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Carnegie Mellon Undergraduate Alumnus Prospects After Graduation

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This study delves into the intricacies of university rankings to uncover the accuracy with which Carnegie Mellon University reports the success of its undergraduate alumnus.

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Introduction

Motivation

Given the recent scandal revealing the over optimistic prospects for graduating law school students, the statistics produced by universities and published in the US News and World Report are being brought into question. These misleading statistics encourage hopeful JD seekers to pursue startling loans with the expectation that their debts will be paid off with relative ease upon graduation thanks to supposed 84% job placement ratings.

While the production of undergraduate college rankings has often been criticized for its accuracy in measuring the actual quality of education, Carnegie Mellon University and other universities have long bolstered their reputations for producing intelligent, motivated, and successful students with the use of these faulty lists. However, this raises the question of how measurably successful Carnegie Mellon University undergraduate alumni are. Where do alumni relocate? What occupations do they practice? What graduate programs do they choose to pursue? And, according to the common man's perception of comparative success, how do Carnegie Mellon University undergraduate alumni measure up when compared to graduates of other universities?

Past Literature

Others have conducted analyses of the correlation between academic quality and university ranking systems such as David D. Dill's and Maarja Soo's "Academic quality, league tables, and public policy: A cross-national analysis of university ranking systems" published by "Higher Education," "International University Ranking Systems and the Idea of University Excellence" by Paul Taylor and Richard Braddock from the "Journal of Higher Education Policy and Management," and College Rankings Exposed: the Art of Getting a Quality Education in the 21st Century by Paul Boyer. Each of these articles and the book discusses the concept of ranking systems as a measure of excellence, but no study has directly applied these concepts of ranking as excellence to Carnegie Mellon University.

Summary of Procedure and Results

This study analyzes the data collected and evaluated by the Carnegie Mellon University Career Center (http://www.studentaffairs.cmu.edu/career/students_alumni/post-grad-survey/index.html) in order to answer such questions as: Are alumni—successful by Carnegie Mellon standards—well received by employers and graduate programs? Do alumni display a tendency to remain near to Pittsburgh or to relocate elsewhere? Do alumni successfully attain employment relevant to their subject(s) of study? How accurately do national and international rankings systems gauge the value of a Carnegie Mellon Undergraduate degree?

The data collected from the Carnegie Mellon University Career Center is will also be used to test the effectiveness of various survey methods. The Career Center has nearly perfected its collection data collection methods as response rates generally run somewhere in the 90th percentile (with the exception of College of Fine Arts classes where response rates are as low as the 70th percentile). This has yielded results near to that of census data. As such, this study assesses the effectiveness of certain types of sampling schemes (stratified and clustered sampling) to produce results representative of the target population so that future statistical researchers can visually apprehend the significance of various survey designs. Few have had the data provided or the opportunity to conduct a study on accurate census data in order to optimize survey results to population parameters.

Operating under the assumption that that the processes of data compilation—including the garnering of data from outside sources and the biases that potentially arise from human coding—results from this study indicate that the overwhelming majority of graduated alumnus from

Carnegie Mellon University's undergraduate program attain employment that is relevant to their concentration of study. The results reflect similarly positive outcomes for students enrolling in graduate school; the average Carnegie Mellon University undergraduate alumnus attends a graduate program more prestigious than the equivalent graduate program offered by Carnegie Mellon University. However, contrary to current Carnegie Mellon University undergraduate perception, variation across schools for all of the tested variables was negligent; salary, prestige of graduate program, and distance from Pittsburgh did not vary significantly among colleges. Rather, variation—for all variables—was much larger between majors within a given college. We ran ANOVA test on all possible combination of variables. Three response variables were salary, miles from Pittsburgh, and comparative ranking. Three explanatory variables were school (college), major, and year. The results show that all three response variables' means were different across school and major. As for year variable, salary was the only response variable whose mean differed at 3 year period. Then we ran 2 regression analyses on our quantitative variables. They were miles from Pittsburgh versus Salary and miles from Pittsburgh versus comparative ranking. The former was statistically insignificant while the latter was statistically significant. However, the coefficient for the second test was too small for us to conclude anything of scientific interest.

Methods

Population and Sample

Our target population was graduating Carnegie Mellon undergraduates of the Pittsburgh campus from the years 2008 to 2010. The sampling frame that came with this data originated from the career center's post graduation survey. This data from the Career Center consistently includes greater than 94%-71% response rates. Majors within CFA had the lowest set of response rates. This may be due to the significantly smaller class sizes, the personalities of the students, and the difficulties associated with categorizing employment in the arts. With the administrative records from the career center we attempted to reconstruct the entire graduating classes from 2008-2010. Each person who answered the survey and either was employed or went on to graduate school was listed individually. For the employed graduates the company name, job title, and location of job by city and state were given. At times these jobs were not in the United States and therefore had a name and country, a country, or just a city. Those who went on to graduate school were listed by university, by specific program, and then whether they were getting a Masters or PhD degree. From these individual listings we were able to create a spreadsheet that contained each individual from the post-graduation survey.

Our sample design consisted of two very different approaches. Based on the wealth of information provided by the Career Center we were able to construct a sampling frame that was almost exactly the same as the target population. This allowed us to conduct tests on essentially the data from the whole population, which would make our study a census. We then did a second round of analysis where we used various types of sampling methods. The first time did a simple random sample of the students in each year. We took 2008 through 2010 and took simple random samples each one. This was then combined to calculate all of our inference tests. In each year we took various sizes of samples. Based on our calculations that come later we found the ideal sample size per year to be 292 students. In a discussion with Professor Junker we examined the idea of using various sizes of simple random samples and compare them to the census data we had. Our sample sizes ended up being 100, 300, 600, and 900 students from a single year. Delete This Section (We then stratified the data and broke all of the students into the six colleges that are part of the university: the College of Fine Arts (CFA), Carnegie Institute of Technology (CIT), the College of Humanities and Social Sciences (HSS), the Mellon College of Science (MCS), the School of Computer

Science (SCS), and the Tepper School of Business (Tepper). From there we stratified the data again and took each department in the school and pulled a random sample from each of those. Our next method involved stratifying the data by college again and then using each department as a cluster. From there we randomly picked on cluster or department in each school and sampled every single student in those clusters. Based on the clustered and stratified by department example we will test these results with the census data to see how accurate these prediction methods are for our study.)

Sample Size Calculations Without Replacement

$$n > \frac{N \cdot n_o}{N + n_o}$$

$$n_o = \frac{z^2 \cdot SD^2}{ME^2}, z = 1.96$$

$$n_o = \frac{1.96^2 \cdot 0.5^2}{0.05^2} = 384.16$$

$$n = 292$$

$$SD = 0.5, ME = 0.05, N = 1200\ (estimate)$$

We do not have any sort of data on the variance of the six colleges when it comes to our most important question: the percentage of Carnegie Mellon Undergraduates who gain employment in a workplace that utilizes the knowledge and skills they learned as a result of their particular major, it is very difficult to calculate any kind of sample size estimate using stratification. Unless the groups are significantly different there will be no gain from stratifying in the sample size calculations.
We used the data of about 3600 individual students. About each year 1200 students graduate and we have 3 years worth of responses. Our nonresponse rate was based purely on the ability of the Career Center to collect responses from individuals. As stated previously the numbers that they provide are fairly good. We will attempt to use imputation when we run into individuals that do not respond. This will make it so when we actually select our samples from the frame there will be no nonresponse. Our information is limited to what the Career Center will give us. In order to increase the variables that we have we are matching the information we have to external databases. We will be using http://www.indeed.com to add in salary information based on the job title. With the aid of *US News* and *Fiske* we will get information about the rankings of college graduate programs. Some of the summary sheets from the Career center have aggregate information about salaries so we will use that to check our additional data from indeed.com.

Variables

Since we are looking at administrative records our questionnaire is a list of variables that we will look for when examining an individual. The primary ones include salary in present dollars, the distance the graduates end up from Pittsburgh, PA, whether the current job they have requires or uses the knowledge and skills learned in undergraduate study, the ranking of the graduate program relative to Carnegie Mellon's ranking in that area, and whether the student is employed.

For the percentage of CMU students that find jobs we are recording anyone who has a job title and/or employer as a person that is considered employed. Some of the data only had an employer or only a job title so we included them in the category of being employed. One tricky aspect to this variable is that CFA has a number of students who listed themselves as freelance. This is somewhat difficult because the nature of some professions. Often the acting sector does not follow the traditional method of employment because it only lasts as long as the production which can be several months instead of years like most other jobs. There are a few individuals not in CFA who consider themselves as self-employed. We counted all of these people as employed, which is one reason why the CFA employment figures may be inflated. We included any military positions and volunteer positions in the employed category.

Next we looked at all of the individuals from each college in order to compare the proportions of employment across the colleges. We also separated our sample by year in order to see how much the employment proportions changed over the three years we have data on. Finally we calculated the employment rates of each college in order to compare how the majors differed in employment rates.

Our post survey processing is the entering of the data from the Career Center sheets to an excel file. We will have multiple people go through to check whether they think that the job description matches the major. Since the titles can be very ambiguous we were hoping to look at the ones where we did not agree.

We looked at the percentage of people who ended up in each state/country. In our data file there was one column for city and one column for state or country. All of the employed positions had locations attached with them so we just used those. For the students attending graduate school we assumed that they lived in or near the city that the campus was in.

Our variable for higher education included all individuals attending or planning to attend a university or college. For most individuals this was fairly straight forward because they had a name for the institution and listed the program they would be participating in. There were a number of individuals that said they would being going to medical school or law school, but failed to specify beyond this. We considered these individuals as students attending graduate school.

The comparative rankings variable consists of several parts. First we looked at the program in which the student was enrolled. From there we looked up the USNews graduate school ranking for that program at the college where the individual was attending and at CMU. This was used in order to see the differences between the institutions that CMU students attend relative to the level at which they already are enrolled. Our final variable was the comparative ranking, which consisted of the CMU ranking minus the ranking of the other school. This would allow us to take the mean of the variable and see on average whether graduates were going to more or less prestigious universities relative to CMU. When a university was not ranked or did not have that program we considered them to have rank 100 in order to show that the difference in rankings is significant and also allow us calculate the statistics for each individual.

One interesting fact we wanted to explore was the relationship between major and change in comparative ranking. Calculated this variable as the mean of the comparative rankings for each major and then put them into an ordered table with the major that has the largest increase in comparative ranking at the top.

For the percentage of graduate students remaining at CMU we looked at the total number graduate students and the number of those going to CMU for graduate school. This does not include people who are hired as research assistants and have an employer of CMU. We then took the number of graduate students attending CMU divided by the total number of graduate students.

From there we made a table of all graduate degrees with the frequency in which they occurred and the percentage of all the degrees. Given how specific some of the students were it may skew the results because degrees may be very similar but are not counted as exactly the same degree because of slight differences. We ranked the table so that those with the highest frequency were listed on top and included the top 10 majors graduates pursue.

Indeed.com was our source for salary information. It allowed for the specification of job title employer and city. With this information it would give back and estimated salary for the given criteria. Since our job titles were fairly vague and sometimes the website would not return any valid results there was some estimation on our part on what some individuals' jobs could be simplified to. A number of the jobs included very ambiguous titles and we were unable to use very specific information to find an estimated salary. One aspect is that we were not able to specify that these should be starting salaries and therefore this may include a somewhat bias sample.

From this data we estimated the mean salaries for the total sample, each year, each college, and each major. This allowed us to test which ones were different and how they compared overall.

Our last variable was the percentage of students of who decided to remain in Pittsburgh for education or work. We included all individuals who attended CMU as well as any other Pittsburgh Universities. This was then divided by the total number of people in our sample to get the percentage who remained in Pittsburgh. This variable is intended to capture some information possibly about how willing or able people are to remain here after spending about four to five years in the city.

