recognized many years earlier. At the time of the 1940 Census of Population, a publication, Convertibility List of Occupations with Conversion Tables and Industrial Classification for Reports from Individuals, was developed by a joint committee of the Bureau of the Budget and the American Statistical Association. The purpose of the publication was to develop a bridge between the occupational classification system used in the 1940 Census and that used by the U.S. Employment Service to classify its operating statistics. Subsequent modifications in the Census classification system and publication of the third edition of the Dictionary of Occupational Titles (DOT) rendered the earlier convertibility list obsolete.

The situation when the SOC project began in the mid-1960’s was, therefore, essentially the same as it had been in the early 1940’s. The two principal systems of occupational classification, those of the Bureau of the Census and of the U.S. Employment Service, needed reconciliation. However, the issue was of even greater concern than in the earlier period because a number of Government agencies had created their own occupational classification systems for specific purposes, thereby compounding the initial problem. In addition, requirements in Federal legislation increased demands for occupational data on a more comparable basis.

After an initial attempt to produce a Government-wide occupational classification standard in 1977, the 1980 Standard Occupational Classification (SOC) Manual was prepared through the collaborative efforts of numerous Federal agencies concerned with occupational information. It served as the foundation for the 1980 Census of Population Classified Index of Industries and Occupations as well as for a revised system for the Bureau of Labor Statistics (BLS) Occupational Employment Statistics (OES) program, although neither system fully adopted the SOC. The 1980 SOC Manual includes descriptions of the content of each occupation together with a list of corresponding occupations from the 1977 Dictionary of Occupational Titles (DOT). This list of corresponding DOT occupations formed the basis of the current occupational crosswalks used to link various Federal occupational classification systems. When the revised OES system was implemented in 1983, a crosswalk was prepared linking it to the 1980 SOC, the 1977 DOT, and the 1980 Census of Population systems. As each system has added occupations, the original crosswalk has been updated to indicate the equivalent occupations in the other systems.

In the past few years, the BLS and the Employment and Training Administration (ETA) have been working together to organize activities aimed at developing information and new concepts related to classification principles for a new SOC. These activities have included commissioning papers on major occupational classification issues.

In 1993, the Advisory Panel for the Dictionary of Occupational Titles (APDOT) issued a report entitled The New DOT: A Database of Occupational Titles for the Twenty-First Century. In this report, the APDOT recommended creating a new database system that would identify and describe the skills, knowledge, and competencies needed in the changing work place.

BLS sponsored an International Occupational Classification Conference, held in June 1993, at which both specially commissioned and numerous other papers were presented. The Conference provided a forum for the discussion of new ideas and alternative approaches to occupational classification issues and served to introduce revision activities for the U.S. SOC. The approximately 100 participants represented statistical agencies from several countries, State-level interests, professional associations, academia, and relevant Federal agencies.
The conference was organized around five modules: (1) Perspectives of current occupational systems; (2) new challenges and alternative approaches to occupational classification; (3) user needs and experiences with different occupational classification systems; (4) possibilities for a unifying classification system; and (5) international perspectives on occupational classification. The proceedings from the conference were published in September 1993. At the conclusion of the conference, there was agreement that work should begin on developing a new SOC.

The changing world of work requires a new approach to statistical occupational classification, such as developing a single system to meet multiple needs or using a single database to develop multiple classifications. Therefore, a revision of the SOC is being undertaken. The Office of Management and Budget has formed the Standard Occupational Classification Revision Policy Committee to coordinate activities leading to a new SOC. The charter for that committee is included near the end of this notice.

**Uses of Occupational Data**

When devising a data classification system, it is crucial to begin with a clear vision of how the data to be classified will be used in order to structure the classification to maximize the usefulness of the data. The uses of occupational data vary widely. Uses include investigating the supply and demand of labor, planning education and training programs, fostering career choices and facilitating placement, studying labor mobility, analyzing the return on alternative investments in human capital, establishing comparable pay schedules, surveying labor productivity, and assessing employment benefits, stability, and working conditions. Not all of such uses will be equally well-served by any given classification.

Moreover, existing occupational information systems typically have data and information from various sources such as the Census of Population and Housing, the OES surveys, and the DOT. Currently, crosswalks provide bridges from one system to another. In the National Occupational Information Coordinating Committee’s Occupational Information System, data from these different sources are presented together through the use of these crosswalks. Unfortunately, linkages from occupations in one system to another are not always exact. In these cases, the crosswalk uses a “best fit” approach to link the systems. If Federal agencies all used one classification system, an SOC, the need for a crosswalk would be obviated or at least minimized.

