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the discrepancy in employment growth between the CPS and the CES. Paper presented at the meeting of the Federal Economic Statistics Advisory Committee. October.
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Comment Charles Brown

Harley Frazis and Jay Stewart have written a very careful chapter on an important topic. Trends in hours worked are a direct object of interest (how much of the improvement in living standards generated by productivity growth is being taken as leisure?) and are an essential component in computing trends in hourly wages and productivity growth. Two major data series track hours worked over time—the household-based Current Population Survey (CPS) and the employer-reported Current Employment Statistics (CES) survey. The CPS workweeks are higher, and show little of the trend decline that one sees in the CES. This substantial difference is cause for concern. In the decade since Abraham, Spletzer, and Stewart first explored the question, the simple addition of ten more years of data has done nothing to resolve it. Frazis and Stewart's contribution is an admirable blend of imagination, care, and their intimate knowledge of (and access to) a wide range of data. They make some progress, particularly with respect to differences in average hours worked over the period studied. They are less successful in accounting for divergent time patterns. Their clear-eyed assessment of what they have and have not done will make this chapter the obvious starting point as others bring further ideas to the discussion.

In reading the chapter, I found it helpful to divide it into three sections. First, CPS and CES differ in the unit for which the hours measure is being

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constructed: CPS includes all workers, while CES (until very recently) focused only on production or nonsupervisory workers; CPS treats two jobs held by one worker as two contributions to one worker's workweek, while CES treats them as two separate jobs. These adjustments more or less eliminate the difference between the two measures of hours worked in the early 1970s (when they start to diverge), but does not account for the divergent trends.

Frazis and Stewart then explore several other possibilities. The CPS measures hours worked, while CES measures hours paid; in addition to different treatment of paid time off, these will differ if workers misreport their hours, or if they work off the clock (leading "hours paid" to misstate actual work hours). Second, CPS measures hours worked during the reference week, while CES measures hours during the pay period, which includes the reference week. The longer reference period, interacted with worker turnover, will lead the two series to diverge and could potentially account for different trends. These two possibilities are more creative. Before looking at any data, I would not have had even a confident hunch as to whether they would resolve or deepen the puzzle of the diverging trends.

Accounting for paid time off gets the levels of the two series still closer, but once again the adjusted CPS series does not mirror the decline one sees in CES. The adjustments for hours reporting and reference periods are both small. But the available data are, here, very limited: we do not have a consistent time series of time-use data, nor of turnover at the frequency that the reference period calculations require, and the sharp change in reference period between 2002 and 2007 (reversing a striking lack of trend over nearly thirty years) may well be distorted by the comparability problems that the authors are quick to admit.

The third contribution of the chapter is a simple decomposition: the CPS-CES divergence has been concentrated in a subset of trade and service industries. Unlike the earlier analysis, where diagnosis and cure are intimately related, here we have a very interesting "fact" but no suggested interpretation. Nevertheless, this strikes me as a very intriguing clue.

The preceding comments have been strikingly short of examples where I wish the authors had made different choices in analyzing the available data. My short list of suggestions for further work on the topic thus focuses on broadening the analysis, rather than hoping that small tweaks in an already careful study will yield further insight.

The authors have focused on hours of work, and not paid much attention to either the employment counts or the payroll data that come from the CPS and CES. I believe that broadening the focus would help us better understand the consequences of the observed CPS-CES disagreement, and *might* suggest candidate explanations. For example, if differences in hours are mirrored by opposite differences in employment counts, so that aggregate hours worked are very similar, the consequences for productivity

measurement are quite different than if employment counts line up perfectly and total hours differ by as much as the hours per week calculations that Frazis and Stewart have analyzed. If we have correctly mimicked the CES production/nonsupervisory worker definitions in the CPS, correctly adjusted for multiple jobholding, and made appropriate corrections for the different reference period, then adjusted employment counts (both aggregate and by industry) should be the same. If they are not, we know we have more work to do on one of these adjustments.

Finally, if we really want to understand differences between CPS and CES, we need to push harder on getting data from workers and their employers on the same employment transaction. Many of the corrections that Frazis and Stewart employ are based on reasonable hypotheses about how workers and employers report a reference week's employment experience. It would be most helpful if they were armed with actual data that mirrored this thought experiment.