How much is your education worth in denver?

A Project Presented in Partial Fulfillment of the

Requirements for MGMT 600

By

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**Abstract**

In this paper I explore and discuss the financial and career ramifications of furthering your education in the Denver, CO area. I researched what the average salary increases an employee in warehousing or logistics can be expected with high school degree, associate’s degree, bachelor’s degree, and master’s degree in Colorado. I conducted my research via the Internet, using such sites as Salary.com, Glassdoor, Payscale.com, The Bureau of Labor Statistics, and the Department of Labor.
From my research I determined the area-average salary in the warehousing/ logistics fields per education level to give future students an idea of what to expect from each degree. From the research I saw a steady increase in salary and promotion within the industry with each increased degree.

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statement of the problem

How much is your education worth? I believe there is a substantial increase in salary with each degree achieved. Students see this as an important factor in our continued education or we wouldn’t be in school working on our MBA. I conducted this study to see if each degree offers an increase salary in the Metro Denver area.

Background

Being that we are all grad students here at Colorado Technical University working on our MBA’s I felt this would be an interesting topic for my paper. The topic of salary increases was also the most interesting topic chosen by my peers.

methods

I used numerous online websites to research my topic such as the Bureau of Labor Statistics, the Department of Labor, Payscale.com, the Denver Post, as well as the bulk of my data from Salary.com. Within this study I retrieved my data mainly from websites such as Payscale.com, the Bureau of Labor Statistics, Department of Labor, and the majority from Salary.com which took data from the Metro Denver work force. After retrieving an upper and lower salary information for the five most recommended positions within the warehouse/ logistics field per education level I performed a Multiple Comparison Graph using High-Low-Close analysis and an Upper/Lower 95% confidence level in excel using descriptive analysis from data retrieved from online research.

The analysis will show patterns in salaries in education levels. The Upper/Lower 95% analysis will test my alternate Hypothesis that there is a significant difference in salary with each degree achieved. My Null Hypothesis was that salaries for all degrees are the same.

results

When calculating the results of the two studies there are some differences between the High-Low-Close analysis and the Upper/Lower 95% analysis. The High-Low-Close shows a steady increase in salary level that if looking at the mean pay lines up positively with my hypothesis. We see a steady increase in salary per degree with subtle overlap of minimums and maximums. When using the Upper/Lower 95% analysis there is a substantial jump in salary between the associate’s degree to the bachelor’s degree of $40,000+ and then another jump at the master’s degree of another $30,000+. There is no significant difference between a high school diploma and an associate’s degree. Possibly a larger sample might provide this.

Table 1. *Hi/Lo Analysis*

*Figure 1.* Note the upward rise in salary increases per education level that tends to agree with the hypothesis.

Table 2. *Upper/Lower 95% Analysis*

*Figure 2.* Note the substantial jumps in salary increases from the Associate’s degree to the Bachelor’s degree and again to the Master’s Degree using the Upper/Lower 95% confidence level that tends to be outside the realm of $10,000 increase in the hypothesis.

conclusions

I wanted to know how much is your education worth? I began this study believing that there is a substantial increase in salary with each degree achieved. Students see this as an important factor in our continued education or we wouldn’t be working on our MBA’s. I conducted this study to see if each degree offers an increased salary in the Metro Denver area.

While all of the ranges overlap, the Hi-Lo shows a steady increase in salary level that if looking at the mean pay lines up positively with my hypothesis. We see a steady increase in salary per degree with subtle overlaps of the minimum and maximum values. When using the Upper/Lower 95% analysis, while there is no significant difference between the high school diploma and the associate’s degree, there is a substantial jump in salary between the associate’s degree to the bachelor’s degree of $40,000+ and then another jump at the master’s degree of another $30,000+.

In conclusion, when examining both the Hi/Lo and the Upper/Lower 95% analysis, there is an increase in the mean salary in the bachelor’s and master’s degrees. However, I personally believed there would be a minimum increase of $10,000 from one level to the next, I saw much higher values from the associate’s to the bachelor’s to the master’s but the increase was less than $10,000 from high school to the associate’s level. This last difference was moving in the right direction and could be proven with a larger sample size. So I did get the information that I was looking for: that furthering your education in Denver has a direct impact on substantially increasing your annual salary.