**Request for Comments**

The Committee invites comments from members of the public on their uses of occupational data and the applicability of existing and potential classification systems to those uses. Descriptions of specific strengths and shortcomings users have experienced with data based on the existing occupational classification systems, including experiences related to the need to employ crosswalks, are most welcome.

**Purpose and Scope of the SOC**

The Standard Occupational Classification provides a mechanism for cross-referencing and aggregating occupation-related data collected by social and economic statistical reporting programs. The system is designed to maximize the analytical utility of statistics on labor force, employment, income, and other occupational data collected for a variety of purposes by various agencies of the United States Government, State agencies, professional associations, labor unions and private research organizations. The classification covers all occupations in which work is performed for pay or profit, including work performed in family-operated enterprises where direct remuneration may or may not be made to family members. The SOC may also be used to classify volunteers, but occupations unique to volunteer settings were not included in the 1980 SOC.

The SOC provides a coding system and nomenclature for identifying and classifying occupations within a framework suitable for use in and out of government. However, because of the vast amount of occupational detail that was considered in developing such a system, and the wide variety of uses of occupational data, it was not possible to construct a system that would meet the specific needs of all organizations. The level of detail, for example, may not be sufficient for specialized analytical purposes or for internal organizational management requirements. In such cases, however, approaches generally can be taken that will not conflict with the overall scheme of the system.

**Request for Comments**

The Committee invites comments on the purpose and scope of the SOC.

**Principles Underlying the Current SOC**

The principles adopted in the new SOC should be relevant to the existing world of work. The twelve classification principles used in the 1980 SOC are listed below. Following some of the principles are questions designed to facilitate public comment.

1. The classification should realistically reflect the current occupational structure of the United States.

2. Should the new system attempt to reflect what analysts see as the future occupational structure?

3. Place of work (industry) should be considered in classifying an occupation only when the work setting alters the nature of the work sufficiently to warrant separate classification. For example, cooks in private households and commercial settings were classified in different unit groups because work is significantly dissimilar in their respective work settings.

4. The occupations should be classified in homogeneous groups that can be defined so that the content of each group is well delineated.

What factor(s) should be used to determine what is an occupational group?

5. An occupation that combines two distinct activities should be classified in one group on the basis of the primary activity—the one that accounts for the major portion of the worker’s time. However, in cases where one activity requires special skills that are crucial in carrying out the duties of the occupation (although not required for as much time as other activities), that activity should determine the classification of the occupation.

6. Each occupation should be assigned to only one group at the most.
detailed level of the classification system (unit group).

7. Large size should not by itself be considered sufficient reason for separate identification of a group.

8. Small size should not by itself be considered sufficient reason for excluding a group from separate identification, although size must be considered, or the system could become too large to be useful.

9. Supervisors should be identified separately from the workers they supervise wherever possible in keeping with the real structure of the world of work.

The 1980 SOC did not separately identify those who supervise professional or technical workers. Should any distinction be made between supervisors and workers in the case of professional or technical workers?

10. Apprentices and trainees should be classified with the occupations for which training is being taken.

11. Helpers should be identified separately when their work is such that they are not in training for the occupation for which they are providing help, or if their work is truly different.

Is there a need to distinguish among these workers according to the type of worker that they assist?

12. The need for comparability to the International Standard Classification of Occupations (ISCO) should be considered in developing the new structure, but it should not be an overriding factor.

Should the ISCO be the anchor for the U.S. system? (Please refer to the description of ISCO 88 below.)

Request for Comments

The Committee invites comments on the principles used in the current SOC. Suggestions for alternative principles are particularly welcomed.

Conceptual Options for the New SOC

The Policy Committee has identified four broad conceptual foundations of occupational classification systems: (1) the type of work performed; for example, the 1980 SOC, the U.S. Bureau of the Census system, the Dictionary of Occupational Titles (DOT) of the Employment and Training Administration, and the Occupational Employment Statistics (OES) system of the Bureau of Labor Statistics; (2) the International Standard Classification of Occupations (ISCO); (3) a skills-based system, for example, the National Occupational Classification (NOC) of Canada; and (4) an economic-based system.

(1) Type of Work Performed

The two major sources of occupational employment data in the U.S., the Census of Population and the OES survey, are based on the 1980 SOC. Both use classification systems based primarily upon work performed. The Census system, used to collect occupational data from households, consists of 501 occupations; the OES system, used to collect data from establishments, consists of 760 occupations. The DOT, used by the U.S. Employment Service, consists of more than 12,000 titles that also are based primarily on work performed.