We did not have access to the original sample so the possibility of collecting responses from those individuals who already graduated was not an angle we tried. Based on the results from the career center it seems that for the older data, pre 2010, there are some facts that are missing and would help in the creation of a full sampling frame. The specific information about how many people returned to their home countries and how many non-responders occurred in each major would have greatly increased our ability to narrow down the statistics that have non-response bias. We did not have any demographic information on the individuals so post stratification was not a reasonable choice of action. The percentage of responders that we had access to relative to the whole graduating class was very high.

We decided that since our sampling frame covered about 80% of the population we would try sampling from the data set we had in order to see how various sample sizes did at estimating various statistics. Here we essentially considered the data set from the career center as our population data and then took simple random samples from the whole set in various sizes. Based on our calculations we would need about 300 people from a single year. In order to test the just how close the various sample sizes were at estimating the assumed population means and proportions. We used samples of 300, 900, 1800, and 2700 from the population. By pooling all of the years together we made it just a simple random sample instead of having clusters or strata. Using 300 for n was supposed to provide an example of a sample size that is much too small to achieve our desired results of a 95% confidence with a margin of error of .05. The 900-person sample was intended to be just about right and the other two should be much more than is necessary.

Results

Based on the current events around the graduate school employment and how they have come into question, we are looking at the employment rates and the correlation between jobs and majors. This will be used to tell whether the skills that a CMU student learns from their expensive education are utilized throughout their working experience in the real world. In order to determine whether the high price of CMU is worthwhile we are looking at the mean salary incomes of graduates to see if they end up making sufficient sums of money that would allow them to make up the difference in tuition from CMU to a public university.

We also chose to look at how CMU students faired when attempting to get into graduate school. Our plan was to look up the rankings of programs that graduates attend and see if they are moving up in the world when it comes to rankings by USNews or not. This allowed us to look at what majors sent people to graduate schools that were ranked higher or lower than the CMU ranking.

Lastly our survey looked into the various places that graduates ended up. We are looking for the distances from Pittsburgh to the new location where people reside. This is supposed to demonstrate how far CMU graduates go and where they end up in the end.

Through the analysis of data obtained through the Carnegie Mellon University Career Center, this study hopes to report the accuracy with which the university publishes positive statistics concerning the successes of undergraduate alumnus. This study also aims to delve deeper than any large ranking system can hope by analyzing the implications of enrollment within specific colleges and majors within Carnegie Mellon University; are there significant statistical differences between the ability of students from different majors of colleges to obtain jobs or matriculate in more prestigious graduate programs.

In order to test the various sample sizes for a simple random sample we used SPSS in order to pull 300, 900, 1800, and 2700 random people from our sampling frame of 3311. Each of these simple random samples was placed in their own data file and then we conducted tests on them separately. The method we used for comparing the SRS's to the population figures was a one-sample t-test. Here we compared the means or proportions for each of the selected variables. We compared the percentage of employment, total and by each college; the percentage of correlation between major and job title; the mean salary; and the percentage of graduates that are remaining in Pittsburgh for further school or work. We were looking for statistically significant results where the null hypothesis was that the sample mean equals the population mean. Our population figures came from the sampling frame that we constructed from the 3311 entries.

All of the results can be found in the appendix of the various tests that we conducted. The printouts are from and SPSS t-test of comparing means. For percent employed we found that all four sample sizes were statistically different from the population means. When we broke down each sample with the select cases function in SPSS by college we found all of the tests to not be statistically significant. The only test that came close was the SRS of 300 individuals for the Tepper School of Business. The test had a p-value of .056.

We then proceeded to test the percent the correlation between major and job title as determined by us. Using a one-sample t-test in SPSS we found that all of the correlations between major and job title were all not statistically significant.

Next we chose the mean salary for analysis and conducted four t-tests with the different sample sizes. The null hypothesis was that the sample mean equals the population mean. We had no statistically significant results from these tests.

As for the people remaining in Pittsburgh we calculated a new variable that included only whether the individual remained in Pittsburgh after graduation or not. Our t-tests had the null hypothesis where the sample mean equals the population mean. In this set of tests we found no statistically significant results.

For all of the tests there is a general trend where the standard deviation for the samples tends to decrease as the sample size increases. This is not a universal trend, however it shows up as a general trend throughout all of the t-tests that we ran.

One-Way Anova: Salary versus School

Our first test was to see if salary is same across all colleges. With p-value of 0.000, we rejected the null hypothesis that mean salary is same between different colleges. School of Computer Science showed highest mean salary of $89809 whereas College of Fine Arts had lowest mean salary of $60831. As for other schools, they were relatively in close range of each other. The results were expected because Computer Science is more practical area of study that is in high demand right now.

One-Way ANOVA: Salary versus Major

This test is similar to ANOVA test for Salary versus School but we decided to run the Salary versus Major test more in-depth to see if we can see any anomaly. With p-value of 0.000, we rejected the null hypothesis that mean salary is same across majors. Physics had the highest mean salary of $96367 whereas BXA had lowest mean salary of $36915. This result was surprising because we didn't expect Physics to come out highest. It is most likely that because the website we used for salary calculation (www.indeed.com) does not take years of job experience into account, the salary for Physics could have been overly inflated compared to other majors.

One-Way ANOVA: Salary versus Year

We also ran ANOVA test for Salary versus Year to see if mean salary stayed constant between these three years period. The p-value was 0.045 which was less than our confidence level of 0.05 so we rejected the null hypothesis that mean salary was same in year 2008, 2009, and 2010. With year 2009 mean salary being highest at $75519, we hypothesized that there was some economic event in 2009 that caused the 2009 salary to rise.

One-Way ANOVA: Miles from Pittsburgh versus School

We decided to test if colleges had any effect on how far students end up being away from Pittsburgh after graduating. The p-value was 0.000, so we rejected null hypothesis that mean miles from Pittsburgh is same across different schools. School of Computer Science had highest mean of 1217 miles. We hypothesized that there are not many employment opportunities related to Computer Science near Pittsburgh so that is why students had to travel far to get employed.

One-Way ANOVA: Miles from Pittsburgh versus Major

We ran the test similar to the one before by breaking the colleges into majors. The p-value was 0.000 so we rejected the null hypothesis that mean miles from Pittsburgh is same across different majors. While most majors were within close range of each other, there were two majors that stood out from the rest. One was Modern Language with mean of 2881 miles and the other was Global Politics with mean of 1980 miles. This result was self-explanatory since people who majored in Modern Language and Global Politics would probably have to go abroad to make full use of their major.

One-Way ANOVA: Miles from Pittsburgh versus Year

We were curious to see if years had any effect on mean miles from Pittsburgh so we ran ANOVA test. The p-value was 0.244 which is greater than significance level of 0.05 so we retained null hypothesis that mean miles from Pittsburgh is same for 3 year period.

One-Way ANOVA: Comparative Ranking versus School

We wanted to see if different colleges had any effect on whether students went to better graduate school than that of CMU ranking-wise. The p-value was 0.000 so we rejected the null hypothesis that mean comparative ranking is same across colleges. Students from Tepper Business School had highest mean of 13.00, meaning on average, students from Tepper went to graduate school that is ranking 13 higher than that of CMU. School of Computer Science had lowest mean of -7.73, which is probably because the ranking of CMU graduate school is so high that it is hard for students to go to better school.

One-Way ANOVA: Comparative Ranking versus Major

To look at effect of student's field of study on comparative ranking more specifically, we ran the ANOVA test for comparative ranking versus major. The p-value was 0.000 so we rejected the null hypothesis that mean comparative ranking is same across majors. There was not one major that really stood out from the rest other than Policy and Management, which had lowest mean of -43.00. Just like test before, we hypothesized that Heinz School (CMU's graduate school for Policy and Management) could have been quite highly ranked compared to other graduate schools.

One-Way ANOVA: Comparative Ranking versus Year

This was the last ANOVA test we ran on population to see if years had any effect on comparative ranking. The p-value was 0.218 so we retained null hypothesis that the mean comparative ranking was same for the 3 year period.

Regression Analysis: Salary versus Miles from Pittsburgh

To see if there was any relationship between salary and how many miles students ended up being away from Pittsburgh, we ran regression analysis on these two variables. The p-value was 0.168 which was greater than confidence level of 0.05 so we retained the null hypothesis that there is no linear correlation between salary and miles from Pittsburgh.

Regression Analysis: Comparative Ranking versus Miles from Pittsburgh

To see if there are any relationship between miles from Pittsburgh and comparative ranking, we ran regression test. The p-value was 0.016 so we rejected null hypothesis that there is no linear correlation between miles from Pittsburgh and comparative ranking. At 0 mile from Pittsburgh the comparative ranking is at 5.715 and for every mile away from Pittsburgh there is a decrease of 0.002414 in comparative ranking, meaning that the further graduate schools are away from Pittsburgh, lower are their ranking. The result was surprising but at the same time, the coefficient was not that big enough for us to definitely conclude that graduate schools are ranked lower if they are further away from Pittsburgh.

Discussion

For this survey, we are trying to show CMU undergraduate prospects after they graduate so students can exactly know what awaits them once they graduate. We did not design the actual survey. There is an annual survey that Carnegie Mellon Career Center conducts on undergraduates who are graduating Carnegie Mellon University. The purpose of Career Center's survey is to keep record of undergraduate prospects after graduation such as where they are employed, their job title, salary, and whether they are going to graduate school. Our project was to take this data and analyze it further using different survey methods while adding our own variables. These new variables include correlation between one's job title and his major, the distance of one's employment place from Pittsburgh, whether the graduate school a student has enrolled is more/less prestigious than that of Carnegie Mellon using US News Ranking and Fiske for Fine Arts school.

In order to test the differences between the population and what we got for the simple random samples we conducted a series of t-tests. These served to show how far off the estimates of the various sample sizes were from the assumed population mean or proportion. The first variable that we analyzed was the proportion of Carnegie Mellon graduates that were employed out of everyone. In this case all four sample sizes were statistically different than the mean. This is quite unusual seeing as a SRS of 2700 and 1800 turned up a statistically significant different than a population that only includes 3311 people. Since we were using a significance level of .05 it is possible that each of these are fall into that 5% window of type I error. This is not very likely but it is possible that the first test is actually different and the other three just happen to have samples that appear different. In order to stretch the sampling a little more we selected only cases from specific colleges. We used the percents of employed persons and for the six colleges and only one of the t-tests was significant. The smallest sample size for Tepper was almost statistically significant at $p = .056$. This is somewhat unexpected. Based on how small the samples sizes got it would make more sense that the lowest sample sizes would have a lower chance of estimating the population figures as well. The lowest sample sizes should have higher standard deviations so they are can be farther from the population and still not be statistically significant and that may have contributed to this.

For the remaining t-tests comparing population figures to the sample means there were no statistically significant tests. None of the tests were close to being statistically significant as well. The other variables that we used to compare sample estimates to population figures were percent for major correlating to job, mean salary, and percent of graduates that were remaining in Pittsburgh for work or school related reasons.

In general we expected there to be a number of t-tests to come up as statistically significant, especially as the sample size decreased. The fact that only one out of nine sets of tests showed even a glimmer of this trend is surprising.

Study Attributes

Strengths

Some of the strengths of this project are very high response rate and the fact that we were able to save lot of time by skipping the part where we actually conduct the survey meaning that we are able to allot more time to analysis of the data. Because we used data from Career Center, we were able to acquire data with response rate of over 90% in most cases with an exception of couple 70%'s, which is still considered very high. Because Career Center conducts this survey on every undergraduate student who is graduating, we can be confident that there is very little sampling error.

Weaknesses

However, there are also many critical flaws in our project that stems from the fact that we used Career Center's survey. One of them is that because we are not the one who designed the actual survey we are restricted to what kind of analysis we can do; we cannot tweak the survey questions to get better data that will suit our analysis purpose better. Second flaw is that Career Center did not disclose all the data to us. We do not know the exact individual's salary; we only know the min, max, and average of students' salaries grouped by year and major. As a result, we decided to get approximate salary amount from indeed.com but given that the many job titles are ambiguous, it is inevitable that we will have much error.

