

Addendum Wave 20  
Real-Time Labor Market Estimates  
During the 2020 Coronavirus Outbreak\*

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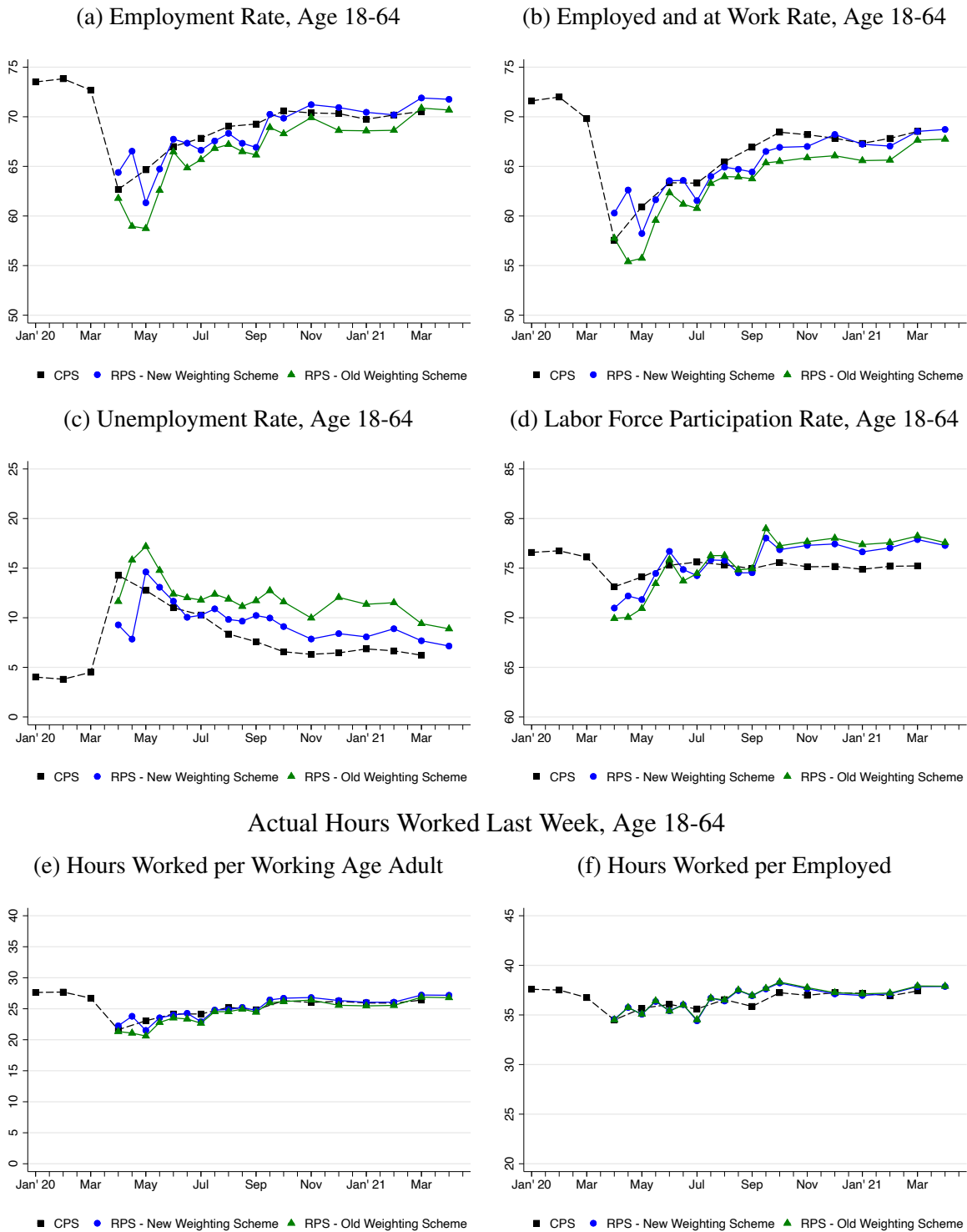
**Abstract**

This addendum describes the new weighting procedure of the RPS introduced with wave 20 (April 2021). Figure 1 displays the previous RPS series alongside the updated series, as well as the corresponding CPS estimates.

