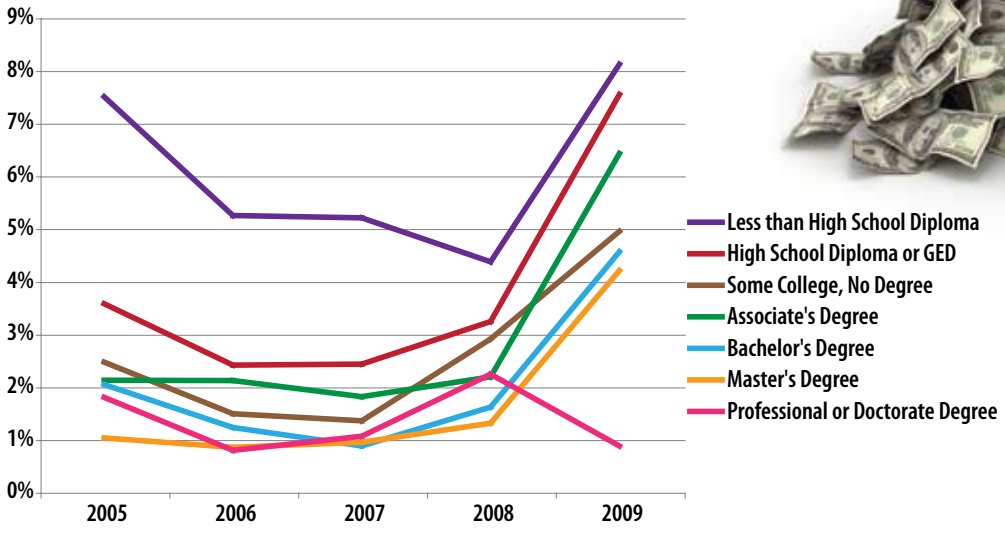
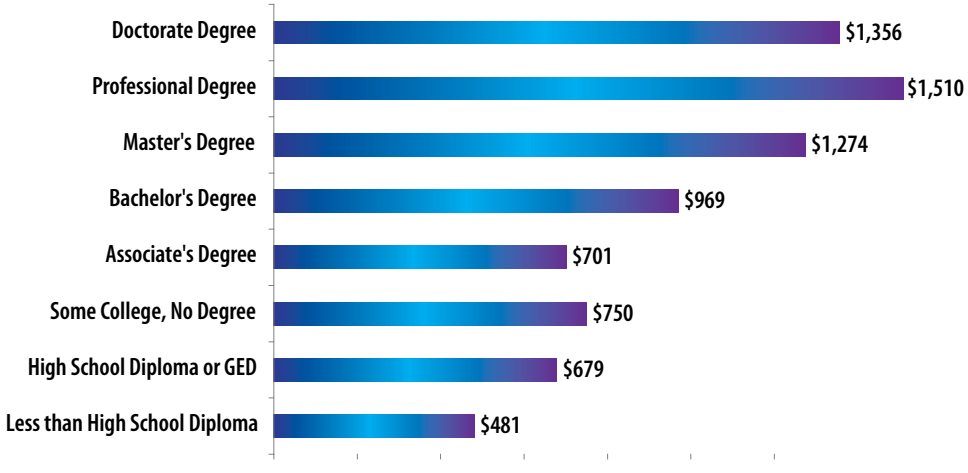
Two Ways

Unemployment Rates
by Level of Education for Utah*



Average Weekly Earnings
by Level of Education in Utah for 2009*



**Based on individuals 25 years of age or older.*
Source: U.S. Census Bureau, Current Population Survey

Education Pay$

Every year in the months of May and June, colleges and universities across the nation hold their traditional commencement ceremonies. According to the U.S. National Center for Education Statistics, just over three million postsecondary degrees were conferred in 2007. Given that the number of degrees conferred has increased steadily every year over the last several decades, it is safe to expect that at least another three million degrees will be awarded in 2010.

After hundreds of lectures, countless hours of study, and dozens of exams, many students have likely pondered the same question: Is it worth it? The evidence provided below supports a resounding "yes!" to this question. While the benefits of higher education are numerous, the focus here rests on only two. First, a direct benefit of higher educational attainment is a higher expected level of earnings. Second, an indirect benefit of higher education is the reduction in the probability of becoming unemployed. Two different methods are used to illustrate the relationship between education levels and unemployment rates.

