Research Notes

CES vs. LAUS Employment Levels
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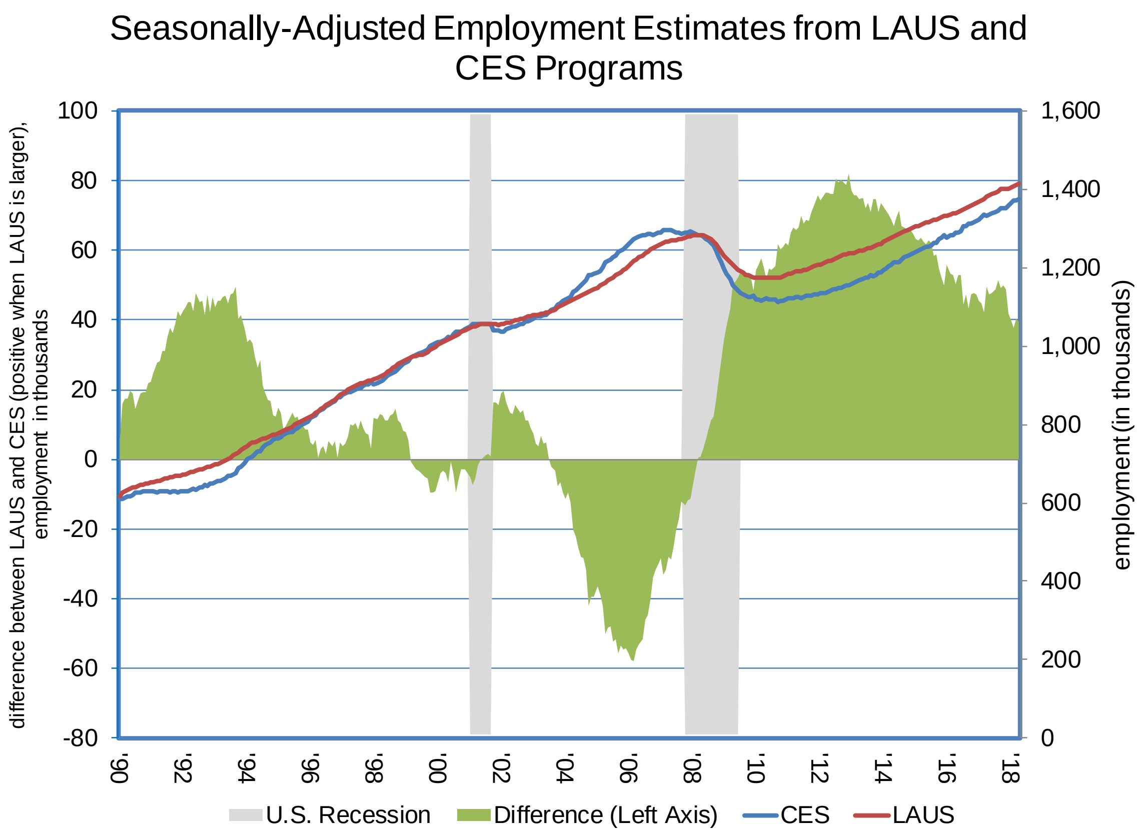
Relationship between Various Employment Estimates Varies Over Time



- The Current Employment Statistics (CES) program, produced by the Bureau of Labor Statistics (BLS) in partnership with state agencies, produces timely and detailed estimates of nonfarm payroll employment by industry for all 50 states and 450 metropolitan areas each month. CES estimates are based off of a monthly survey of business establishments. The Local Area Unemployment Statistics (LAUS) program, also sponsored by the BLS, is used primarily to estimate the unemployment rate, but also provides estimates for the number of employed persons by county and state for each month. LAUS employment is estimated using a household survey combined with unemployment insurance claims and CES data.
- There are a number of reasons why CES and LAUS employment estimates vary. At the most basic level, CES counts *jobs*, whereas LAUS counts employed *persons*. Thus, someone with two jobs would be counted twice by CES but only once by LAUS. Secondly, since CES is an establishment survey, employment is counted for the area where the job/establishment is located. LAUS is a household survey and counts people based on where they live. This can affect estimates in areas where a large number of workers commute from a different county,

state, or metropolitan area. CES estimates would be higher in dense metros (where the majority of jobs are located), whereas LAUS estimates may be higher in suburban areas where commuting workers live.

- There are also significant ways in which the scope and definition of employment varies between the two surveys. CES does not count self-employed workers, while LAUS does. CES only counts non-farm employment, while LAUS includes both agricultural and non-agricultural workers. Perhaps most significantly, CES only counts employees who received pay during the pay period that includes the 12th of the month. Any workers on unpaid leave or on strike would not be counted for that month, whereas LAUS still counts these workers as employed since they intend to return to their jobs.
- Examining the 1990 through 2017 period, for the majority of the time LAUS employment levels are higher than reported CES levels. This suggests that the impact of agricultural workers, self-employed persons, people who live in Nevada but work out of state, and workers on unpaid leave (which are all counted by LAUS and not by CES) is larger than the impact of multiple job holders and workers who live out of state but work in Nevada (which are counted in CES but not in LAUS).
- Interestingly, this dynamic has flipped in the lead-up to the past two recessions, with CES employment levels rising higher than LAUS estimates. Nationally, the past two recessions occurred in 2001 and from late 2007 to mid-2009[1]. Nevada saw large GDP growth in the years leading up to these recessions, peaking at 7.5 percent in 1999 and 10.8 percent in 2004[2]. In Nevada, CES employment levels surpassed LAUS levels in 1999 and 2000, and again from 2004 through 2007. This pattern suggests that "boom" years alter the underlying relationship between CES and LAUS employment estimates in the State.
- Looking at annual data for 2017, CES employment averaged 96.5 percent of LAUS employment levels. This put Nevada exactly in the middle of the 49 other states plus the District of Columbia. Since the recovery began, Nevada's CES to LAUS ratio has consistently ranked near the middle of the pack.
- Although the scope and definition of the establishment and household surveys vary, the relationship between their employment estimates can shed some light on the dynamics of Nevada's economy. With further analysis, this could aid our understanding of the Silver State's economic strengths and weaknesses through good times and bad.

[1] Hamilton, James, Dates of U.S. recessions as inferred by GDP-based recession indicator, retrieved from FRED, Federal Reserve Bank of St. Louis.

[2] Real GDP in chained dollars, annual percent change, retrieved from the Bureau of Economic Analysis, www.bea.gov.