

Labor force data from the CPS to undergo revision in January 1983

BLS statistics in 1983 will include members of the Armed Forces stationed in the U.S. and will drop classification of workers as 'blue collar' or 'white collar,' substituting a new occupational system

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Beginning with data for January 1983, the Bureau of Labor Statistics will make changes in presentation, classification, and estimating procedures in labor force data derived from the Current Population Survey (CPS). This article reports on the nature of and reasons for the changes.

In any economic time series, there is an inevitable conflict between the need for maintaining a consistent data series for historical analysis and the need to introduce change to reflect new concepts and definitions or improvements in survey operations. It is the practice of the Bureau of Labor Statistics, whenever changes become necessary, to introduce them with full explanations, including the reasons for undertaking them and a description of their impact. Moreover, to the maximum extent possible, historical data are revised in order to maintain temporal consistency.

The CPS is one of the most valuable sources of economic time series data, having provided essentially consistent measures of the labor force status of the civilian population for more than 40 years. In addition to aggregate measures of economic performance, data collected and published monthly include a rich array of demographic, occupational, and industrial detail, allowing for many cross-classifications.¹ CPS changes have resulted from such events as the availability of data from the most recent decennial census; recommendations by

commissions appointed to review the survey and its underlying concepts; and improvements in such areas as survey design, questionnaire content, and industry or occupational classification systems. The most recent change was the introduction of 1980 census population figures into estimation procedures.²

Several other changes in the CPS are also planned for the 1980's. Of major significance is a comprehensive redesign of the entire sample—a process that occurs after every decennial census—and a possible revision in the CPS questionnaire. In the more immediate future, there are four separate modifications that will become effective with January 1983 data. These are:

- Persons in the Armed Forces stationed in the United States will be included in the national labor force and employment totals and thus in the base for the overall unemployment rate.
- All occupational detail in the CPS will be coded according to the classification system developed for the 1980 decennial census, which evolved from the 1980 Standard Occupational Classification system (SOC).
- In terms of racial classification, data will be published for the "black" group instead of for the broader "black and other" category.
- Revised "first-stage ratio estimates" based on the 1980 Census of Population and Housing will be introduced into the estimation procedures.

These changes affect the data in different ways. The first and third relate to data presentation, the second is

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one of classification, and the last one updates the estimating procedures. The nature and potential impact of these changes are discussed below.

Resident Armed Forces

Over a 14-month period during 1978–79, a presidentially appointed, congressionally mandated panel of experts convened to examine “procedures, concepts, and methodology involved in employment and unemployment statistics and suggesting ways and means of improving them.”³ Known as the National Commission on Employment and Unemployment Statistics, this nine-member panel made many recommendations for improving the Nation’s labor force statistics (in its final report, *Counting the Labor Force*).⁴ One of these recommendations was to treat members of the Armed Forces stationed in the United States as “employed” in national statistics, because joining the military was (and still is) voluntary and thus represents a viable job market alternative.⁵ This recommendation was subsequently accepted by Secretary of Labor Raymond Donovan in his final report on the Commission’s recommendations.⁶

At present, there are nearly 1.7 million persons in the Armed Forces stationed in the United States, out of a total of 2.2 million. In keeping with the Commission’s recommendation, effective with January 1983 data, they will be included in the totals for labor force and employment and thus affect the calculation of the overall unemployment rate as well. Also, separate data for all men and women 16 years and over will include the resident Armed Forces counts. Data for all other worker groups, such as for specific age-sex groups and racial detail, will continue to be on a civilian basis only, because, although data for the resident Armed Forces total and for both sexes are available from the Department of Defense as far back as 1950, there is considerably less information available for individual age groups and by race. Consistency over time will be maintained through revision of historical totals back to 1950 and otherwise by sustaining all civilian data series.

In addition to increasing the magnitudes of the labor force and total employment, the addition of the resident Armed Forces will also reduce the overall unemployment rate—contrasted with the civilian labor force-based measure—although by only one- or two-tenths of a percentage point. For example, the 1981 annual average unemployment rate will be 7.5 percent, compared with the civilian-based 7.6 rate. The total rate for men will be reduced by one- to three-tenths of a point, depending on rounding, whereas the women’s rate typically will be unaffected.

New occupational classifications

In 1977, following a lengthy period of careful examination by many experts in the field of occupational

classification, the first edition of a standardized classification system of occupations was introduced.⁷ Whereas such a system has long existed for industries, this was the first for occupations. Among other things, the Standard Occupational Classification (SOC) was “designed for use in statistical analysis and presentation about occupations,”⁸ and it also served to reconcile heretofore diverse classification systems, such as the Census system and Dictionary of Occupational Titles. The SOC was revised somewhat in 1980, to take into account the comments of users resulting from the issuance of the 1977 manual and to “assure that the Bureau of the Census could incorporate the changes as part of its tabulation program for the 1980 census.”⁹ The Census Bureau adapted the SOC for use in the 1980 census. This SOC-Census hybrid represents a comprehensive revamping of the occupational classification system used for prior censuses as well as that currently in the CPS, in that much of the nomenclature and recognizable groupings have been completely revised.