Earnings by Educational Attainment

When most people think about the ways in which education pays, the first thought that comes to mind is earnings. One way to determine if education pays is to consider the average weekly earnings by level of education. The data used to estimate the average weekly earnings by level of education was taken from the U.S. Census Bureau's Current Population Survey (CPS). Using the 12 monthly national samples for 2009, the Utah portions were extracted and pooled together. (Because the sample size for Utah is relatively small, the pooling of the data helps to improve the reliability of the estimates.)

As the graph reveals, average weekly earnings tend to increase with higher levels of education. However, the correlation is not perfect. At the highest educational levels, those with doctorate degrees earn less, on average, than those with professional degrees. Perhaps this should not be viewed as an anomaly. The five highest paying occupations in Utah fall under the occupational category of healthcare practitioners, all of which require a professional degree. The one unexpected result was that those with associate degrees earn less than those with only some college, but no degree. Although the explanations of differences in concentration across occupations or industries suggested themselves, the data does not support either of these hypotheses. A definitive explanation cannot be provided without further research.

Unemployment Rates by Educational Attainment

The second way in which education pays can be viewed as an indirect benefit of higher education. In a sense, an unemployment rate can be interpreted as the probability of becoming unemployed. This probability will vary from group to group depending on the characteristics that determine the groups. When the groups are determined by level of education, a clear and distinct relationship between unemployment and education appears. (The unemployment rates were estimated using the CPS data for Utah.)

Although the correlation is not perfect, the graph shows that the unemployment rate generally decreases for each higher level of educational attainment. In 2005, the unemployment rate steadily decreases with each increase in the level of education, except for one incongruity. While those with master's degrees had a lower unemployment rate than those with professional or doctorate degrees, not too much significance should be placed on this result. Because the total number of individuals in the sample with either a professional or doctorate degree is rather small, just one additional unemployed individual in this category can have a large impact on the unemployment rate.

Turning to 2009, the relationship between unemployment and level of education is again nearly perfect. The one discrepancy is that those with an associate degree have a higher unemployment rate than those with only some college, but no degree. These two categories of educational attainment were precisely the same ones that exhibited a similar inconsistency with respect to earnings. Again, no clear explanation presents itself.

continued

Given the fact that those with postsecondary degrees have a lower probability of becoming unemployed, the costs associated with obtaining a higher education are clearly worth it.

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Initial Unemployment Claims and Education

The year 2009 was notable for the high volume of initial unemployment claims generated in Utah. That volume was the highest since the early 1980s. The Utah Department of Workforce Services is able to record the number of initial claims filed down to the zip code level. As the accompanying map shows, claims were pervasive across the state, but there are certain "hot spots" that emerge with more claims than other areas. Not surprisingly, these are found in the Wasatch Front with its higher concentration of population. But even within this metropolitan area, there are areas with relatively low quantities of initial unemployment claims.

This raises the question of why some areas are more prone to high levels of unemployment claims than others. Along the Wasatch Front, those areas emerge as eastern Tooele County, West Valley City, northern Davis County, and most of central and northern Weber County. What characteristic might tie them all together? It turns out that the answer is education.

Each of these areas is characterized with a high percentage of its population with education levels less than an associate degree. This was revealed by overlaying education results from the 2000 Census on top of the initial unemployment claims. This does not result in a perfect match, as Census data is not available at the zip code level. But for this analysis, education levels down to the Census tract level were used, and most offer a representative fit with a zip code. Tracts whose 25-and-older population comprised 80 percent or more with an education level below an associate degree are represented on the Wasatch Front map with a red dot. There appears to emerge a strong correlation that, the lower the education level by Census Tracts within a zip code, the higher the amount of initial unemployment claims that will emerge for that zip code.

The resulting analysis makes a strong case for the concept that the higher the education level an individual has attained, the less likely one is to become a laid-off worker. Other social and economic characteristics were tested for correlation, including population counts, income, and age distribution, but none showed a strong correlation. The industry mix in a zip code is not a factor, because the initial claims are recorded by where a person lives, not where their job was located.

Higher Education is Worth It

Obtaining a postsecondary degree is not without its costs. Full-time students who do not work while attending college not only incur the direct costs of tuition and books, but also the opportunity cost of the income that could have been earned instead of going to college. However, the increase in expected lifetime earnings for individuals with a bachelor's degree or higher is much larger that the amount needed to cover these educational costs. If we add in the fact that those with postsecondary degrees have a lower probability of becoming unemployed, it is clear that higher education is worth it.