(2) The International Standard Classification of Occupations (ISCO-88)

ISCO-88 has a dual framework: The concept of the kind of work performed, or job; and the concept of skill. Jobs is defined as a set of tasks and duties executed by one person. It is the statistical unit classified by ISCO-88. A set of jobs whose main tasks and duties are characterized by a high degree of similarity constitutes an occupation. Persons are classified by occupation through their relationship to a past, present, or future job.

Skill is defined as the ability to carry out the tasks and duties of a given job. It has two dimensions—skill level, which is a function of the complexity and range of the tasks and duties involved, and skill specialization, which is defined by the field of knowledge required, the tools and machinery used, the materials worked on or with, as well as the kinds of goods and services produced.

These were the basis for the delineation and further aggregation of the occupational groups in ISCO-88. In part due to the international properties of the classification, only four broad skill levels were defined, each according to the categories that appear in the International Standard Classification of Education (ISCED). Although there is a direct linkage with educational attainment, it does not follow that the skills necessary to perform the tasks and duties of a given job can be acquired only through formal education. Skills often are acquired through informal training and experience.

There are some obstacles that may limit the desirability of completely adopting ISCO-88 for the U.S. SOC. A major focus of a new SOC should be to meet user needs that center on job placement, career guidance, and program planning; less demand exists for internationally-comparable occupational data. Only four skill levels are identified in ISCO-88, based upon formal education or vocational training, which are the basis for identifying major occupational groups. This leads to major groups that are somewhat divergent, resulting in a classification system that is not markedly different from existing “work content based” occupational classifications.

(3) Skills-Based Systems

Discussions about skills-based occupational classification concepts often are difficult, because the term “skills” means different things to different people. A number of other countries have dealt with this issue in revising their national classification systems, and it is useful to look to their experiences.

The National Occupational Classification of Canada merits study since Canada and the United States have a great deal in common in terms of occupational structure. The two major attributes that were used as classification criteria in developing the NOC were skill level and skill type. Other factors, such as industry and occupational mobility, also were taken into consideration. Skill level is defined as the amount and type of education and training required to enter and perform the duties of an occupation. In determining skill level, the experience required for entry and the complexity of the responsibilities typical of an occupation were also considered. Four skill levels are identified in the NOC.¹

Skill Level A

—University degree (bachelor’s, master’s, or other post-graduate)

¹ The ISCO can be obtained by contacting the International Labour Organisation (ILO), International Labour Office, CH-1211 Geneva 22, Switzerland or ILO Publications, 49 Sheridan Avenue, Albany, NY 12210 or by calling 518-436-9686, ext. 123.

² The NOC can be obtained by contacting Canada Communication Group—Publishing, Ottawa, Canada K1A 0S9 or by calling 819-956-4802.
Skill Level B
—Two to three years of post-secondary education at community college or institute of technology, or
—Two to four years of apprenticeship training, or
—Three to four years of secondary school and more than two years of on-the-job training, training courses, or specific work experience
—Occupations with supervisory responsibilities
—Occupations with significant health and safety responsibilities

Skill Level C
—One to four years of secondary school education
—Up to two years of on-the-job training, training courses, or specific work experience

Skill Level D
—Up to two years of secondary school and short work demonstration or on-the-job training
—Skill type is defined generally as the type of work performed, although other factors related to skill type are also reflected in the NOC. One of these factors is similarity with respect to the education field of study required for entry into an occupation. Another factor is the industry of employment, where experience within an internal job ladder or within an industry is usually a prerequisite for entry. The ten broad occupational categories, based on skill type, identified in the NOC are:

O. Management Occupations
1. Business, Finance, and Administration
2. Natural and Applied Sciences and Related Occupations
3. Health Occupations
5. Occupations in Art, Culture, Recreation, and Sport
6. Sales and Service
7. Trades, Transport and Equipment Operators, and Related Occupations
8. Occupations Unique to Primary Industry
9. Occupations Unique to Processing, Manufacturing, and Utilities

While the NOC changes the way in which occupations are grouped, it does not change the basic definition of what constitutes an individual occupation. Some advocates of skills-based systems suggest that occupations should be distinguished by their unique combinations of skills. There is no system currently that uses this type of combined skills base to classify individual occupations.