Because of the conversion of occupational classification for the 1980 census, it was clear that the revised classification had to be introduced into the CPS as soon as possible, and January 1983 has been chosen as the effective date. The change will be dramatic. Such commonly used identifiers as white-collar and blue-collar and professional and technical, craftworkers, and operatives will disappear. Moreover, so many classification changes will occur that reconstruction of these groupings will be equally impossible. Thus, there will be no long-term consistent time series for large occupational groupings, and seasonal adjustment cannot be undertaken for several years.

Exhibit 1 presents old and new occupational titles at the broadest and second broadest aggregations.¹⁰ Based on the groupings shown, one might conclude that SOC titles could be combined so as to retain the white-collar and blue-collar categories; but this is not being done for a variety of reasons. For one, although not specifically stated, the framers of the SOC had explicitly intended to finally purge these titles because of the favorable impression given by “white-collar” versus the more pejorative notion of “blue-collar.” In reality, some parts of the old clerical and sales occupations were considerably below both of the other white-collar as well as some blue-collar groups—in terms of earnings or prestige. Another misleading aspect of both white- and blue-collar categories in the present census classification system is the unevenness and largely misunderstood aspects of each; among other things, they are incorrectly assumed by many to exhaust occupational coverage (there are also the service and farm groupings). Finally, while it might appear that the first two categories in the “broad grouping” of the modified SOC correspond to white-collar and the fourth and fifth to blue-collar, the specific

Exhibit 1. A comparison of 1980 decennial census occupational nomenclature to be used in 1983 with the 1970 census system

<i>Broadest groupings</i>	
<i>New</i>	<i>Pre-1983</i>
Managerial and professional specialty	White-collar
Technical, sales, and administrative support	Blue-collar
Service	Service
Precision production, craft, and repair	Farm
Operators, fabricators, and laborers	
Farming, forestry, and fishing	
<i>Major occupational groups</i>	
<i>New</i>	<i>Pre-1983</i>
Executive, administrative, and managerial	Professional and technical
Professional specialty	Managers and administrators, except farm
Technicians and related support	Sales
Sales	Clerical
Administrative support, including clerical	Craft and kindred
Private household	Operatives, except transport
Protective service	Transport equipment operatives
Service, except private household and protective service	Nonfarm laborers
Precision production, craft, and repair	Private household
Machine operators, assemblers, and inspectors	Other service workers
Transportation and material moving	Farmers and farm managers
Handlers, equipment cleaners, helpers and laborers	Farm laborers and supervisors
Farming, forestry, and fishing	

content of the various component occupations have been changed so that the data would not match.

In an effort to mitigate the inescapable problems that will ensue from introducing a totally new occupational classification system into the CPS, the Census Bureau is coding 20 percent of the monthly records for 1982 on the new system. This will permit a limited crosswalk between the two systems through a matrix of the broad groupings shown in exhibit 1. The more desirable matrix of the present 428 three-digit occupations with the comparable grouping of 503 in the SOC-Census hybrid will not be operationally feasible.

BLS will initiate publication of the new occupational data in *The Employment Situation* press release for January 1983 and in the February 1983 issue of *Employment and Earnings*; the latter is also expected to contain a rundown on some of the impacts on CPS occupational data. Whereas comparison of data with the past, to include a continuation of trends, will not be possible, it is

felt that the vast improvements brought about through the availability of a universal classification system will greatly outweigh these problems as time goes by.

Conversion to black only data

Traditionally, racial data have been presented for two groups, "white" and "black and other" (formerly termed "nonwhite"). Historically, blacks have predominated the latter category—more than 92 percent of the black and other population in the 1960 census and 89 percent in 1970—such that the "black and other" group was deemed to portray adequately the situation among blacks. But in recent years the population of the "other" group—mostly Asian and Pacific Islanders, American Indians, and Alaskan natives—has been expanding at a greater pace, and, by the 1980 census, the black proportion of the "nonwhite" population had dropped to 85 percent. Moreover, labor market and other characteristics vary considerably by race. For example, in 1981, the annual average unemployment rate for blacks was 15.6 percent, compared with 14.2 percent for black and other; the other races rate was significantly lower.

In view of the lower proportion of blacks within the black and other population, which has resulted in a situation whereby the larger group is now less representative of the status for blacks, it is fitting that the presentation of these statistics be converted to black (only). This has already been accomplished on a limited basis, with the publication of the major employment status categories by age and sex for blacks in *The Employment Situation* press release in 1982. Beginning in 1983, there will be a more comprehensive conversion, as all published tables containing racial data will show "black" instead of "black and other" statistics. The other races classification is too small—and is not controlled to independent population weights in the estimation process—to meet reliability standards for publication. (Data for the group can be ascertained through subtraction.) Data for blacks are available back to 1972 and can be provided to interested users upon request. At the same time, BLS will retain the capacity to produce data for the "black and other" group.