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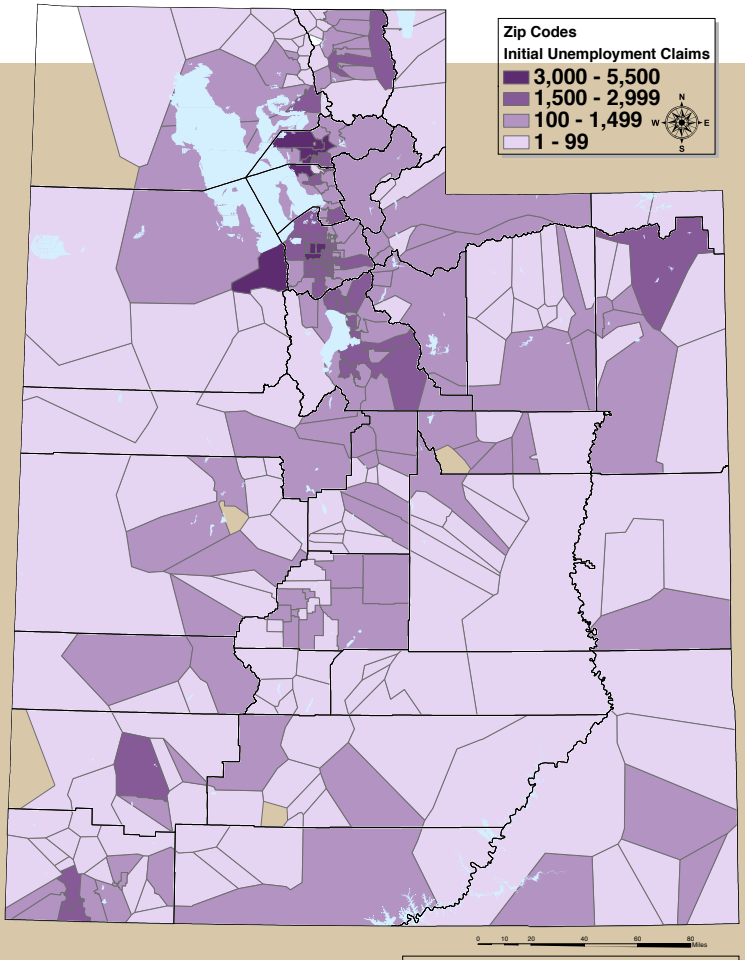
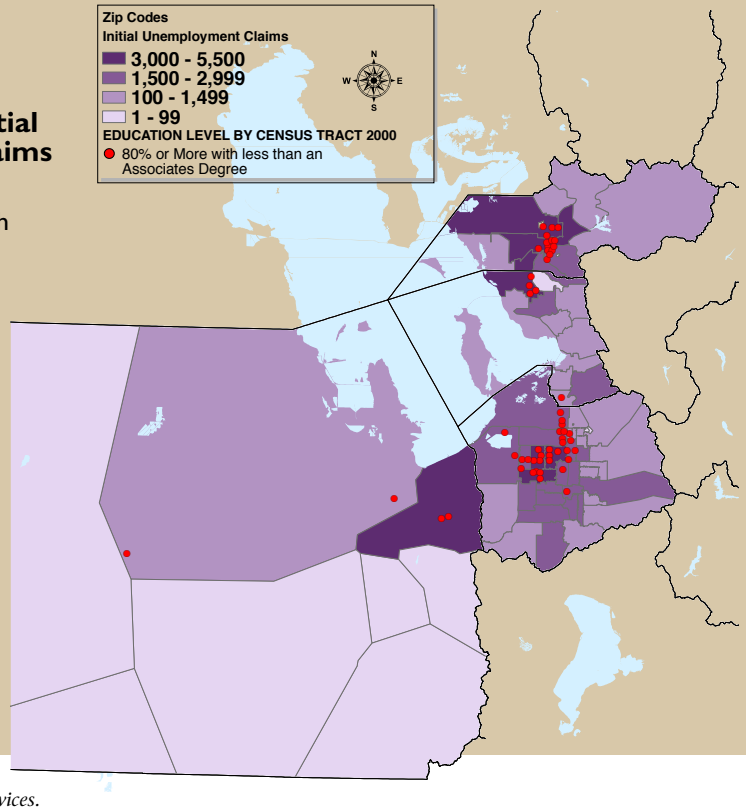
White space assumes missing zip code parameters



Initial Unemployment Claims

By Zip Code
January 2009
through
December 2009



Wasatch Front Initial Unemployment Claims

By Zip Code
January 2009 through
December 2009

Source: Utah Department of Workforce Services.