We are still in process of compiling the data from Career Center into Excel for more efficient analysis. Once data compilation is done we will start our analysis and will be able to find out if there are relationships between various variables and whether the employment rate that CMU has provided us is accurate and true.

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Appendix

Sample of Career Center Data

Carnegie Mellon
CAREER & PROFESSIONAL DEVELOPMENT CENTER

Post Graduation Survey Results 2009
College of Fine Arts
CSA/BHA/BSA

EMPLOYERS AND JOB TITLES

Employer	Job Title	City	State/Country
AmeriCorps Vista Hands On Greater Richmond	Non-Profit and Capacity Builder	Richmond	VA
Interac	Assistant Language Teacher		Japan
IStep	Teacher	Boston	MA
Marc Advertising	Intern	Pittsburgh	PA
Tom Gigliotti	Photographer's Assistant	Pittsburgh	PA

GRADUATE AND PROFESSIONAL SCHOOLS SELECTED

Institution	Program	Degree
Carnegie Mellon University	Human Computer Interaction	MS
Carnegie Mellon University	Entertainment Technology Center	MS
Drexel University	Medical Science Preparatory Course	
George Washington University	Law	JD

New York University - Singapore	Film	Masters
University of Akron	Arts Administration	Masters
University of Southern California	Cinematic Art	Masters

Source: Post-graduation data compiled from graduating seniors with a 74% response rate among all BCSA/BHA/BSA graduates.

Sampling Frame

This is an example of the format used for the sampling frame

year	school	major	employer	job title
2008	Tepper Scho	Business Adr	Abercrombie	Assistant Me
2008	Tepper Scho	Business Adr	Ameriprise	Financial Adv
2008	Tepper Scho	Business Adr	Applied Pred	Business Con
2008	Tepper Scho	Business Adr	Bank of New	Securities Pr
2008	Tepper Scho	Business Adr	Barclays Cap	Analyst (Trac
2008	Tepper Scho	Business Adr	Barclays Cap	Analyst (Inve
2008	Tepper Scho	Business Adr	Barclays Cap	Analyst (Deri
2008	Tepper Scho	Business Adr	Bartle Bogle	Intern- Strate
2008	Tepper Scho	Business Adr	BearingPoint	Managemen

Coding

Categories were coded for analysis in SPSS and Minitab

CIT=1
- Biomedical Engineering=11
- Chemical Engineering=12
- Civil Engineering=13
- Electrical and Computer Engineering=14
- Engineering and Public Policy=15
- Material Science Engineering=16
- Mechanical Engineering=17

CFA=2
- Architecture=21
- Art=22
- BXA=23
- Design=24
- Drama=25
- Music=26

HSS=3
- Economics=31
- English=32
- History=33
- Modern Languages=34
- Philosophy=35
- Psychology=36
- Information systems=37

Statistics=38
Policy and Management=39
Decision Science=310
Econ/Stat=311
Global Politics=312

MCS=4
Biology=41
Chemistry=42
Math=43
Physics=44

SCS=5
Computer Science=51

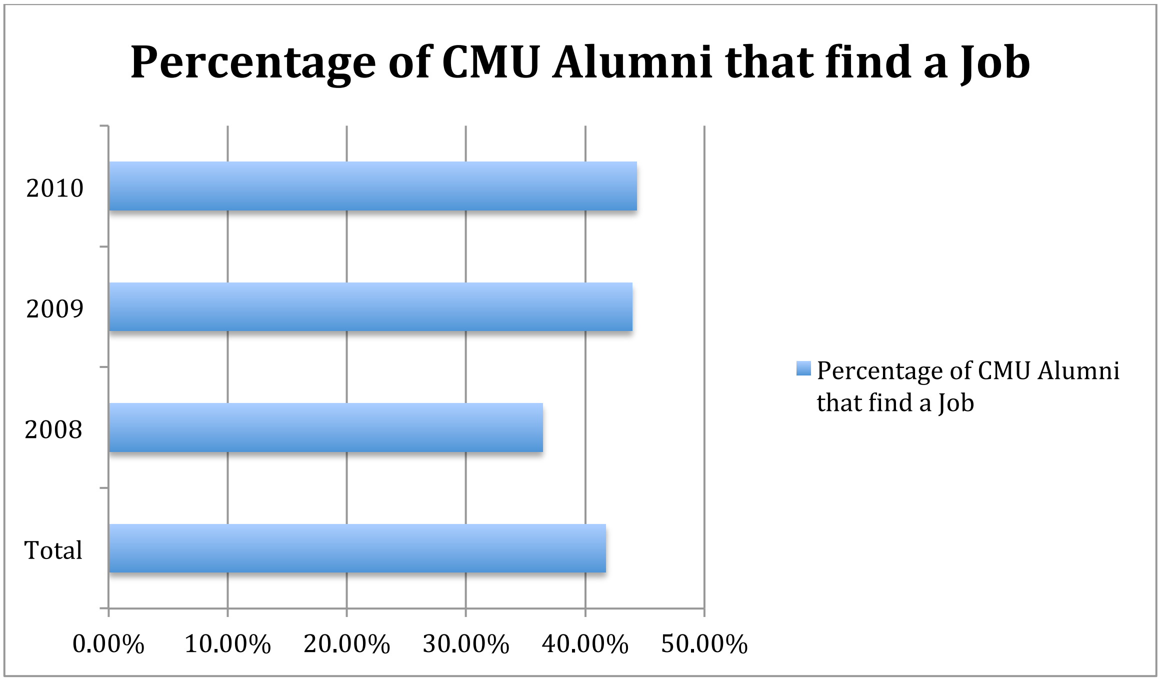
TEP=6
Business Administration=61

Questionnaire

Variables measured by the "Carnegie Mellon Undergraduate Alumnus Prospects After Graduation" Study:

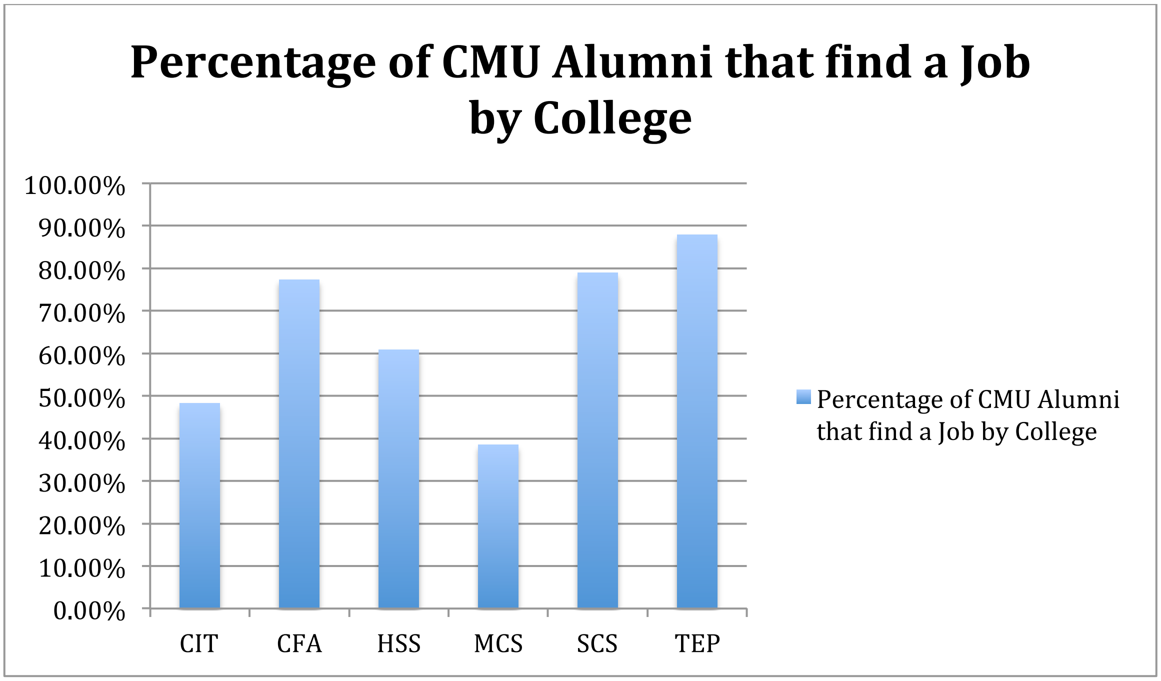
1. Percentage of CMU alumni who find employment upon graduation (for whole sample and each of five sample years)
    a. This variable would be calculated using the Career Center data on salary as a reference

Percentage of CMU Alumni that find Job			
	Count	Total	Percent
Total	1382	3311	41.74%
2008	376	1032	36.43%
2009	505	1149	43.95%
2010	501	1130	44.34%



2. Percentage of CMU alumni from each college finding employment upon graduation (for each of three sample years)
    a. This variable would be calculated using the Career Center data on employment percentages as a reference

Percentage of CMU Alumni that find Job by College			
	Count	Total	Percent
CIT	523	1084	48.25%
CFA	403	521	77.35%
HSS	326	536	60.82%
MCS	221	574	38.5%
SCS	274	347	78.96%
TEP	219	249	87.95%



3. Percentage of CMU alumni from each major finding employment upon graduation (for whole sample and each of five sample years)
    a. This variable would be calculated using the Career Center data on employment percentages as a reference

major * employed Crosstabulation

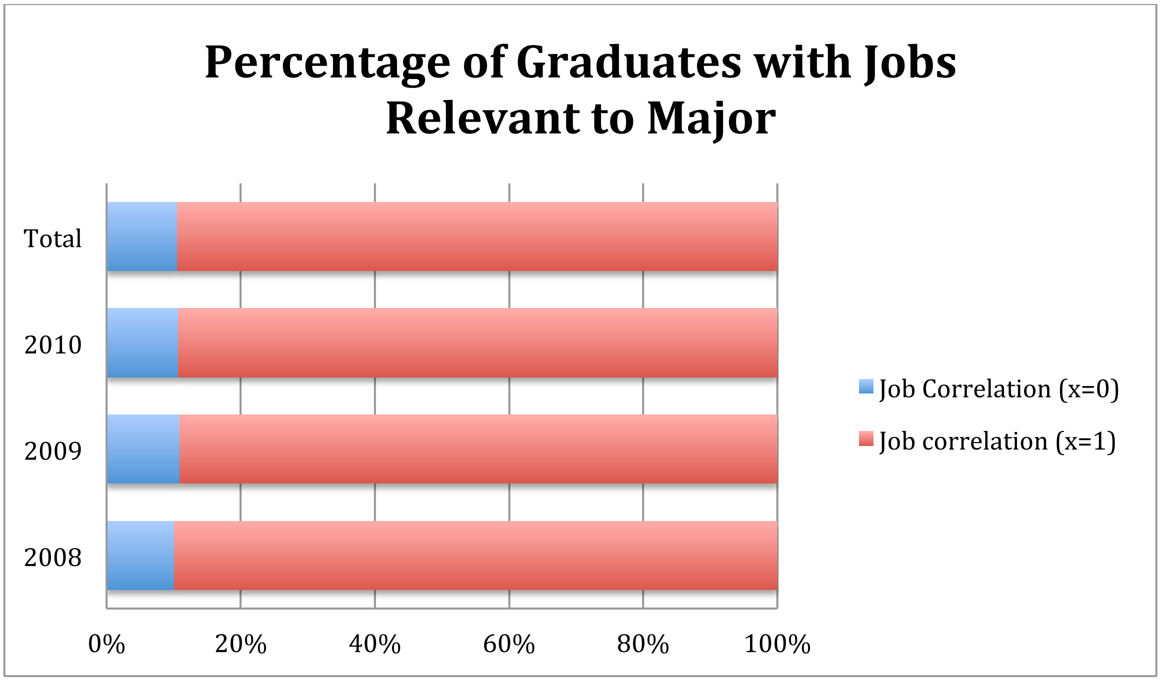
Count				
		Employed		Total
		.00	1.00	
Major	Biomedical Engineering	67	46	113
	Chemical Engineering	55	96	151
	Civil Engineering	38	43	81
	Electrical and Computer Engineering	236	131	367
	Engineering and Public Policy	20	33	53
	Material Science Engineering	44	22	66
	Mechanical Engineering	101	152	253
	Architecture	29	77	106
	Art	8	33	41
	BXA	16	21	37
	Design	9	131	140
	Drama	1	119	120
	Music	55	22	77
	Economics	25	29	54