Revision of first-stage ratio estimator

Information from the decennial population censuses figure prominently in the CPS design and estimating procedures. To begin with, the censuses form the basis for the sample design and selection for the ensuing 10 years after the census materials become available. Moreover, the population estimates carried forward from the censuses are used as weights to which the sample estimates are "blown up" to represent the Nation. As indicated earlier, the weights based on the 1980 census population figures were introduced into the CPS effective

with January 1982 data; technically, this weighting occurs in what is known as the "second-stage ratio estimate" and is done for each of 64 age-sex-race groups making up the population 16 years of age and over. There is also a "first-stage ratio estimate," which has continued to be based on the 1970 census. Effective with data for January 1983, data from the 1980 census will be used in the development of first-stage ratio estimates as well.¹¹

The first-stage adjustment concerns that portion of the 629 sample areas that have been chosen to represent other areas not in the sample—the remainder represent themselves. These "nonself-representing" areas are adjusted so as to correct for differences existing at the time of the most recent census between the distribution by race and residence of the population in these areas and the known race-residence distribution in the portions of the census region or State represented by these areas. The procedure is applied at two geographic levels: by region—Northeast, North Central, South, and West—and for each of the 46 States that contain nonsample areas. The regional adjustment is performed by metropolitan-nonmetropolitan residence and race, while the State adjustment is done by urban-rural status and race. The introduction of the 1980 census information for regions and States could well produce a "bump" (break in series) in some of the estimates. The nature and extent of any discontinuity will not be

known until the time of the introduction of the revised first-stage factors but will clearly be quite small vis-à-vis the effect of the 1980 census-based second-stage factors.¹² Indeed, it is possible that the effects will be limited to internal estimations, such as farm-nonfarm and metropolitan-nonmetropolitan data, while not affecting broader totals. Again, any impacts will be described in a special article devoted to the changes being introduced into the January 1983 CPS, that will appear in the February 1983 issue of *Employment and Earnings*.

IN SUMMARY, there will be four distinctly separate changes introduced into the 1983 CPS that will affect the data. One change—adding the resident Armed Forces to the statistics—was recommended by the National Commission on Employment and Unemployment Statistics, which also acknowledged the necessity for the second change discussed—the revision of all occupational data based on the Standard Occupational Classification system.¹³ The third change—publishing data for "black" instead of "black and other" workers—relates to data presentation rather than revision but is very important in terms of usage. The final change—revising the first-stage ratio estimates—is technical and results from the availability of information from the 1980 decennial census. All changes are made so as to improve either the basic data or enhance our use and understanding of the data. □

— FOOTNOTES —

¹ The primary compendium of monthly, quarterly, and annual data is the BLS publication *Employment and Earnings*. The explanatory notes section in the back of each issue describes the survey and nature of the data collected.

² See Kenneth D. Buckley, Jennifer Marks, and Ronald J. Statt, "Revisions in the Current Population Survey Beginning in January 1982," *Employment and Earnings*, February 1982, pp. 7-15, and Deborah Pisetznier Klein, "Labor force data: the impact of the 1980 census," *Monthly Labor Review*, July 1982, pp. 39-43.

³ See Section 13, Public Law 94-444, 94th Cong., H.R. 12987, Oct. 1, 1976, reprinted in John E. Bregger, "Establishment of a new Employment Statistics Review Commission," *Monthly Labor Review*, March 1977, pp. 14-20.

⁴ National Commission on Employment and Unemployment Statistics, *Counting the Labor Force* (Washington, D.C., U.S. Government Printing Office, Labor Day 1979).

⁵ *Counting*, pp. 49-51. The resident Armed Forces was recommended over the more commonly used figures for the Armed Forces total in order to maintain consistency with the civilian employed, which excludes U.S. residents with jobs in foreign countries.

⁶ See *Final Report of the Secretary of Labor on the Recommendations of the National Commission on Employment and Unemployment Statistics*, transmitted to the Congress in October 1981.

⁷ U.S. Department of Commerce, Office of Federal Statistical Policy and Standards, *Standard Occupational Classification Manual*, 1977 (Washington, D.C., U.S. Government Printing Office).

⁸ *Classification Manual*, 1977, p. 3.

⁹ U.S. Department of Commerce, Office of Federal Statistical Policy and Standards, *Standard Occupational Classification Manual*, 1980 (Washington, D.C., U.S. Government Printing Office).

¹⁰ *Classification Manual*, 1980, p. 10. It should be emphasized that the SOC manual does not itself provide either the 6- or 13-group dichotomies, though a variant of the 6-group is suggested. Indeed, the smallest breakdown presented has 20 civilian categories (see pp. 18-30 in the manual), many of which were formerly in the "professional and technical" category. These groupings were chosen by the BLS and Census Bureau for purposes of clarity in instances where it is not possible or desirable to present data at more detailed levels.

¹¹ The ratio estimation procedures, as developed based on the 1970 census, are described in U.S. Department of Commerce, Bureau of the Census, Technical Paper 40, *The Current Population Survey—Design and Methodology* (Washington, D.C., U.S. Government Printing Office, 1978), pp. 58-61.

¹² Buckley and others, *Revisions*, and Klein, *Labor force data*.

¹³ National Commission on Employment and Unemployment Statistics, *Counting*, pp. 113-14.