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Improving Estimates of Hours Worked for U.S. Productivity Measurement

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Labor is an important input to the production process, and the correct measurement of hours worked is critical for accurately measuring productivity. This paper evaluates the feasibility of using the Bureau of Labor Statistics (BLS) Current Employment Statistics (CES) all-employee hours-paid series as an alternative to BLS's current methodology for estimating hours worked in its productivity measures. The current methodology uses the CES production-worker hours series as the main source of data. Nonproduction worker hours are estimated by calculating the ratio of nonproduction worker to production worker hours using Current Population Survey (CPS) data, and then multiplying that ratio by production worker hours. We examine a number of issues related to the current methodology, including classification of production and nonproduction workers in CPS, differences in the accuracy of hours reporting between worker types, and differences in industry classification between CPS and CES. We then develop a new hours worked series based on the CES all-employee series, which requires a different set of adjustments to account for paid leave and off-the-clock work. We compare the all-employee-hours based series to the current methodology and find that the growth in aggregate hours worked over the 10 years for which the CES all-employee hours data are available is about the same as the growth using the current methodology. However, there are larger differences in quarterly growth rates, which result in the two series telling somewhat different stories about the timing of productivity growth.