	English	22	36	58
	History	13	20	33
	Modern Languages	2	10	12
	Philosophy	6	13	19
	Psychology	36	29	65
	Information Systems	41	87	128
	Statistics	9	7	16
	Policy and Management	13	25	38
	Biology	140	85	225
	Chemistry	63	26	89
	Math	55	80	135
	Physics	95	30	125
	Computer Science	73	274	347
	Business Administration	30	219	249
	Decision Science	21	33	54
	Economics/Statistics	13	30	43
	Global Politics	9	7	16
Total		1345	1966	3311

4. Percentage of CMU alumni whose employment relates to their major (for whole sample and each of five sample years)
    a. This variable would be calculated using the Career Center data on employer and job title
    b. Both employer and job title of each alumnus will be coded as "does relate to major" or "does not relate to major"
        i. For a job to be coded as "does relate to major" the job title should indicate that the undergraduate degree received is necessary to fulfill some aspect of the job qualifications
            1. E.g. the job title "Mechanical Designer Engineer" does relate to a major in engineering/physics
        ii. Coding will be conducted by several Group H members to ensure that coding is consistent by person

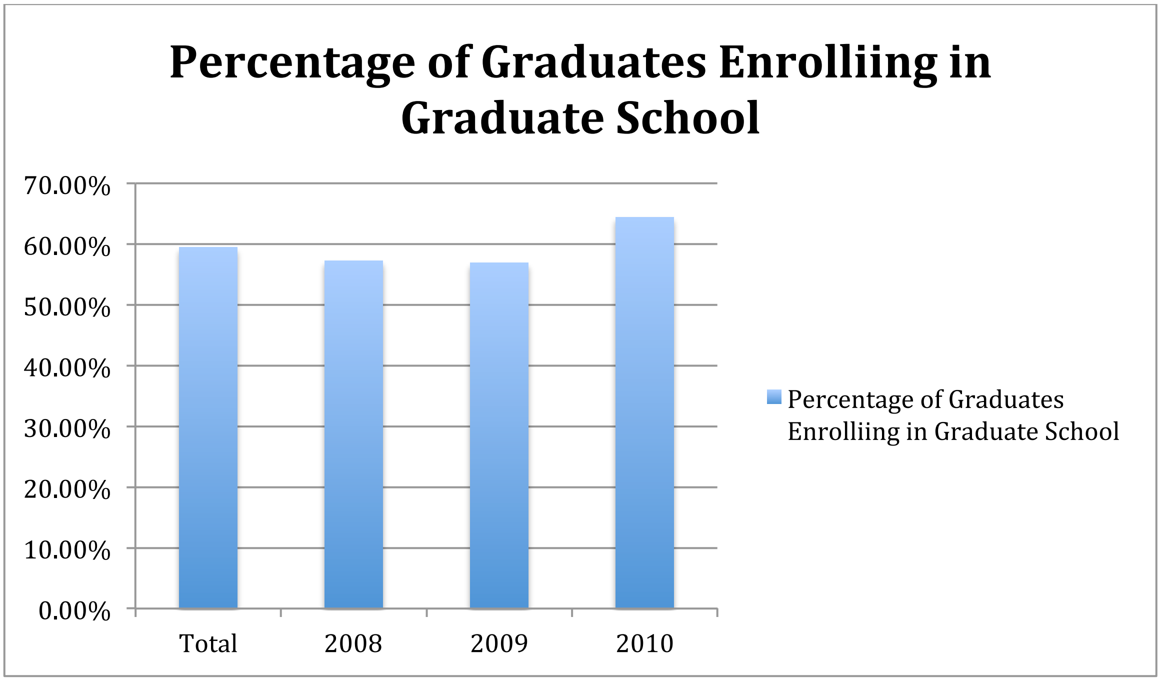
Year * job-major correlation (yes=1, no=0) Cross tabulation				
Count				
		Job-major correlation (yes=1, no=0)		Total
		0	1	
Year	2008	67	598	665
	2009	71	579	650
	2010	57	477	534
Total		195	1654	1849

*Note almost all people end up with job/path that is suitable for CMU



5. Percentage of CMU alumni enrolling in graduate school
    a. This variable would be calculated using the Career Center data on the number of alumnus pursing graduate degrees in respect to his/her class

Percentages Enrolling in Graduate School			
	Count	Total	Percentage
Total	1968	3311	59.44%
2008	647	1130	57.25%
2009	654	1149	56.91%
2010	667	1032	64.63%



6. Average comparative ranking of graduate school program compared to CMU ranking
    a. This variable would be a measurement of the deviation from CMU ranking for each graduate program pursued by CMU alumni
    b. Graduate program ranking would be measured as a negative or positive number in comparison with CMU ranking
        i. Graduate program ranking would be collected from US News and World Report
        ii. Negative graduate program rankings would represent programs of lesser prestige than CMU
        iii. Positive graduate program rankings would represent programs of greater
    c. Average Comparative Ranking by year (for whole sample and each of three sample years)

Whole Sample Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Comparative ranking of chosen graduate program and CMU graduate program [(CMU-program)/CMU]	1330	-174	100	4.77	34.402
Valid N (list wise)	1330				

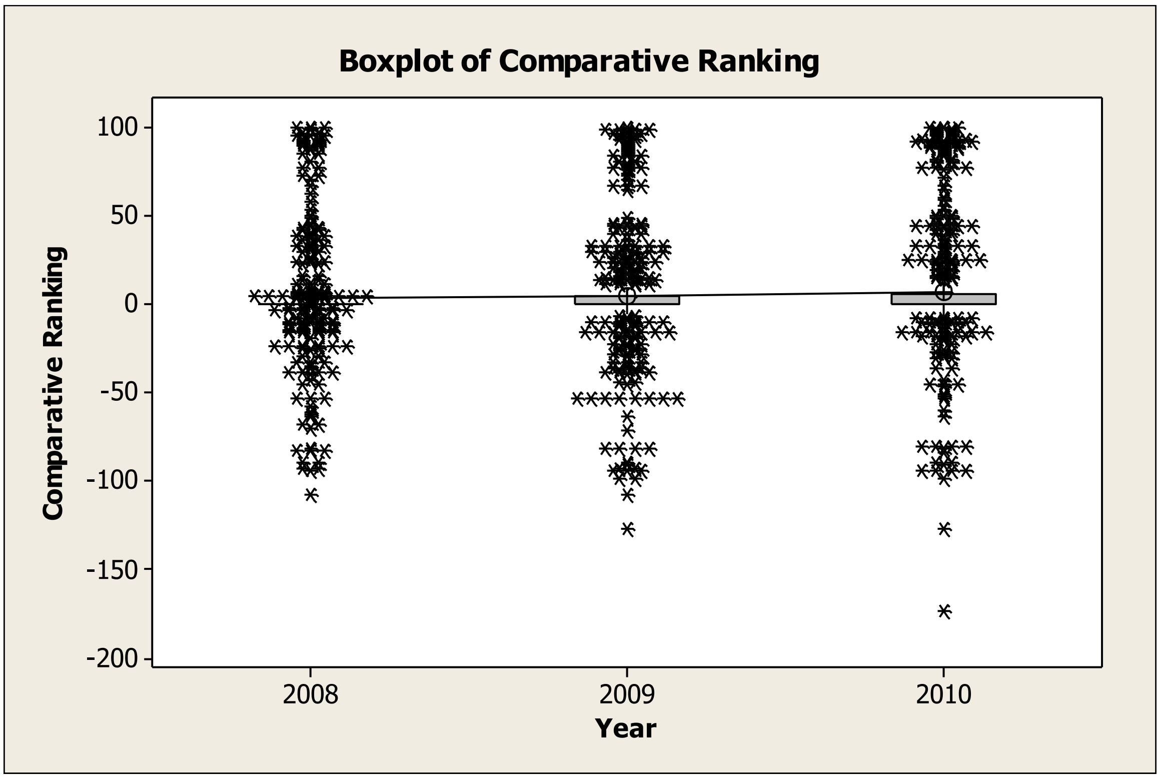
One-way ANOVA: Comparative Ranking versus Year

```
Source     DF        SS     MS     F      P
Year        2      3602   1801  1.52  0.218
Error    1327   1569238   1183
Total    1329   1572840

S = 34.39   R-Sq = 0.23%   R-Sq(adj) = 0.08%
```

```
                               Individual 95% CIs For Mean Based on
                               Pooled StDev
Level     N  Mean  StDev   -+---------+---------+---------+--------
2008    365  3.22  33.82   (-----------*-----------)
2009    485  3.79  33.48      (----------*---------)
2010    480  6.94  35.70               (---------*---------)
                           -+---------+---------+---------+--------
                           0.0       3.0       6.0       9.0

Pooled StDev = 34.39
```



d. Average Comparative Ranking by college (from whole sample)

One-way ANOVA: Comparative Ranking versus School

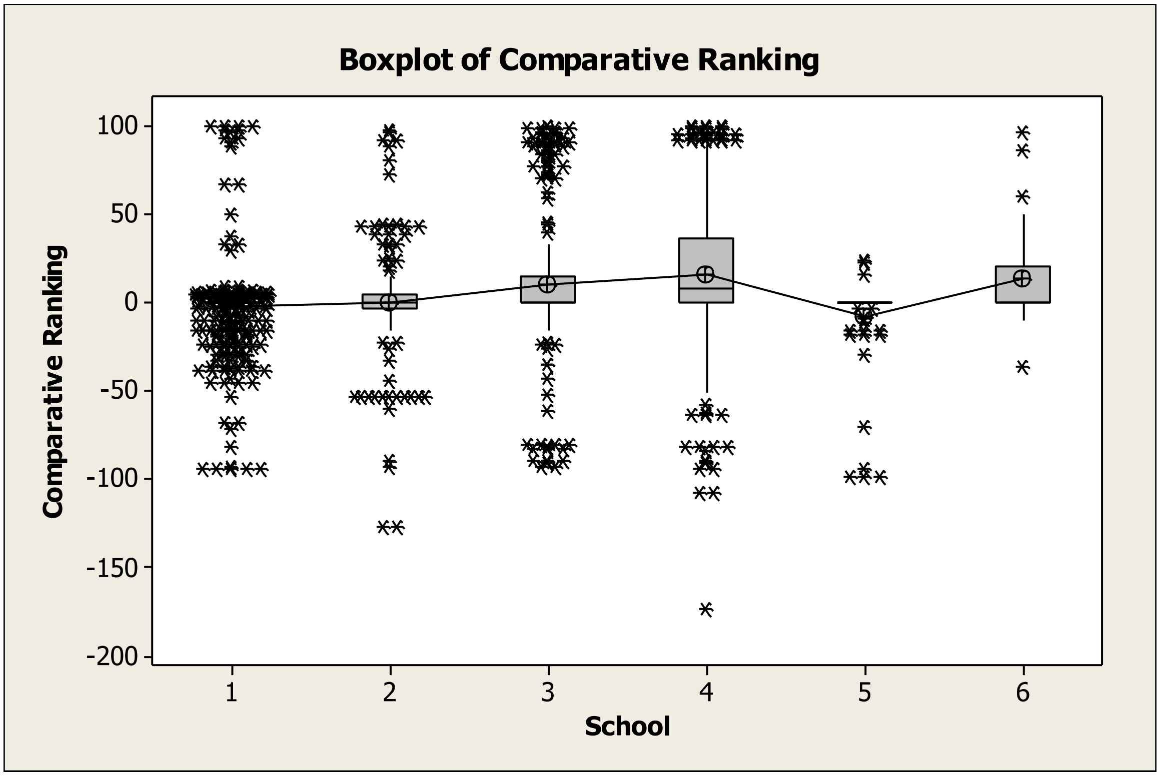
```
Source     DF       SS     MS      F      P
School      5    92272  18454  16.50  0.000
Error    1324  1480568   1118
Total    1329  1572840

S = 33.44   R-Sq = 5.87%   R-Sq(adj) = 5.51%


                                Individual 95% CIs For Mean Based on
                                Pooled StDev
Level     N   Mean  StDev   ---+---------+---------+---------+------
1       561  -2.03  20.82            (-*--)
2       112  -0.11  39.04           (----*----)
3       202  10.09  44.53                     (--*---)
4       353  16.01  41.45                          (--*--)
5        73  -7.73  24.51   (------*-----)
```

```
6        29  13.00  28.14                (---------*---------)
                                    ---+---------+---------+---------+------
                                     -12         0        12        24

Pooled StDev = 33.44
```



e. Average Comparative Ranking by major (from whole sample)

