The reversal of the college gender gap

In 1947, women made up 30 percent of those enrolled in college as undergraduates; by 2003, they made up 57 percent of undergraduates. In the course of less than 60 years, women went from being a minority of those attending college to a solid majority. College graduation rates showed a similar trend over the period. The trends began with the 1930s birth cohorts (those attending college in the 1950s) and continued fairly steadily to the present—except during the Vietnam War, when large numbers of men went to college to avoid the draft. In a recent National Bureau of Economic Research Working Paper (No. 12139, March 2006), Harvard economists Claudia Goldin, Lawrence F. Katz, and Ilyana Kuziemko use longitudinal data to examine these trends, which they call the narrowing and reversal of the college gender gap.

The authors find that two of the leading factors behind the trends are that from 1972 to 1992, high school girls narrowed the gap with high school boys in taking math and science courses and in achievement test scores. They call these variables the "proximate determinants" and find that they account for 30 to 60 percent of the increase in the "women's college completion rate." Other factors include the increase in young women's future work expectations that occurred during the 1968–79 period and the increase of 2.5 years in the average age at which women marry for the first time. The latter allowed young women to be more serious students, rather than spend their time and energy trying to find a husband (formerly a primary concern among women undergraduates). Moreover, improved birth control methods allowed women to plan their pregnancies or avoid them altogether, making it easier for them to maintain more serious careers. Additionally, as women's life-cycle labor force participation increased, the direct returns to them from investing in human capital increased as well.

Still, the authors ask, why has the percentage of women attending and graduating from college surpassed that of men? Goldin and her colleagues offer "two key factors" to explain the advantage women now enjoy: first, the economic benefits of college for women relative to those for men are greater; and second, the "effort costs" of preparing for and attending college are now relatively greater for men than for women. They cite evidence that the wage premium for having a college degree actually is higher for women than it is for men. As for the greater effort costs to men for attending college, the authors explain that girls have consistently outperformed boys in secondary schools, which makes them better prepared for college than boys. Two "noncognitive" factors that help explain this are "the slower social development and more serious behavioral problems" among boys and the fact that boys spend less time doing homework than girls.

The geographic education gap

In "Human capital growth in a cross section of U.S. metropolitan areas" (Federal Reserve Bank of St. Louis *Review*, March/April 2006), Christopher H. Wheeler considers the distribution of college-educated labor among metropolitan areas and how this has changed over time.

Wheeler analyzes U.S. Census metropolitan area data for 1980, 1990 and 2000. The percentage of all employed college graduates who lived in metropolitan areas rose from 86.1 to 89.9 percent between 1980 and 2000. About 78

percent of workers with only a high school education lived in metropolitan areas during those 2 years.

Using educational attainment as a measure of human capital, Wheeler calculates what proportion of employed persons in each metropolitan area have bachelor's degrees (or higher) for each year and looks for the correlates of growth in that proportion. The most significant correlations for growth in human capital in metropolitan economies are an area's population and the proportion of collegeeducated workers who already live there. The fact that college-educated workers live in metropolitan areas that are larger and more-educated suggests that human capital will become more concentrated over time. Larger and more-educated metropolitan areas should have the fastest growth rates of both population and college-educated labor. The data Wheeler studies supports this conclusion.

Why do college graduates act like birds of a feather and flock together? Large cities have employers—establishments in industries such as finance, insurance, and professional services—likely to hire them. Large cities have amenities, such as museums and restaurants, that appeal to educated workers. Young college graduates prefer to work with experienced college-educated colleagues, so as to learn from them. Dual-degree couples may live in large cities to increase the chance that they both find jobs. Finally, the desire of the college-educated to interact socially with their peers may be a factor.

While there has been a divergence of human capital and population growth among metropolitan areas, it is notable that the effect on wages has not been as pronounced. Wages for college-educated workers in larger metropolitan areas have not risen as fast as population and human capital. Increasing numbers of college-educated workers in metropolitan areas may depress wages for those workers, as they become more common.