2020 Update to a New Approach to Industry and Occupation Recoding in the CPS

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In my 2019 paper, “A New Approach to Industry and Occupation Recoding in the CPS,” I introduce an industry and occupation recode for Current Population Survey (CPS) data from 1976 to 2019 based on Census codes. In January 2020, the CPS switched to new industry and occupation schemes. This update maps 2020 CPS industry and occupation data into the slightly modified version of the 2019 CPS major and detailed industry and occupation categories in my 2019 paper.

In 2020, the CPS switched from the 2012 Census industry codes and 2010 Census occupation codes to slightly modified versions of the 2017 Census industry codes and 2018 Census occupation codes. The CPS versions of the new schema are very similar to the original versions, but combine some of the smaller categories. For instance, 2018 Census occupation codes 6020 and 6050, “Animal breeders” and “Miscellaneous agricultural workers,” are combined to form CPS code 6050, “Other agricultural workers.” The CPS versions of the codes are listed at the end of the January 2020 CPS Data Dictionary. The code list carefully specifies how the occupation codes were combined, but is much less clear on how the industry codes were modified. The detailed and major industry and occupation variables in the CPS appear unchanged from 2019 to 2020 aside from slight changes in title.

Following the general strategy outlined in my 2019 paper, I use a new set of Census crosswalks to map the 2020 data back into the modified version of the 2019 CPS major and detailed industry and occupation categories in my 2019 paper. The Census Bureau’s “Census 2017 Industry Code List with Crosswalk” features a crosswalk from the 2012 to 2017 Census industry codes while “2018 Census Occupation Code List with Crosswalk” features a crosswalk from the 2010 to 2018 Census occupation codes. Beckhusen (2020) features conversion rate tables that helped to clarify some mappings.
The crosswalks reveal that no changes are needed to the CPS industry recode. The Census’s industry crosswalk shows that there were very few changes to the Census industry codes and that all 2017 Census industry codes map to 2012 Census industry codes in the same detailed and major categories. My 2019 paper recodes industry data to a slightly modified version of the detailed and major industry variables in the CPS. The associated R code uses these aggregate category variables to assign aggregate industry categories from 2003 to 2019 with the needed modifications added afterward for select Census codes. Even though the exact Census code numbers used changed in 2020, the composition of the aggregate categories did not, so the CPS industry R code does not need revision.

However, the CPS occupation recode does require revision. Census’s new occupation crosswalk, Beckhusen (2020), and the January 2020 CPS data dictionary show that six 2020 CPS Census occupation codes map back into 2010 Census occupation codes in different detailed and major categories and need to be recoded accordingly. This adjustment can be seen in the addition of lines 333 through 339 to the CPS occupation R code.

With these six changes, the occupation categories show consistent time series through the code change in January 2020. Figure 1 shows the recoded major occupation categories from January 1994 to March 2020. There are no visible jumps when the change in Census codes occurred (dotted line). However, without adjustments, there are large jumps in some categories. Table 1 compares six detailed occupation categories affected by the 2020 Census code change. Without the modifications, some of these series jump by millions of people from December 2019 to January 2020. For instance, detailed occupation 14, “Personal care and service occupations,” dropped by 2 million people from December 2019 to January 2020, a 30 percent decline. With the modifications, the category decreased by only 0.3 million, a 5 percent decline.
Figure 1: Time series of recoded major occupations in the CPS January 1994 to March 2020

Notes: These time series were weighted using pwsswgt. The dotted line at January 2020 denotes when the classification systems changed. The data series count all observations with valid occupation data; this includes people who are employed, unemployed, and not in the labor force. Since people of all labor force statuses are included, the series are not much affected by recessions.
Sources: U.S. Census Bureau, U.S. Bureau of Labor Statistics, and author's calculations.

Table 1: Comparison of select detailed occupations in the CPS December 2019 and January 2020

| Occupation size in millions | December 2019 | January 2020 | Percent change December 2019 to January 2020 |
|-----------------------------|---------------|--------------|---------------------------------------------|
|                             | Without new modifications | With new modifications | Without new modifications | With new modifications |
| 1 Management occupations    | 26.0          | 25.1          | 26.0                                        | -3.7                  | -0.1                   |
| 2 Business and financial operations occupations | 8.5          | 9.2          | 8.2                                        | 8.2                  | -2.9                   |
| 10 Healthcare support occupations | 4.0        | 5.3          | 3.7                                        | 34.0                  | -6.0                   |
| 14 Personal care and service occupations | 6.4        | 4.4          | 6.0                                        | -30.4                 | -5.4                   |
| 16 Office and administrative support occupations | 17.3        | 15.6         | 17.2                                      | -9.9                  | -0.5                   |
| 21 Transportation and material moving occupations | 11.0        | 12.6         | 11.0                                      | 15.2                  | 0.2                    |

Notes: These data were weighted using pwsswgt. The data count all observations with valid occupation data; this includes people who are employed, unemployed, and not in the labor force.
Sources: U.S. Census Bureau, U.S. Bureau of Labor Statistics, and author's calculations.
This document and associated R code are only an update of the CPS recodes. The information presented here and in the new R code is not enough to apply the recode to other datasets. The R code relies on the aggregate category variables already present in the CPS. Other datasets do not have these aggregate category variables and so their recodes require lists of the codes in each category, which I have not supplied here. Additionally, the CPS uses modified versions of the Census classification schemes. These modified versions require different adjustments to the recode than the standard Census versions.
References

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