One-way ANOVA: Comparative Ranking versus Major

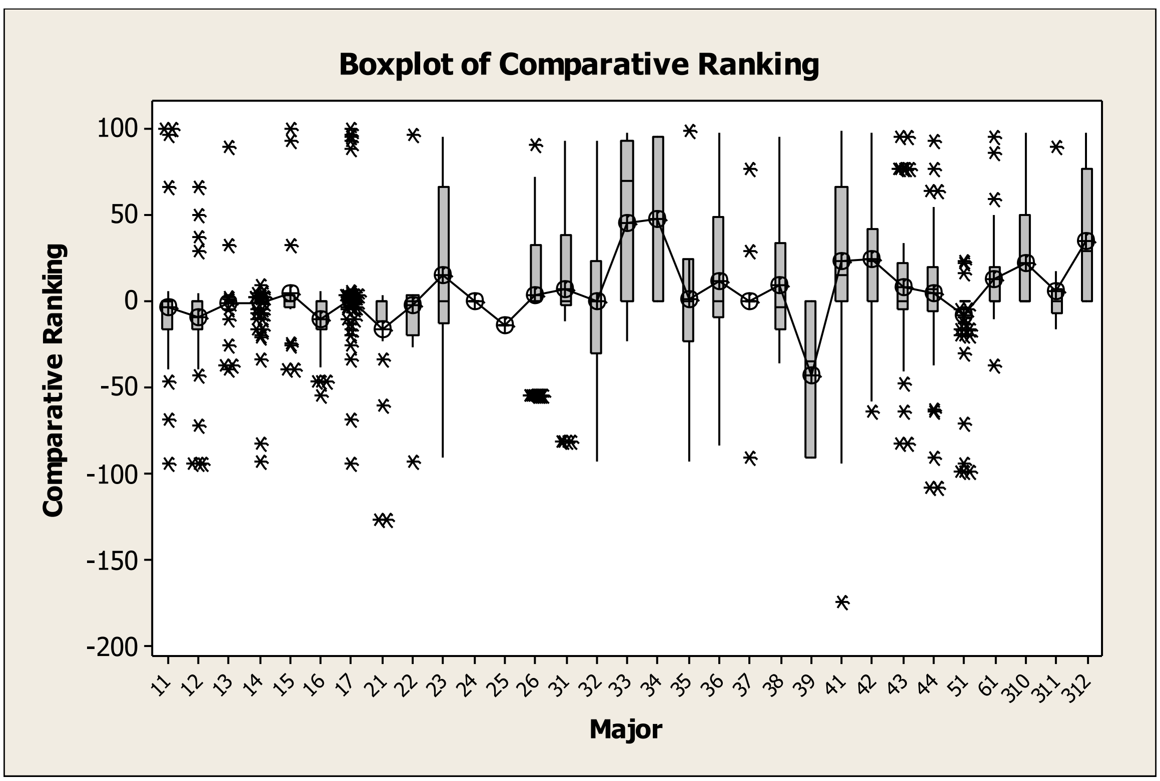
```
Source     DF       SS    MS     F      P
Major      30   188760  6292  5.91  0.000
Error    1299  1384080  1065
Total    1329  1572840

S = 32.64   R-Sq = 12.00%   R-Sq(adj) = 9.97%


                           Individual 95% CIs For Mean Based on
                           Pooled StDev
Level    N    Mean  StDev  ------+---------+---------+---------+---
 11     67   -3.03  29.98                (*-)
 12     55   -9.20  29.45              (-*-)
 13     38   -0.66  19.58                (-*-)
 14    236   -1.19   8.74                 (*)
 15     20    5.45  35.19                (--*--)
 16     44   -9.66  16.04              (-*-)
 17    101    1.88  24.79                 (*-)
 21     26  -15.96  35.54            (--*-)
 22      8   -1.75  51.74             (----*---)
 23     16   14.94  51.50                  (--*--)
 24      8    0.00   0.00             (----*----)
```

```
 25     1  -14.00      *  (-----------*-----------)
 26    53    3.62  36.16                (-*)
 31    25    6.72  51.40                (-*--)
 32    22   -0.05  52.86              (--*--)
 33    13   45.38  48.47                       (--*---)
 34     2   48.00  67.88                   (--------*--------)
 35     6    1.00  60.74            (----*----)
 36    36   12.08  50.74                 (-*--)
 37    41    0.39  19.28               (-*-)
 38     9    9.22  42.04               (---*---)
 39     5  -43.00  45.22   (----*-----)
 41   140   23.35  48.83                     (*)
 42    63   24.06  36.23                    (-*)
 43    55    7.96  37.79                 (-*)
 44    95    4.49  30.42                 (*)
 51    73   -7.73  24.51              (*-)
 61    29   13.00  28.14                 (--*-)
310    21   22.00  37.03                   (-*--)
311    13    6.08  26.90               (--*---)
312     9   35.56  39.60                    (---*---)
                          ------+---------+---------+---------+---
                              -50         0        50       100

Pooled StDev = 32.64
```



7. Majors from which graduates matriculate in the most prestigious graduate schools—students from which majors (on average) matriculate in in programs more comparatively prestigious than a comparable one at Carnegie Mellon University
    a. This variable would summarize the findings of variable (7) found above
    b. For each major, the average comparative ranking will be calculated, and the majors with the highest average comparative rankings will be reported

Average Increase in Ranking	Major
48	Modern Languages
45	History
36	Global Politics
24	Chemistry
23	Biology
22	Decision Science
15	BXA
13	Business Administration
12	Psychology
9	Statistics
8	Math
7	Economics
6	Econ/Stat
5	Engineering and Public Policy
4	Music
4	Physics
2	Mechanical Engineering
1	Philosophy
0	Design
0	English
0	Information Systems
-1	Civil Engineering
-1	Electrical and Computer Engineering
-2	Art
-3	Biomedical Engineering
-8	Computer Science
-9	Chemical Engineering
-10	Material Science Engineering
-14	Drama
-16	Architecture
-43	Policy and Management

8. Regression between comparative ranking and distance from Pittsburgh

Regression Analysis: Salary versus Miles from Pittsburgh

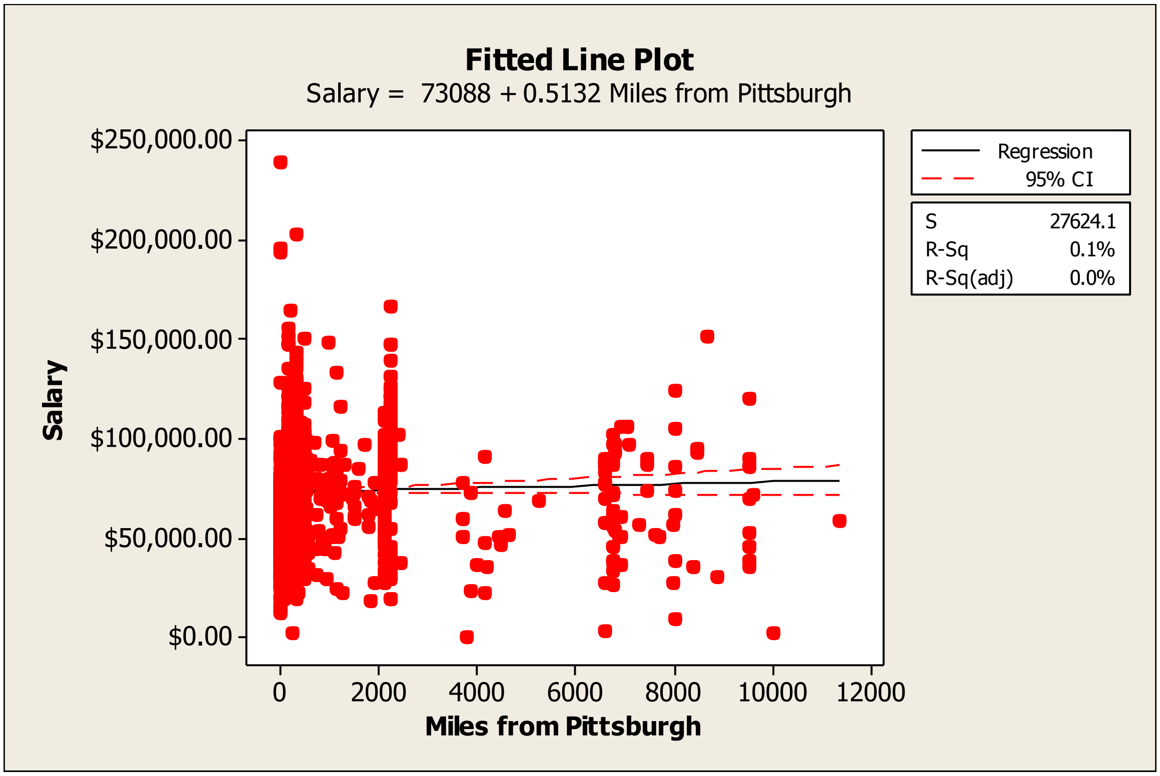
```
The regression equation is
Salary = 73088 + 0.5132 Miles from Pittsburgh


S = 27624.1   R-Sq = 0.1%   R-Sq(adj) = 0.0%


Analysis of Variance

Source          DF            SS            MS      F       P
```

```
Regression      1  1.44936E+09  1449356964  1.90  0.168
Error        1916  1.46208E+12   763091006
Total        1917  1.46353E+12
```



9. Percentage of graduates pursing graduate degrees at Carnegie Mellon
    a. This variable would be calculated using Career Center data on graduate institution at which an alumnus is pursing a graduate degree

Percentage of Students Remaining at CMU for Graduate School			
	Count	Total	Percentage
Total	661	1968	33.58%
2008	238	647	36.78%
2009	244	654	37.31%
2010	179	667	26.84%

10. 10. Most common graduate degrees (top 10) that alumni pursing graduate degrees at Carnegie Mellon are pursuing
    a. This variable is similar to variable (8) found above
    b. The numbers of alumnus pursing individual graduate degree types would be compiled and the most popular (top 10) graduate degrees would be reported

Feq	Percent	Degree
79	7	Electrical and Computer Engineering
33	2.9	Mechanical Engineering
21	1.9	Materials Science and Engineering
16	1.4	Computer Science

16	1.4	Physics
13	1.2	Medicine
10	0.9	Biomedical Engineering
10	0.9	Chemical Engineering
10	0.9	Master of Information Systems Management
9	0.8	Chemistry

11. Mean starting salary of graduates from CMU (for whole sample and each of three sample years)

Whole Sample Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Indeed.com	1938	$.00	$240,000.00	$73,456.0913	$2.76887E4
Valid N (list wise)	1938				

2008 Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Indeed.com	658	$1,320.00	$194,000.00	$71,739.0881	$2.63328E4
Valid N (list wise)	658				

2009 Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Indeed.com	647	$3,000.00	$240,000.00	$75,519.3199	$2.92822E4
Valid N (list wise)	647				