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Appendix 1: Data

|  |  |  |  |
| --- | --- | --- | --- |
| **No College** | **Associates**  | **Bachelors** | **Masters** |
|  $ 20,965  |  $ 27,985  |  $ 39,986  |  $ 59,868  |
|  $ 21,093  |  $ 21,093  |  $ 47,543  |  $ 69,657  |
|  $ 22,196  |  $ 26,946  |  $ 55,120  |  $ 70,924  |
|  $ 24,687  |  $ 29,515  |  $ 55,843  |  $ 71,288  |
|  $ 25,347  |  $ 29,950  |  $ 59,868  |  $ 80,408  |
|  $ 26,946  |  $ 31,624  |  $ 63,737  |  $ 82,103  |
|  $ 27,985  |  $ 33,144  |  $ 65,583  |  $ 83,889  |
|  $ 28,775  |  $ 33,375  |  $ 69,657  |  $ 94,623  |
|  $ 28,809  |  $ 33,771  |  $ 70,924  |  $ 95,185  |
|  $ 31,624  |  $ 35,622  |  $ 71,288  |  $ 97,730  |
|  $ 33,105  |  $ 37,147  |  $ 77,074  |  $ 100,807  |
|  $ 33,375  |  $ 38,446  |  $ 80,408  |  $ 108,639  |
|  $ 34,296  |  $ 40,525  |  $ 83,889  |  $ 110,332  |
|  $ 35,622  |  $ 40,674  |  $ 89,125  |  $ 110,572  |
|  $ 37,047  |  $ 44,326  |  $ 95,185  |  $ 118,828  |
|  $ 39,291  |  $ 44,990  |  $ 97,730  |  $ 122,263  |
|  $ 40,525  |  $ 47,320  |  $ 100,097  |  $ 124,872  |
|  $ 40,674  |  $ 48,277  |  $ 108,639  |  $ 138,736  |
|  $ 44,990  |  $ 49,679  |  $ 110,572  |  $ 161,367  |
|  $ 47,320  |  $ 58,410  |  $ 122,263  |  $ 182,028  |
|   |   |   |   |
| warehouse worker | forklift operator | shift supervisor | operations manager |
| forklift operator | line lead | production manager | regional manager |
| janitor | mechanic | office manager | operations director |
| line lead | asst. shift supervisor | operations manager | marketing director |

Appendix 2: Descriptive Analysis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *No College* | *Associates*  | *Bachelors* | *Masters* |
| Mean | 32233.6 | 37640.95 | 78226.55 | 104205.95 |
| Standard Error | 1737.648405 | 2052.276214 | 5008.959746 | 7001.082889 |
| Median | 32364.5 | 36384.5 | 74181 | 99268.5 |
| Mode | #N/A | #N/A | #N/A | #N/A |
| Standard Deviation | 7770.999911 | 9178.058248 | 22400.74898 | 31309.79451 |
| Sample Variance | 60388439.62 | 84236753.21 | 501793554.8 | 980303232.5 |
| Kurtosis | -0.769640079 | -0.071507864 | -0.688437845 | 0.786978182 |
| Skewness | 0.287366872 | 0.413155934 | 0.263476075 | 0.918623288 |
| Range | 26355 | 37317 | 82277 | 122160 |
| Minimum | 20965 | 21093 | 39986 | 59868 |
| Maximum | 47320 | 58410 | 122263 | 182028 |
| Sum | 644672 | 752819 | 1564531 | 2084119 |
| Count | 20 | 20 | 20 | 20 |

Appendix 3: Hi/Lo Analysis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *No College* | *Associates*  | *Bachelors* | *Masters* |
| Minimum | 20965 | 21093 | 39986 | 59868 |
| Maximum | 47320 | 58410 | 122263 | 182028 |
| Mean | 32233.6 | 37640.95 | 78226.55 | 104205.95 |

Appendix 4: Upper/Lower 95% Analysis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *No College* | *Associates*  | *Bachelors* | *Masters* |
| Upper 95% | 35708.89681 | 41745.50243 | 88244.46949 | 118208.1158 |
| Lower 95% | 28758.30319 | 33536.39757 | 68208.63051 | 90203.78422 |
| Mean | 32233.6 | 37640.95 | 78226.55 | 104205.95 |