(4) Economic-Based Systems

As has been recognized explicitly in ongoing work by the Economic Classification Policy Committee (ECPC) (1993), classification systems should be designed to facilitate the use of the information they provide. For example, data on employment and wages classified by occupation are used by researchers and policy makers to analyze a variety of labor market issues. As initially pointed out by Cain, Hansen, and Weisbrod (1967), to be useful for economic analysis, occupational groupings should be relatively homogeneous in the sense that a high degree of substitutability should exist within each group compared to between groups. Two alternative approaches, each based on a consistent economic concept, have been suggested. A demand-based approach would group jobs or workers based on how employers choose to utilize different types of labor. A supply-based approach would group workers based on how individuals choose how much labor to supply and what jobs to enter. A demand-based approach would build on the technological relationship between outputs and inputs that economists term a “production function.” Given a production function, together with product prices, wages of different types of labor, and prices of other inputs, firms will choose labor and other inputs so as to maximize profits or minimize costs. A demand-based classification approach would view an occupation essentially as a bundle of worker characteristics or skills that are needed to produce the product (for example, see Welch (1969)).

Such a system would be invaluable for analyzing a variety of issues pertaining to labor demand. For example, it would be helpful in studying how the economy’s demands for low and high skilled labor are changing over time due to changing technology and increasing globalization. A demand-based system would be of interest to researchers and policy makers, students deciding what types of courses to take, and unemployed workers searching for work. Another attractive feature of a demand-based occupational classification system is that it would be logically consistent with the production-based industrial classification system being developed by the Economic Classification Policy Committee.

A supply-based conceptual approach would group occupations on the basis of considerations workers care about such as their incomes and the consumption aspects of their jobs (see Rosen, 1986). Measurable attributes that are important to workers include the cost of obtaining the requisite skills, the risk of layoff and subsequent unemployment, onerous working conditions, such as risks to life and health and exposure to pollution, and special work-time scheduling and related requirements, including shift work and inflexible work schedules. A supply-based approach would group occupations according to these attributes. The resulting classification system would yield data of interest to both researchers and policy makers. Both the demand-based and supply-based approaches motivate attention to some measure of skills in a classification system. Seemingly very different functions could require virtually identical skills. For example, a manufacturing firm may have a number of jobs in which workers perform different functions, but which require very little specific training and similar computer skills, motor coordination, interpersonal skills, and amounts of education. Because the workers in these positions will have similar skills and be nearly interchangeable, a demand-based argument would justify their being grouped together. If the positions do not differ in terms of working conditions, scheduling, and so forth, a supply-based argument would also indicate that they should be grouped together. From the research economist’s point of view, it is difficult to justify a system that makes detailed distinctions between occupations that require very similar skills and have very similar job attributes. Economic theory also suggests that more detail is required across high skill occupations than across low skill occupations because demand- and supply-based substitution is much more difficult and costly across high skill jobs than across low skill jobs.

Request for Comments

The Committee invites comments on any aspect of the alternative classification concepts. Specificity is encouraged particularly in commenting...
Proposed: Federal Register Notice

The U.S. Office of Management and Budget (OMB) proposes to revise the U.S. Standard Occupational Classification (SOC) system. The proposed changes are intended to improve the classification system's accuracy, comparability, and relevance to current occupational needs.

The SOC is a system of occupational classification used by the federal government and private organizations to categorize workers. The current SOC is nearly two decades old and is being revised to better reflect the changes in the workforce and economic landscape.

The proposed revisions aim to improve the following aspects:

1. **Comparability:** The new SOC will be more consistent with international occupational classification systems.
2. **Relevance:** The new SOC will be more aligned with current occupational roles and responsibilities.
3. **Accuracy:** The new SOC will be more accurate in capturing the nature of work.
4. **Flexibility:** The new SOC will be more adaptable to changes in the labor market.
5. **User Needs:** The new SOC will better meet the needs of users such as employers, educators, and policymakers.

The revision process is guided by the OMB's SOCR Revision Policy Committee, which consists of representatives from various federal agencies, including the Bureau of Labor Statistics and other stakeholders.

Comment Procedure:

Individuals interested in providing comments on the proposed revisions are encouraged to submit their comments in writing to the OMB by July 20, 2015. Comments should be submitted to: OMB, Office of Information and Regulatory Affairs, Regulatory Clearinghouse, 725 17th St. NW., Washington, DC 20503. Comments can also be submitted via email to reginfo@omb.gov.

Proposed: Federal Register Notice

The Office of Information and Regulatory Affairs, OMB, proposes to...