2010 Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Indeed.com	633	$.00	$203,000.00	$73,132.0458	$2.72930E4
Valid N (list wise)	633				

One-way ANOVA: Salary versus Year

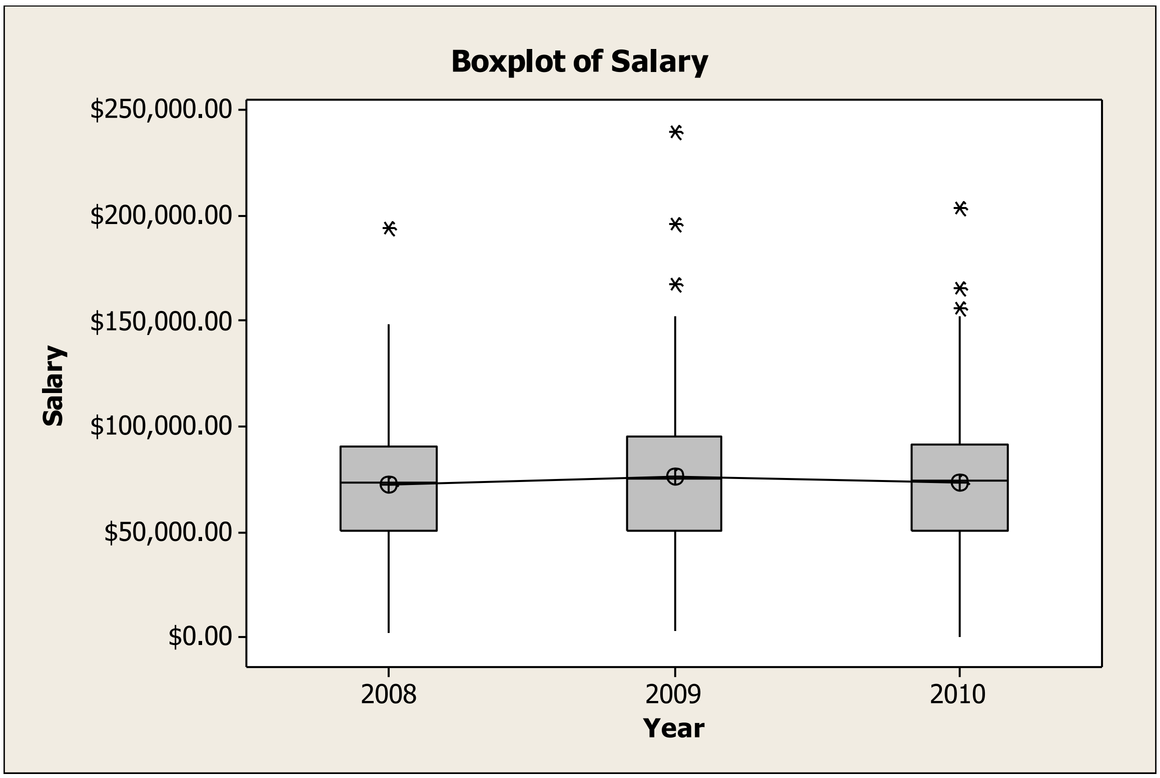
```
Source     DF          SS          MS     F      P
Year        2  4760540488  2380270244  3.11  0.045
```

```
Error   1935  1.48027E+12   764997116
Total   1937  1.48503E+12

S = 27659   R-Sq = 0.32%   R-Sq(adj) = 0.22%


                           Individual 95% CIs For Mean Based on Pooled StDev
Level    N   Mean  StDev     --+---------+---------+---------+-------
2008   658  71739  26333     (--------*-------)
2009   647  75519  29282                     (-------*--------)
2010   633  73132  27293           (--------*-------)
                             --+---------+---------+---------+-------
                           70000     72500     75000     77500

Pooled StDev = 27659
```



12. Regression between mean salary and distance from Pittsburgh

Regression Analysis: Salary versus Miles from Pittsburgh

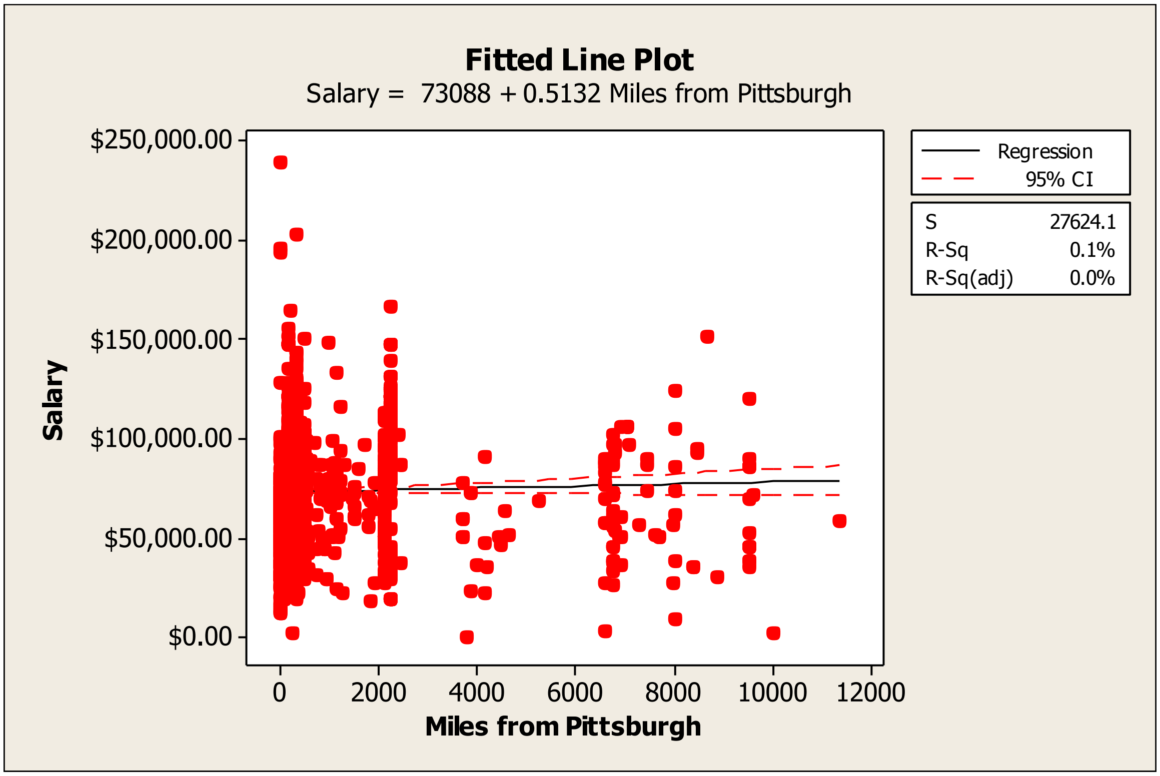
```
The regression equation is
Salary = 73088 + 0.5132 Miles from Pittsburgh


S = 27624.1   R-Sq = 0.1%   R-Sq(adj) = 0.0%


Analysis of Variance

Source        DF           SS          MS     F      P
Regression     1  1.44936E+09  1449356964  1.90  0.168
Error       1916  1.46208E+12   763091006
```

```
Total        1917  1.46353E+12
```



13. Mean starting salary of graduates from each college (for whole sample)

CIT Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Indeed.com	497	$.00	$167,000.00	$77,553.3199	$2.08545E4
Valid N (list wise)	497				

CFA Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Indeed.com	402	$1,300.00	$196,000.00	$60,830.6468	$2.69679E4
Valid N (list wise)	402				

HSS Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation

Indeed.com	325	$9,000.00	$240,000.00	$72,803.0769	$3.05720E4
Valid N (list wise)	325				

MCS Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Indeed.com	221	$1,300.00	$148,000.00	$70,652.9412	$2.97316E4
Valid N (list wise)	221				

SCS Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Indeed.com	274	$29,000.00	$203,000.00	$89,809.0693	$2.36872E4
Valid N (list wise)	274				

Tepper Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Indeed.com	219	$18,000.00	$165,000.00	$70,671.2329	$2.85696E4
Valid N (list wise)	219				

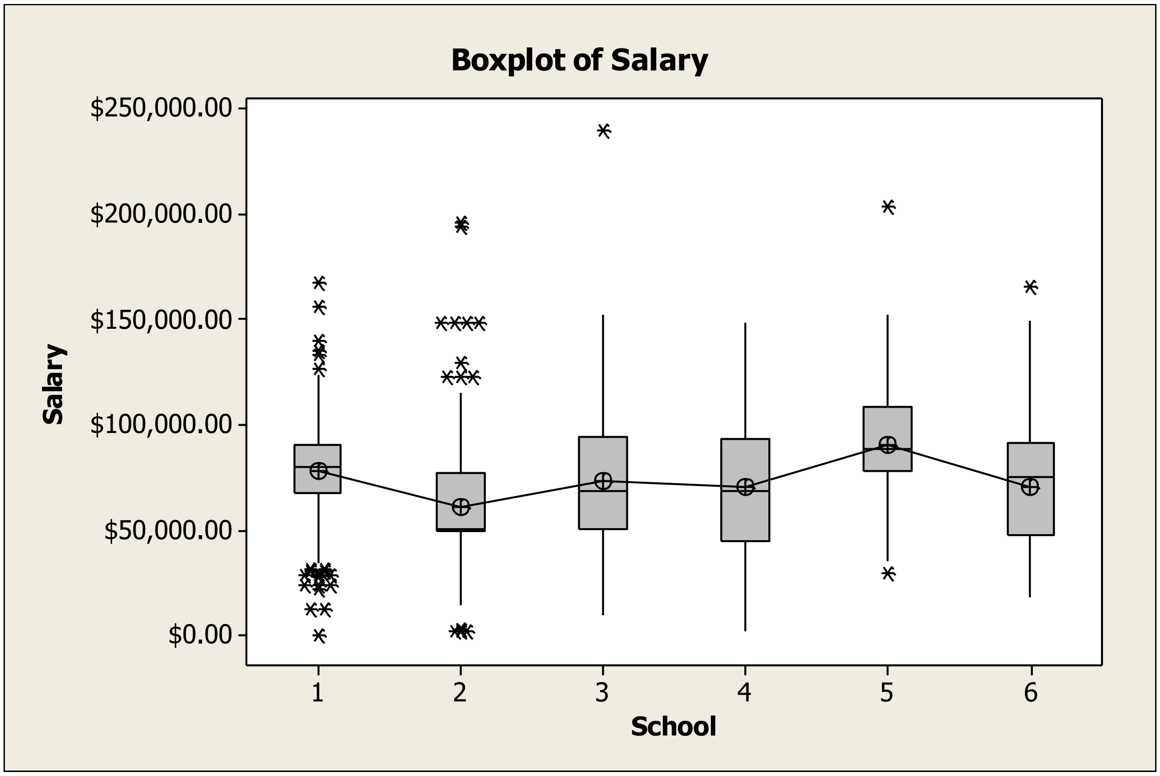
One-way ANOVA: Salary versus School

```
Source     DF           SS           MS      F      P
School      5  1.49269E+11  29853888679  43.18  0.000
Error    1932  1.33576E+12    691387431
Total    1937  1.48503E+12

S = 26294   R-Sq = 10.05%   R-Sq(adj) = 9.82%


                           Individual 95% CIs For Mean Based on Pooled StDev
Level    N   Mean  StDev   --+---------+---------+---------+-------
1      497  77553  20854                     (--*-)
2      402  60831  26968    (--*-)
3      325  72803  30572               (--*--)
4      221  70653  29732            (---*--)
5      274  89809  23687                                  (--*--)
6      219  70671  28570            (---*--)
                           --+---------+---------+---------+-------
                           60000     70000     80000     90000
```

```
Pooled StDev = 26294
```



