**Lifetime Value of a College Degree**

February 23, 2006

Utah Foundation’s December 2005 report entitled “What is a college degree worth?” found that many Utah college graduates are earning less than $30,000 in their first year after graduation. Some concern was expressed regarding the relatively low starting salaries of Utah graduates. However, it should be noted that the value of a four year college degree cannot be adequately assessed by examining only the starting salaries of graduates. This brief will more deeply explore what a college degree is worth to graduates over their lifetimes.

**Job Opportunities**

According to Utah occupational projections by the Utah Department of Workforce Services (DWS), from 2002 to 2012 Utah will add 365,680 jobs or an increase in total employment of nearly 31% over 2002. From 2002 to 2012, occupations that typically require higher education will grow at a faster rate than occupations that only require on-the-job training (Figure 1). It should be noted that occupations requiring on-the-job training will still account for a larger number of new jobs. By 2012, at least a bachelor’s degree will be required for nearly 19.8% percent of workers compared to 19.2% percent in 2002 (Figure 2). Although the 0.6% increase may not seem like much, it represents an increase of nearly 80,000 new jobs. In contrast, the share of jobs requiring some post-secondary training or an associate’s degree will increase by 0.3% and those requiring only on-the-job training will decrease by 0.9%.[1]

![Figure 1: Percent Job Growth by Required Training Level, 2002 to 2012](image)

Source: Utah Department of Workforce Services; Calculations by Utah Foundation
In addition to an increasing share of job opportunities, those with at least a bachelor’s degree enjoy better quality job opportunities. These graduates will earn better salaries as well as enjoying increased professional mobility. While there are certainly gains in earning an associate’s or receiving some post-secondary education, the gains are limited when compared with the opportunities gained from earning a bachelor’s degree. DWS, in its publication Utah Job Trends, ranks jobs based on employment outlook and wages and lists what it considers to be “five star” jobs. Among the “five star” jobs, thirteen require a bachelor’s degree, while only seven require an associate’s degree or postsecondary vocational training(Figure 3).[2]
Also, an examination of unemployment rates by educational attainment reveals that the greatest employment levels are enjoyed by those with a bachelor’s degree or higher. Based on data from the 2003 Current Population Survey, the statewide unemployment rate for persons 25 years and older with high school diplomas was 4.2%. Interestingly, unemployment rose to 4.4% for those who have some college experience or an associate’s degree. In contrast, the unemployment rate dipped to 2.1% for those with at least a bachelor’s degree.[3]

**Lifetime Earnings**

While Utah Foundation’s December 2005 report found that many first year college graduates were earning less than $30,000, graduates with a four-year degree will earn significantly higher earnings over the course of their lifetime. According to the Census Bureau, on average a bachelor’s degree holder will earn about $2.5 million over 40 years, while associate’s degree holders earn about $1.8 million, and high school graduates earn $1.4 million.
million (Figure 4).[4] A bachelor’s degree in lifetime earnings is worth over $1 million more than receiving only a high school diploma. Also, obtaining an advanced degree can mean even greater lifetime earnings.

**Figure 4: Expected Lifetime Earnings by Educational Attainment (in millions)**

<table>
<thead>
<tr>
<th>Educational Attainment</th>
<th>2005 Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctoral Degree</td>
<td>$4.0</td>
</tr>
<tr>
<td>Professional Degree</td>
<td>$5.2</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>$2.8</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>$2.5</td>
</tr>
<tr>
<td>Associate’s Degree</td>
<td>$1.8</td>
</tr>
<tr>
<td>Some College</td>
<td>$1.8</td>
</tr>
<tr>
<td>High School Graduate</td>
<td>$1.4</td>
</tr>
<tr>
<td>Not High School Graduate</td>
<td>$1.1</td>
</tr>
</tbody>
</table>

Source: Census Bureau

**Work Experience**

Starting salaries for many graduates are often low because of a lack of work experience. Most students of four-year colleges attend school full-time immediately after graduating from high school, leaving students with little opportunity to gain relevant work experience. Therefore, starting salaries are significantly lower than the average earnings of those with more experience. Figure 5 details the differences among starting wages or salaries for positions requiring at least a bachelor’s degree, some higher education, or only on-the-job training. [5] The chart shows that while starting salaries can be low, future earnings within the same position can dramatically increase with experience.
Also, according to the Utah Department of Workforce Services, many higher paying jobs require at least three to five years of relevant work experience in addition to a college degree.[8] Therefore, many lower earning first-year graduates will be in position to move to a higher paying job in a few years. Census estimates show that there are significant increases in earnings for bachelor’s degree holders until they reach their mid-50s (Figure 6). The largest increase in earnings ($9,238 on average) occurs between the 25 to 29 year old cohort and the 30 to 34 year old cohort.[7]

**Internships**

Utah Foundation, in its December 2005 publication, reported that on average, bachelor’s graduates from all Utah schools who completed an internship received significantly higher starting salaries than those students who had no internship experience.[8] For example, 69% of University of Utah graduates who completed an internship receive salaries above $30,000, whereas that percentage fell to 42% for those who did not intern (Figure 7).
The National Association of Colleges and Employers (NACE) found in its 2005 Experiential Education Survey that “44.9 percent of employers said they offer higher salaries to new hires with co-op/internship experience than they offer to those without such experience.” NACE also reported that employers offered full-time employment to 52.3 percent of interns.[9]

Major/Concentration

Overall, starting salaries are largely determined by a graduate’s chosen field of study. While the purpose of a college education can vary widely from student to student, those who choose to major in fields that develop highly demanded technical skills will obviously command higher starting salaries after graduation. Engineering and science graduates along with business graduates, as a group, receive the highest starting salaries, while those graduates in the liberal arts, humanities, and education receive the lowest starting salaries (Figure 8).[10]

The demand for computer science and engineering graduates in Utah is especially apparent. According to DWS, ten of the thirteen “five star” jobs that require a bachelor’s degree without experience are in computer science and engineering fields. However, in 2004 only 9% of the graduates from Utah schools received degrees in either computer and information sciences or engineering.[11]

Other Benefits to College Education

The calculation of benefits from a college education is often limited to a financial analysis. However, the outcomes of a college education go beyond increased incomes and better job opportunities. According to a 2004 report published by the College Board, the individual benefits that college graduates enjoy include: lower poverty rates, better health, lower incarceration rates, better civic engagement (voting and volunteerism), and improved quality of life for their offspring.[12] Also, an article in the ERIC (Education Resources Information Center) Digest reports that college graduates benefit society by becoming “more open-minded, more cultured, more rational, more consistent and less authoritarian; these benefits are also passed along to succeeding generations.” The article also finds that a college degree “has been shown to decrease prejudice, enhance knowledge of world affairs and enhance social status while increasing economic and job security for those who
earn bachelor's degrees.”[13]

Conclusion

While the average Utah graduate in Utah Foundation’s 2005 survey earned less than $30,000 a year, those salaries will grow significantly in the future, Research shows that over the long-term, most college graduates benefit significantly from their investment in a college education. Graduates will enjoy better job opportunities, increased job security, and better salaries with experience. In addition to employment benefits, college graduates will also enjoy many non-monetary advantages that will not only benefit the individual, but society and future generations.

Endnotes


[6] Ibid.


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