Assessing Census Bureau Estimates of High School Graduation

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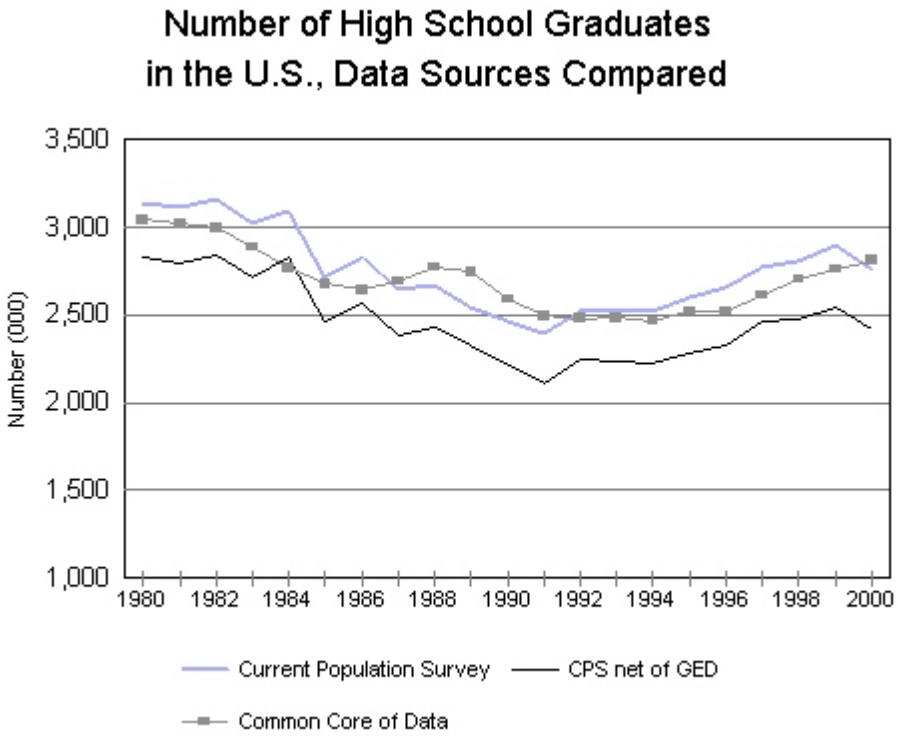
According to recent research, there has been a serious misstatement of levels and trends in high school graduation over the past decade or longer (Chaplin 1999, Greene 2002, Swanson 2004). Greene, for example, writes that federal statistics produce a "blurred and falsely cheerful picture of how U.S. schools are performing." He estimates that recent high school graduation rates were around 74 percent rather than the 86 percent reported by the National Center for Education Statistics for the year 2000 (Greene 2002).

Calculations based on Census Bureau surveys have been criticized for poor population coverage, due to the difficulty of reaching certain population groups and deliberately leaving out those in institutions. In addition, Census Bureau estimates of high school graduation have been criticized for including those who obtained a General Education Development (GED) certificate which, it is argued, is a poor substitute for a traditional high school diploma (Boesel et al. 1998, Chaplin 1999).

The proposed research will examine CPS and Census estimates of high school graduation in comparison to benchmark figures from the National Center for Education Statistics, GED Testing Service and other sources, building on earlier benchmarking work by Phillip Kaufman (2001).

The first part of the research will focus on comparisons between sources. Figure 1 shows one of our initial attempts to do so. Two estimates of number of high school graduates from CPS

are provided. The higher one includes all high school completers, the lower estimate subtracts the number who annually received GEDs, taken from reports by the GED Testing Service, which administers the exams.[1] These two lines are compared to the number of graduates estimated from National Center for Education Statistics' (NCES) Common Core of Data (supplemented by



estimates of private school graduation). The lower estimate is more closely aligned, conceptually, to the number provided by NCES, since GEDs are generally not included in figures reported by state education agencies. The CPS numbers don't appear to overstate high school

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[1] The number of GEDs was taken from reports of the GED testing service, reported in the National Center for Education Statistics compendium *Digest of Education Statistics: 2001*. To be consistent with CPS reports, which only report graduates aged 16 to 24, only GEDs awarded to those 24 and below were reported. In the period 1980 to 1986, the CPS reports were based on people 16 to 34. This change doesn't have a large effect on the levels and trends shown in figure 1.

graduation, but to understate it. The trends from the two data sets are fairly similar. This initial analysis, therefore, casts some doubt on claims that CPS-based estimates are inherently flawed.

Simply providing evidence that national CPS estimates are conservative doesn't completely address the situation. Administrative data (used for the NCES estimates) varies in quality by reporting unit, so state and substate-level comparisons should be made where possible. In addition, good quality of data on the flow of high school graduates does not necessarily mean that we have good quality data on the stock of graduates. Our analysis will address both these issues.

Table 1
Agreement levels with originally-given educational level,
2001 SIPP reinterview survey (unweighted responses)

Education level in original survey	Percent giving same answer in reinterview
Less than high school	70.1
High school graduate	89.8
Some college	82.2
Bachelor's degree	96.9
Advanced degree	97.9

(Answer is treated as "same" if it falls in the same detailed category of 16 possible levels of education. The percentages shown are weighted averages for all the detailed categories in each education level.)
Source: SIPP reinterview survey tabulations by authors.

Another concern in with graduation statistics is reporting or response error. Fortunately, several studies have been made of the reliability of educational attainment questions, with generally favorable results. Moreover, where there are problems, it has mostly to do with levels apart from high school completion (Kominski and Adams 1994). Table 1 presents results from a reinterview survey on educational attainment in the Survey of Income and Program Participation. Most answers appeared to be reliable. The least reliable answers were in the less than high

school and some college categories (the questionnaire allowed for four categories in the former, three in the latter, and any shift in answer takes away from the percent giving same answer calculated here).

Random error is only part of the problem, however. The authors cited above have claimed that household survey respondents bias their answers towards reports of higher education levels. We hope that careful examination of reliability and comparison to benchmarks may, taken together, provide evidence on this point.

References

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