14. Mean starting salary of graduates from each major (for whole sample)

Salary Statistics of Graduates from Each Major					
	major			Stat Type	
				Statistic	Std. Error
Indeed.com	Biomedical Engineering	Mean		$70,644.4444	$3,563.72798
		95% Confidence Interval for Mean	Lower Bound	$63,462.2226	
			Upper Bound	$77,826.6663	
		5% Trimmed Mean		$71,148.1481	
		Median		$70,000.0000	
		Variance		5.715E8	

		Std. Deviation		$2.39062E4	
		Minimum		$12,000.00	
		Maximum		$114,000.00	
		Range		$102,000.00	
		Interquartile Range		$30,500.00	
		Skewness		-.412	.354
		Kurtosis		-.212	.695
	Chemical Engineering	Mean		$77,204.3011	$2,213.24370
		95% Confidence Interval for Mean	Lower Bound	$72,808.6080	
			Upper Bound	$81,599.9941	
		5% Trimmed Mean		$77,097.3716	
		Median		$78,000.0000	
		Variance		4.556E8	
		Std. Deviation		$2.13437E4	
		Minimum		$24,000.00	
		Maximum		$167,000.00	
		Range		$143,000.00	
		Interquartile Range		$21,000.00	
		Skewness		.331	.250
		Kurtosis		3.082	.495
	Civil Engineering	Mean		$69,025.6410	$3,598.71157
		95% Confidence Interval for Mean	Lower Bound	$61,740.4303	

			Upper Bound	$76,310.8517	
		5% Trimmed Mean		$69,032.7635	
		Median		$71,000.0000	
		Variance		5.051E8	
		Std. Deviation		$2.24739E4	
		Minimum		$.00	
		Maximum		$135,000.00	
		Range		$135,000.00	
		Interquartile Range		$32,000.00	
		Skewness		-.172	.378
		Kurtosis		2.603	.741
	Electrical and Computer Engineering	Mean		$84,804.6875	$1,817.22194
		95% Confidence Interval for Mean	Lower Bound	$81,208.7332	
			Upper Bound	$88,400.6418	
		5% Trimmed Mean		$85,411.4583	
		Median		$87,500.0000	
		Variance		4.227E8	
		Std. Deviation		$2.05595E4	
		Minimum		$28,000.00	
		Maximum		$140,000.00	
		Range		$112,000.00	
		Interquartile		$26,500.00	

		Range			
		Skewness		-.414	.214
		Kurtosis		.134	.425
	Engineering and Public Policy	Mean		$77,206.8966	$3,299.64146
		95% Confidence Interval for Mean	Lower Bound	$70,447.8874	
			Upper Bound	$83,965.9057	
		5% Trimmed Mean		$77,697.3180	
		Median		$79,000.0000	
		Variance		3.157E8	
		Std. Deviation		$1.77691E4	
		Minimum		$22,000.00	
		Maximum		$118,000.00	
		Range		$96,000.00	
		Interquartile Range		$20,000.00	
		Skewness		-.657	.434
		Kurtosis		2.769	.845
	Material Science Engineering	Mean		$69,809.5238	$4,297.62894
		95% Confidence Interval for Mean	Lower Bound	$60,844.8269	
			Upper Bound	$78,774.2207	
		5% Trimmed Mean		$70,407.4074	

		Median		$71,000.0000	
		Variance		3.879E8	
		Std. Deviation		$1.96942E4	
		Minimum		$28,000.00	
		Maximum		$101,000.00	
		Range		$73,000.00	
		Interquartile Range		$26,500.00	
		Skewness		-.574	.501
		Kurtosis		.028	.972
	Mechanical Engineering	Mean		$76,992.9577	$1,518.22730
		95% Confidence Interval for Mean	Lower Bound	$73,991.5264	
			Upper Bound	$79,994.3891	
		5% Trimmed Mean		$77,201.0955	
		Median		$79,000.0000	
		Variance		3.273E8	
		Std. Deviation		$1.80918E4	
		Minimum		$12,000.00	
		Maximum		$156,000.00	
		Range		$144,000.00	
		Interquartile Range		$20,000.00	
		Skewness		.054	.203
		Kurtosis		3.786	.404
	Architecture	Mean		$65,523.6364	$3,283.38131
		95% Confidence	Lower Bound	$58,984.2157	

		Interval for Mean			
			Upper Bound	$72,063.0570	
		5% Trimmed Mean		$64,913.4199	
		Median		$59,000.0000	
		Variance		8.301E8	
		Std. Deviation		$2.88116E4	
		Minimum		$1,320.00	
		Maximum		$129,000.00	
		Range		$127,680.00	
		Interquartile Range		$44,000.00	
		Skewness		.377	.274
		Kurtosis		-.682	.541
	Art	Mean		$47,706.0606	$3,975.18805
		95% Confidence Interval for Mean	Lower Bound	$39,608.8675	
			Upper Bound	$55,803.2537	
		5% Trimmed Mean		$47,250.8418	
		Median		$41,000.0000	
		Variance		5.215E8	
		Std. Deviation		$2.28357E4	
		Minimum		$1,300.00	
		Maximum		$104,000.00	
		Range		$102,700.00	
		Interquartile		$37,000.00	

		Range			
		Skewness		.382	.409
		Kurtosis		-.012	.798
	BXA	Mean		$36,915.0000	$5,096.01121
		95% Confidence Interval for Mean	Lower Bound	$26,248.9260	
			Upper Bound	$47,581.0740	
		5% Trimmed Mean		$35,333.3333	
		Median		$31,000.0000	
		Variance		5.194E8	
		Std. Deviation		$2.27901E4	
		Minimum		$1,300.00	
		Maximum		$101,000.00	
		Range		$99,700.00	
		Interquartile Range		$28,750.00	
		Skewness		1.055	.512
		Kurtosis		2.148	.992
	Design	Mean		$74,931.2977	$2,711.99659
		95% Confidence Interval for Mean	Lower Bound	$69,565.9368	
			Upper Bound	$80,296.6586	
		5% Trimmed Mean		$73,204.4105	
		Median		$74,000.0000	
		Variance		9.635E8	

		Std. Deviation		$3.10402E4	
		Minimum		$19,000.00	
		Maximum		$196,000.00	
		Range		$177,000.00	
		Interquartile Range		$35,000.00	
		Skewness		.936	.212
		Kurtosis		2.503	.420
	Drama	Mean		$52,218.4874	$1,048.33749
		95% Confidence Interval for Mean	Lower Bound	$50,142.4938	
			Upper Bound	$54,294.4810	
		5% Trimmed Mean		$50,989.7292	
		Median		$50,000.0000	
		Variance		1.308E8	
		Std. Deviation		$1.14360E4	
		Minimum		$27,000.00	
		Maximum		$104,000.00	
		Range		$77,000.00	
		Interquartile Range		$.00	
		Skewness		2.557	.222
		Kurtosis		8.032	.440
	Music	Mean		$48,454.5455	$3,030.67097
		95% Confidence Interval for Mean	Lower Bound	$42,151.9201	
			Upper	$54,757.1708	

			Bound		
		5% Trimmed Mean		$47,439.3939	
		Median		$50,000.0000	
		Variance		2.021E8	
		Std. Deviation		$1.42151E4	
		Minimum		$29,000.00	
		Maximum		$88,000.00	
		Range		$59,000.00	
		Interquartile Range		$14,000.00	
		Skewness		.851	.491
		Kurtosis		1.670	.953
	Economics	Mean		$69,310.3448	$4,339.95739
		95% Confidence Interval for Mean	Lower Bound	$60,420.3451	
			Upper Bound	$78,200.3445	
		5% Trimmed Mean		$69,214.5594	
		Median		$69,000.0000	
		Variance		5.462E8	
		Std. Deviation		$2.33714E4	
		Minimum		$30,000.00	
		Maximum		$115,000.00	
		Range		$85,000.00	
		Interquartile Range		$39,000.00	
		Skewness		-.053	.434
		Kurtosis		-.886	.845

	English	Mean		$57,388.8889	$4,159.95226
		95% Confidence Interval for Mean	Lower Bound	$48,943.7368	
			Upper Bound	$65,834.0410	
		5% Trimmed Mean		$56,197.5309	
		Median		$52,000.0000	
		Variance		6.230E8	
		Std. Deviation		$2.49597E4	
		Minimum		$13,000.00	
		Maximum		$125,000.00	
		Range		$112,000.00	
		Interquartile Range		$32,750.00	
		Skewness		.835	.393
		Kurtosis		.441	.768
	History	Mean		$55,750.0000	$6,177.15443
		95% Confidence Interval for Mean	Lower Bound	$42,821.0672	
			Upper Bound	$68,678.9328	
		5% Trimmed Mean		$55,333.3333	
		Median		$56,500.0000	
		Variance		7.631E8	
		Std. Deviation		$2.76251E4	
		Minimum		$19,000.00	

		Maximum		$100,000.00	
		Range		$81,000.00	
		Interquartile Range		$46,500.00	
		Skewness		.282	.512
		Kurtosis		-1.291	.992
	Modern Languages	Mean		$61,900.0000	$7,678.90328
		95% Confidence Interval for Mean	Lower Bound	$44,529.1139	
			Upper Bound	$79,270.8861	
		5% Trimmed Mean		$60,333.3333	
		Median		$54,500.0000	
		Variance		5.897E8	
		Std. Deviation		$2.42828E4	
		Minimum		$36,000.00	
		Maximum		$116,000.00	
		Range		$80,000.00	
		Interquartile Range		$32,500.00	
		Skewness		1.380	.687
		Kurtosis		1.739	1.334
	Philosophy	Mean		$63,307.6923	$5,909.99221
		95% Confidence Interval for Mean	Lower Bound	$50,430.9255	
			Upper Bound	$76,184.4592	
		5% Trimmed		$63,230.7692	

		Mean			
		Median		$64,000.0000	
		Variance		4.541E8	
		Std. Deviation		$2.13088E4	
		Minimum		$26,000.00	
		Maximum		$102,000.00	
		Range		$76,000.00	
		Interquartile Range		$31,000.00	
		Skewness		.178	.616
		Kurtosis		-.243	1.191
	Psychology	Mean		$69,379.3103	$7,738.55643
		95% Confidence Interval for Mean	Lower Bound	$53,527.5961	
			Upper Bound	$85,231.0246	
		5% Trimmed Mean		$64,310.3448	
		Median		$65,000.0000	
		Variance		1.737E9	
		Std. Deviation		$4.16734E4	
		Minimum		$26,000.00	
		Maximum		$240,000.00	
		Range		$214,000.00	
		Interquartile Range		$42,500.00	
		Skewness		2.586	.434
		Kurtosis		9.490	.845
	Information Systems	Mean		$89,395.3488	$2,940.64768
		95% Confidence	Lower Bound	$83,548.5534	

		Interval for Mean			
			Upper Bound	$95,242.1442	
		5% Trimmed Mean		$89,675.7106	
		Median		$90,000.0000	
		Variance		7.437E8	
		Std. Deviation		$2.72704E4	
		Minimum		$9,000.00	
		Maximum		$143,000.00	
		Range		$134,000.00	
		Interquartile Range		$44,750.00	
		Skewness		-.226	.260
		Kurtosis		-.311	.514
	Statistics	Mean		$72,285.7143	$6,951.23931
		95% Confidence Interval for Mean	Lower Bound	$55,276.6444	
			Upper Bound	$89,294.7841	
		5% Trimmed Mean		$72,706.3492	
		Median		$68,000.0000	
		Variance		3.382E8	
		Std. Deviation		$1.83913E4	
		Minimum		$44,000.00	
		Maximum		$93,000.00	
		Range		$49,000.00	
		Interquartile		$33,000.00	