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Figure 1: Comparison between CPS and the RPS with the New and Old Weighting Procedure



# 1 Summary

The previous weighting procedure employed a raking algorithm (in particular we use the Stata routine `ipfweight`) to match the distribution of demographics in the CPS.<sup>1</sup> We also have information about whether respondents worked for pay or profit in the first full week of the previous month for survey waves covering the CPS reference week or at the start of the current month for survey waves conducted in the end of month. This week either is one week prior to or the same as reference week of the most recently conducted CPS. For most waves, in the raw data the implied employed at work rate falls short by several percentage points relative to the corresponding CPS number. This suggests that respondents into our survey are negatively selected based on recent employment history. To account for this selection, we also included the employed at work status at the time of the most recent CPS into our weighting procedure (also interacted with some demographics).<sup>2</sup>

Upon further inspection of the data, we found that even when using the above weighting procedure, the fraction of individuals on layoff exceeds the corresponding fraction in the current CPS by several percentage points.<sup>3</sup> This suggests additional negative selection into our survey based on recent employment history not captured by the weighting procedure. While we do not explicitly ask for whether someone was on layoff at the beginning of the previous months as this would involve multiple questions, we know the start month of the layoff and thus can approximate the share of individuals on layoff in the the previous month. This share misses individuals on layoff last month, who are no longer on layoff this month (either because they are employed or non-employed and do not any longer report being on layoff), or whose layoff started after the CPS reference week in the previous month.

To correct for the fact that our sample systematically includes too many individuals who were on layoff in the previous month, we implement a new weighting procedure beginning with wave 20 (April 2021). This new procedure augments the old one by also weighting on the share of individuals on layoff in the previous month, again interacted with demographics.<sup>4</sup> Note that we do

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<sup>1</sup>Specifically, we use sex, age (18-24, 25-34, ..., 55-64), race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, Other), education (less than high school, high school graduate or equivalent, some college but no degree, associate's degree in college, bachelor's degree, graduate degree), marital status (married + spouse present, divorced, never married, other), relationship status (spouse living in the same household, partner living in the same household, other), number of children (none, 1, 2, 3 or more), and the four major Census regions. We also interact these characteristics with sex.

<sup>2</sup>Specifically, we use age (18-24, 25-34, ..., 55-64), race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, Other), education (less than high school, high school graduate or equivalent, some college but no degree, associate's degree in college, bachelor's degree, graduate degree), more broadly defined marital status (married + spouse present, never married, other), relationship status (spouse living in the same household, partner living in the same household, other), and the four major Census regions. We drop the number of children and use a more broadly defined marital status to ensure that each cell in the RPS has at least 30 observations.

<sup>3</sup>A layoff here is defined as someone who is on layoff, whether temporarily or permanently, and whether they could have returned to work if asked or not. Put differently, these individuals can show up in any of the following labor market states: unemployed on layoff, unemployed looking, or not in the labor force.

<sup>4</sup>Specifically, we use broad groups for age (18-39, 40-64), race/ethnicity (non-Hispanic White, everyone else), education (at most some college, associate's degree in college or more), more broadly defined marital status (married + spouse present, never married, other), relationship status (spouse living in the same household, other). We resort to this smaller set of very broadly defined groups to ensure that each cell in the RPS has at least 30 observations.

not have information of the employed at work status at the beginning of the previous month prior to wave 8, and thus cannot “target” the employed and at work rates in the previous month in our raking algorithm for these waves. We explain in the “[Addendum to Wave 12](#)” and in the Appendix of [Bick and Blandin \(2020\)](#) how we construct the weights prior to wave 8 to account for this. In contrast, we can construct our measure of the share of individuals on layoff in the previous month for all waves.

Figure 1 shows that the new weighting procedure increases mostly entails level shifts. With the new weighting procedure the estimates for the employment rate in the CPS and RPS agree now both in terms of trends and levels. For the unemployment rate a difference prevails, which is however substantially smaller than with the old weighting procedure. The decreases in the share categorized as unemployed is partly offset by the increase in employment resulting in only a small decrease in the labor force participation rate. Hours are virtually unaffected.

Beyond the level shifts, the most notable difference entails the late April and first May 2020 surveys. With the old weighting procedure they were clear outliers with regard to employment. With the new weighting procedure, they remain their outlier status but the first May survey now estimates a larger employment rate than the CPS. Moreover, the relatively large changes for the first and second April wave can be accounted for a smaller share of individuals on layoff, originating from a different classification used in those two waves.

## References

BICK, A. AND A. BLANDIN (2020): “The Labor Market Impact of a Pandemic: Validation and Application of a Do-It-Yourself CPS,” Working paper, Arizona State University.