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# The Impact of Education on Unemployment in Kentucky

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CENTER FOR BUSINESS AND ECONOMIC RESEARCH

**ISSUE BRIEF**

*on topics affecting Kentucky's economy*

March 2013  
No. 8

*The unemployment rate in Kentucky peaked at 10.7% in 2009 while the U.S. peak was 10%.*

*Unemployment rates for those without a high school diploma peaked at 16.5% in 2009.*

*Those individuals with a college degree had an unemployment rate peak of 5.1% in 2009.*

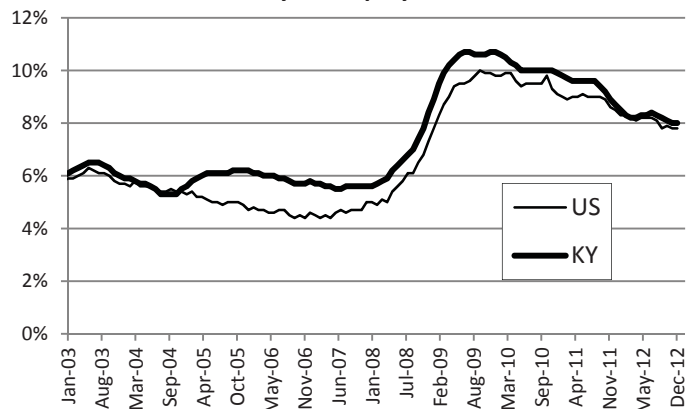
**The Impact of Education on Unemployment in Kentucky**

*By Christopher R. Bollinger (crboll@uky.edu)<sup>1</sup>*

During the recent recession Kentucky's unemployment rate peaked in 2009 at 10.7 percent. Meanwhile, the overall unemployment rate in the U.S. reached a high of 10 percent in the same year. As Figure 1 illustrates, the Kentucky unemployment rate is often higher than the U.S. unemployment rate. While there are myriad reasons for this difference, this issue brief examines the importance of differences in educational attainment. The analysis presented here shows that if Kentucky's educational profile looked the same as the U.S. profile, then the state's unemployment rate would have been consistently and markedly lower during the recession.

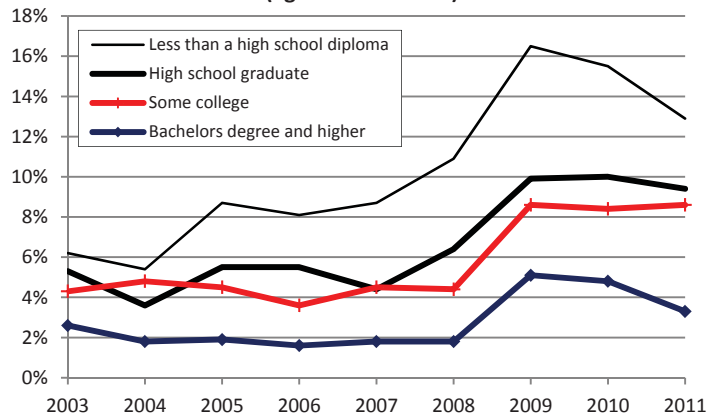
Education has important impacts on many labor market outcomes, not least of which is unemployment. Figure 2 presents the unemployment rates for individuals 25 years and older in Kentucky for four broad education groups: individuals with less than a high school degree, individuals with a high school degree only, individuals with some college (including associates degrees), and individuals with at least a bachelor's degree. Individuals 25 years and older are chosen because most individuals have completed schooling by age 25. The unemployment rate in Kentucky for individuals 25 and older peaked in 2009 at 8.9 percent. In Figure 2 it can be seen that unemployment rates for those without a high school degree peaked at 16.5 percent. The unemployment rate for those with only a high school diploma was still a disturbing 10 percent in 2009. Completing some college brought that rate below the overall average to 8.6 percent. However, those individuals with a college degree saw a peak unemployment rate of only 5.1 percent. The overall unemployment rate is a mix of these four groups. That mixture is determined by the percentage of workers with different levels of education.

