Jepsen, Troske, & Coomes (2014) recently released an analysis of how community college students in Kentucky fared in the job market. Their analysis makes the following points, among others:

1. “This article provides some of the first detailed empirical evidence of labor-market returns to community college diplomas and certificates and also gives additional information on the returns to associate’s degrees and credits earned...With these caveats in mind, our results strongly support the claims made by community colleges that associate’s degrees and diplomas have large labor-market returns. Even though the returns to certificates are much more modest, the benefits to certificates likely still outweigh the costs...” [pp. 97-98]

2. “Associate’s degrees are associated with higher quarterly earnings of $1,349 for men and $2,290 for women. These returns are roughly 22% of men’s average quarterly earnings and 54% for women. The return to a diploma for men is $1,017, or 17% of average earnings, and the return for women is $1,990, or 47% of average earnings. For men, the returns for certificates are one-third as large as the returns for associate’s degrees: $496, or 8%. For women, the returns to certificates are only $221, or 5%...” [p. 110]

3. “…associate’s degrees are associated with large increases in earnings, particularly for women. In our preferred specification [statistical terminology]... associate’s degrees are associated with returns of $2,363 for women and $1,484 for men. In percentage terms of average earnings from table 1, the return is approximately 56% for women and 24% for men. Women also have higher returns from diplomas than men: $1,914... versus $1,265... In percentage terms, the returns to diplomas are 45% for women and 21% for men. For both associate’s degrees and diplomas, the average number of credits earned varies little between men and women. Thus, the gender difference in returns cannot be explained by differences in the number of credits earned...” [p. 114]

4. “Certificates have small positive returns for women and men, although the returns for men are only significant at the 10% percent level (two-sided test) once we include controls for intentions as well as demographics and enrollment timing... In the preferred specification, certificates are associated with returns of approximately $300 for men and women, an increase of 5% for men and 7% for women. Certificates require the least amount of course work (usually 1 year or less of full-time course work) so their lower returns are not surprising...” [p. 114]

5. “…for both men and women, the highest returns are from associate’s degrees in health: around $4,000 per quarter. Associate’s degrees in academic subjects other than the humanities and in vocational subjects have quarterly returns above $1,000. Diplomas in health fields also provide sizable returns, in excess of $2,000 per quarter, and, for men, vocational diplomas are associated with higher quarterly earnings of around $1,200. Certificates usually are associated with small and statistically insignificant returns, except for vocational certificates for men ($368) and health certificates ($375) for women...” [pp. 116-117]

6. “…returns vary greatly by age, award, and gender. For men, the largest returns for associate’s degrees—around $2,000 per quarter—are for students in their early twenties, although the returns are above $1,000 for all but the oldest students. Men’s returns to diplomas vary greatly, with the largest returns (around $1,800) for students in their early twenties through their early thirties. In every age category, men’s returns to a certificate are statistically insignificant for each age range between 20 and 60. Women receive returns usually in excess of $2,000 to degrees and diplomas throughout their teens, twenties, thirties, and into their forties. For certificates, women’s returns are under $250 for most age categories...” [p. 117]

7. “The results illustrate that most of the increase in earnings for associate’s degrees and diplomas are from awards rather than from credits. For example, a man earning an associate’s degree with 69
Jepsen, Troske & Coomes give the following details, among others, to document their methodology:

A. "One unique aspect of our analysis is that to estimate these returns we exploit detailed administrative data from Kentucky, following 20–60-year-old students who entered the state's community college system during the 2002–3 and 2003–4 school years with the intent of receiving an award. Our student fixed effects model uses across-student and within-student variation to identify the labor-market returns. We include information on student goals and number of classes taken in the first term to provide comprehensive controls for potential differences in labor-market outcomes between students who complete different levels of community college schooling. Such controls have not been included in previous studies of community college returns and therefore provide a valuable contribution to the returns-to-schooling literature..." [p. 97]

B. "The time period of the earnings data is from 2000 to 2008, so most of the post-schooling observations are prior to the most recent recession...In terms of program evaluation, our estimation technique resembles a treatment-on-the-treated model. This approach of using 'dropouts' as a comparison group has been common in the job-training literature for decades..." [p. 103]

C. "The person fixed effects...capture person-specific components that are constant over time, such as race/ethnicity or innate ability...In fact, the fixed effects can be thought of as the overall effect of all these time-invariant person characteristics. The inclusion of the fixed effects has the advantage of controlling for time-invariant measures of ability and other factors that affect earnings and are correlated with community college schooling. The fixed effects model uses variation between individuals as well as variation over time within individuals to estimate the value of the parameters..." [p. 105]

This study will interest education policy makers and administrators because earnings and jobs are the expected outcomes for many enrollees at community colleges. Such expected outcomes are also levers for public funding and accountability efforts. Researchers will appreciate the documentation of their rigorous methodology. Christopher Jepsen (University College Dublin and University of Kentucky), Kenneth Troske (University of Kentucky and IZA), and Paul Coomes (University of Louisville), present details in an article ("The Labor Market Returns to Community College Degrees, Diplomas, and Certificates") in the peer-reviewed Journal of Labor Economics (January 2014, Vol. 32, No. 1, pp.95-121). The article is easily accessible to parties with some background in higher education, labor economics, and data analysis.

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