**FIGURE 1**  
Monthly Unemployment Rate



Source: U.S. Bureau of Labor Statistics

**FIGURE 2**  
Kentucky Unemployment Rate by Education  
(aged 25 and older)





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*While Kentucky has about the same percentage of workers without a high school diploma as the U.S., Kentucky has a significantly lower percentage of college graduates in its labor force.*

*In 2009, Kentucky would have experienced a 0.8% reduction in unemployment were its education levels comparable to the U.S.*

Figure 3 presents the mixture of educational attainment in Kentucky for 2011, but is quite representative of the educational attainment for other years. As can be seen, while Kentucky has about the same percentage of workers without a high school degree as the U.S., Kentucky has a significantly lower percentage of college graduates in its labor force. Kentucky also has a higher percentage of workers with just a high school degree, but it does have a significantly higher percentage with at least some post-secondary education (typically an associate's degree).

In order to assess the impact of educational attainment on the unemployment rate for Kentucky, we constructed a simulated unemployment rate for Kentucky using the U.S. educational mix and the Kentucky unemployment rates by educational attainment. Figure 4 illustrates three lines—the Kentucky unemployment rate, the U.S. unemployment rate, and the simulated Kentucky unemployment rate (U.R.) achieved by using the U.S. educational attainment mix. As can be seen, Kentucky's unemployment rate would be consistently lower from 2003 to 2011 if educational attainment in the state looked more like the U.S.

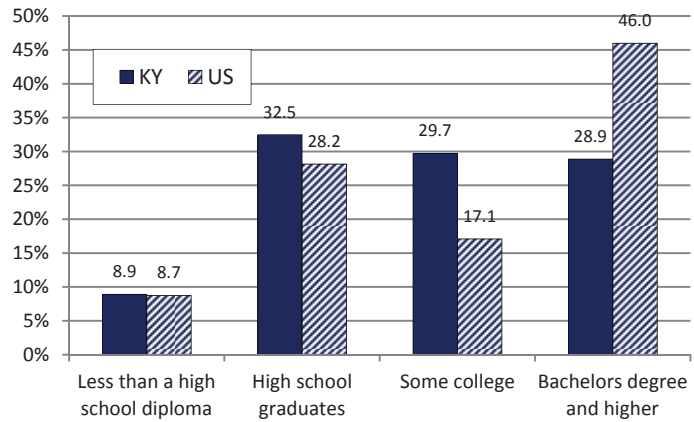
During the economic expansion from 2003 to 2006, the simulated unemployment rate is closer to the actual Kentucky unemployment rate. During this period, Kentucky's unemployment would have been about 0.3 percent lower than the actual level Kentucky experienced. However, during the worst of the recession, Kentucky's simulated unemployment rate is much closer to the U.S. unemployment rate—which is markedly lower. In 2009 Kentucky would have experienced 8.1 percent unemployment (for those 25 year old and up) as compared to the U.S. average of 7.9 percent and the Kentucky average of 8.9 percent. This represents a 0.8 percent reduction in unemployment during the recession period.

While this is a relatively simple analysis, it paints a clear picture that at least some portion of the higher unemployment rate experienced by Kentucky is due to the educational mix of the Kentucky labor force and shows that higher education is associated with lower unemployment.

**Notes**

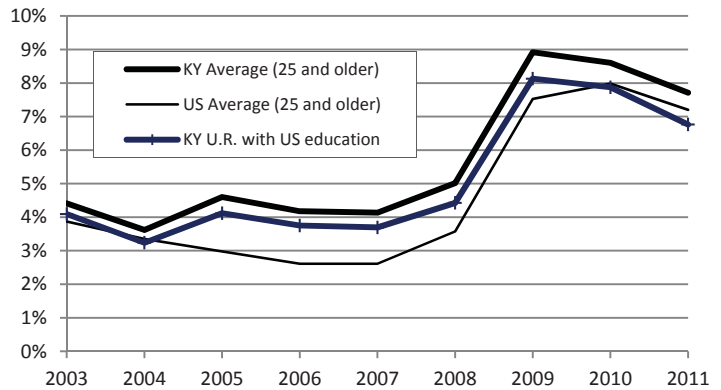
<sup>1</sup>Jacob Blair, an Experienced-Based Career Education (EBCE) student from Paul L. Dunbar High School, Fayette County Public School District, provided research assistance for this project.

**FIGURE 3**  
**Educational Attainment of the Labor Force, 2011**



Source: US Census Bureau

**FIGURE 4**  
**Kentucky & U.S. Unemployment Rates, with Kentucky Estimated at U.S. Education Levels**



Source: Authors' calculations