		Range			
		Skewness		-.295	.794
		Kurtosis		-1.216	1.587
	Policy and Management	Mean		$64,080.0000	$5,460.43954
		95% Confidence Interval for Mean	Lower Bound	$52,810.2067	
			Upper Bound	$75,349.7933	
		5% Trimmed Mean		$63,033.3333	
		Median		$63,000.0000	
		Variance		7.454E8	
		Std. Deviation		$2.73022E4	
		Minimum		$27,000.00	
		Maximum		$121,000.00	
		Range		$94,000.00	
		Interquartile Range		$44,500.00	
		Skewness		.482	.464
		Kurtosis		-.615	.902
	Biology	Mean		$55,968.2353	$3,399.53869
		95% Confidence Interval for Mean	Lower Bound	$49,207.8798	
			Upper Bound	$62,728.5908	
		5% Trimmed Mean		$52,656.8627	
		Median		$50,000.0000	

		Variance		9.823E8	
		Std. Deviation		$3.13422E4	
		Minimum		$1,300.00	
		Maximum		$148,000.00	
		Range		$146,700.00	
		Interquartile Range		$18,000.00	
		Skewness		2.078	.261
		Kurtosis		3.847	.517
	Chemistry	Mean		$52,769.2308	$3,907.90429
		95% Confidence Interval for Mean	Lower Bound	$44,720.7512	
			Upper Bound	$60,817.7103	
		5% Trimmed Mean		$51,418.8034	
		Median		$50,000.0000	
		Variance		3.971E8	
		Std. Deviation		$1.99265E4	
		Minimum		$29,000.00	
		Maximum		$105,000.00	
		Range		$76,000.00	
		Interquartile Range		$19,500.00	
		Skewness		1.107	.456
		Kurtosis		.619	.887
	Math	Mean		$82,425.0000	$2,350.04545
		95% Confidence Interval for Mean	Lower Bound	$77,747.3515	

			Upper Bound	$87,102.6485	
		5% Trimmed Mean		$83,361.1111	
		Median		$90,500.0000	
		Variance		4.418E8	
		Std. Deviation		$2.10194E4	
		Minimum		$31,000.00	
		Maximum		$120,000.00	
		Range		$89,000.00	
		Interquartile Range		$27,250.00	
		Skewness		-.748	.269
		Kurtosis		.041	.532
	Physics	Mean		$96,366.6667	$3,314.71236
		95% Confidence Interval for Mean	Lower Bound	$89,587.3187	
			Upper Bound	$1.0315E5	
		5% Trimmed Mean		$96,833.3333	
		Median		$1.0000E5	
		Variance		3.296E8	
		Std. Deviation		$1.81554E4	
		Minimum		$59,000.00	
		Maximum		$125,000.00	
		Range		$66,000.00	
		Interquartile Range		$31,000.00	
		Skewness		-.416	.427

		Kurtosis		-.526	.833
	Computer Science	Mean		$89,809.0693	$1,430.99772
		95% Confidence Interval for Mean	Lower Bound	$86,991.8761	
			Upper Bound	$92,626.2626	
		5% Trimmed Mean		$89,658.9619	
		Median		$88,500.0000	
		Variance		5.611E8	
		Std. Deviation		$2.36872E4	
		Minimum		$29,000.00	
		Maximum		$203,000.00	
		Range		$174,000.00	
		Interquartile Range		$30,250.00	
		Skewness		.307	.147
		Kurtosis		1.305	.293
	Business Administration	Mean		$70,671.2329	$1,930.55424
		95% Confidence Interval for Mean	Lower Bound	$66,866.2927	
			Upper Bound	$74,476.1730	
		5% Trimmed Mean		$70,278.7925	
		Median		$75,000.0000	
		Variance		8.162E8	
		Std.		$2.85696E4	

		Deviation			
		Minimum		$18,000.00	
		Maximum		$165,000.00	
		Range		$147,000.00	
		Interquartile Range		$44,000.00	
		Skewness		.024	.164
		Kurtosis		-.468	.327
	Decision Science	Mean		$65,666.6667	$5,226.61941
		95% Confidence Interval for Mean	Lower Bound	$55,020.3913	
			Upper Bound	$76,312.9420	
		5% Trimmed Mean		$64,176.7677	
		Median		$56,000.0000	
		Variance		9.015E8	
		Std. Deviation		$3.00246E4	
		Minimum		$16,000.00	
		Maximum		$152,000.00	
		Range		$136,000.00	
		Interquartile Range		$36,500.00	
		Skewness		.879	.409
		Kurtosis		.829	.798
	Economics/Statistics	Mean		$86,266.6667	$5,503.17220
		95% Confidence Interval for Mean	Lower Bound	$75,011.4158	
			Upper Bound	$97,521.9176	

		5% Trimmed Mean		$86,259.2593	
		Median		$88,000.0000	
		Variance		9.085E8	
		Std. Deviation		$3.01421E4	
		Minimum		$22,000.00	
		Maximum		$152,000.00	
		Range		$130,000.00	
		Interquartile Range		$45,500.00	
		Skewness		-.054	.427
		Kurtosis		-.357	.833
	Global Politics	Mean		$66,428.5714	$8,604.69734
		95% Confidence Interval for Mean	Lower Bound	$45,373.6355	
			Upper Bound	$87,483.5073	
		5% Trimmed Mean		$66,976.1905	
		Median		$58,000.0000	
		Variance		5.183E8	
		Std. Deviation		$2.27659E4	
		Minimum		$29,000.00	
		Maximum		$94,000.00	
		Range		$65,000.00	
		Interquartile Range		$31,000.00	
		Skewness		-.406	.794
		Kurtosis		-.506	1.587

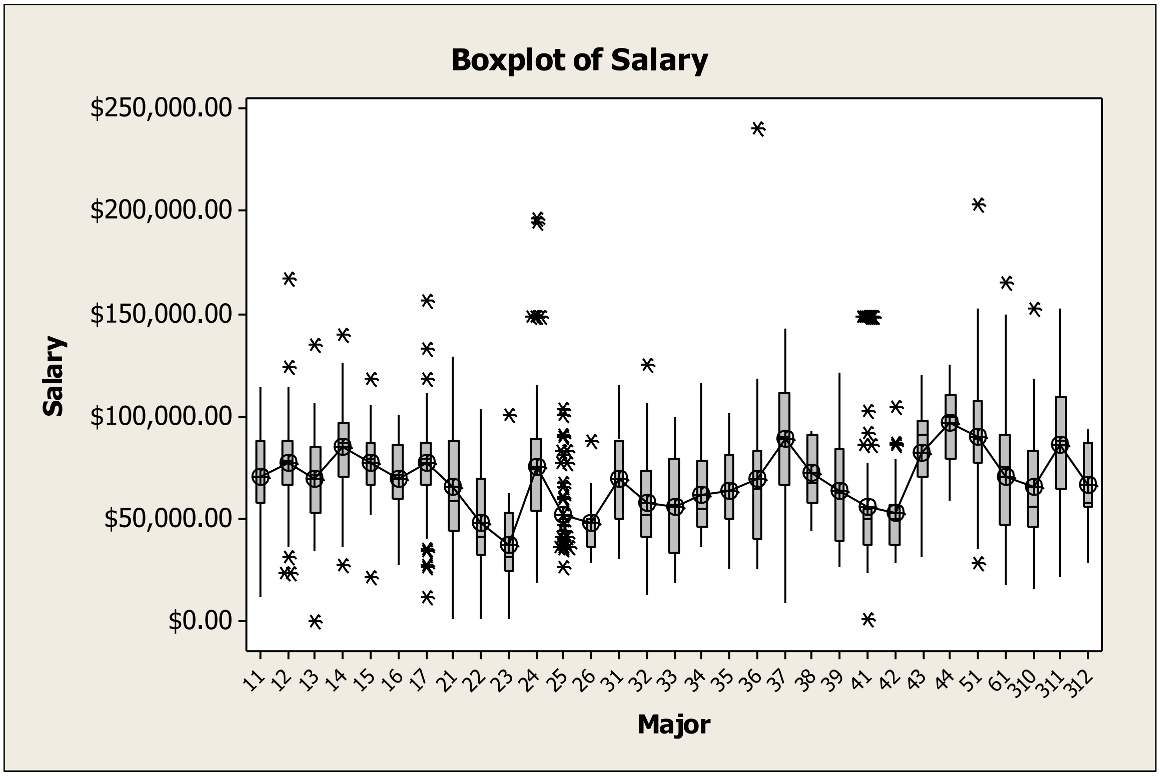
One-way ANOVA: Salary versus Major

```
Source    DF           SS           MS      F      P
Major     30  3.27340E+11  10911317813  17.97  0.000
Error   1907  1.15769E+12    607074161
Total   1937  1.48503E+12

S = 24639   R-Sq = 22.04%   R-Sq(adj) = 20.82%


                          Individual 95% CIs For Mean Based on
                          Pooled StDev
Level     N   Mean  StDev  -------+---------+---------+---------+--
 11      45  70644  23906                     (--*---)
 12      93  77204  21344                         (--*-)
 13      39  69026  22474                    (---*--)
 14     128  84805  20560                             (-*--)
 15      29  77207  17769                       (----*---)
 16      21  69810  19694                   (----*----)
 17     142  76993  18092                         (-*--)
 21      77  65524  28812                   (--*--)
 22      33  47706  22836         (---*---)
 23      20  36915  22790  (----*-----)
 24     131  74931  31040                        (-*--)
 25     119  52218  11436             (-*-)
 26      22  48455  14215        (----*----)
 31      29  69310  23371                   (----*---)
 32      36  57389  24960              (---*---)
 33      20  55750  27625           (-----*----)
 34      10  61900  24283            (-------*-------)
 35      13  63308  21309              (------*-----)
 36      29  69379  41673                   (----*---)
 37      86  89395  27270                               (--*-)
 38       7  72286  18391                (--------*--------)
 39      25  64080  27302                (----*----)
 41      85  55968  31342              (--*--)
 42      26  52769  19926           (---*----)
 43      80  82425  21019                            (-*--)
 44      30  96367  18155                                 (---*----)
 51     274  89809  23687                                (-*)
 61     219  70671  28570                       (*-)
310      33  65667  30025                  (---*---)
311      30  86267  30142                            (---*----)
312       7  66429  22766             (--------*--------)
                           -------+---------+---------+---------+--
                              40000     60000     80000    100000

Pooled StDev = 24639
```



15. Distance of location/graduate institution location from Pittsburgh
    a. This variable could help indicate how undergraduates found their experience in Pittsburgh
    b. Percentages of the job locations (states) of CMU alumni
        i. This variable would be calculated using the Career Center data on job location

state/country					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		242	7.3	7.3	7.3
	AL	4	.1	.1	7.4
	Angola	1	.0	.0	7.5
	Australia	2	.1	.1	7.5
	AZ	15	.5	.5	8.0
	CA	365	11.0	11.0	19.0
	CA (Ventura)	1	.0	.0	19.0
	Canada	7	.2	.2	19.2
	Canada	1	.0	.0	19.3
	Caribbean	1	.0	.0	19.3
	China	7	.2	.2	19.5

	CO	9	.3	.3	19.8
	CT	52	1.6	1.6	21.4
	DC	73	2.2	2.2	23.6
	DE	3	.1	.1	23.6
	Egypt	1	.0	.0	23.7
	England	2	.1	.1	23.7
	FL	1	.0	.0	23.8
	FL	28	.8	.8	24.6
	FRA	1	.0	.0	24.6
	France	1	.0	.0	24.7
	GA	26	.8	.8	25.5
	Germany	5	.2	.2	25.6
	HI	1	.0	.0	25.6
	Hong Kong	2	.1	.1	25.7
	Hungary	1	.0	.0	25.7
	IA	4	.1	.1	25.9
	IL	86	2.6	2.6	28.5
	IN	9	.3	.3	28.7
	India	9	.3	.3	29.0
	Indonesia	1	.0	.0	29.0
	Italy	2	.1	.1	29.1
	Japan	10	.3	.3	29.4
	JP	3	.1	.1	29.5
	Korea	18	.5	.5	30.0
	Korea (Seoul)	1	.0	.0	30.1
	KR	1	.0	.0	30.1
	KR	1	.0	.0	30.1
	KS	1	.0	.0	30.1
	KY	10	.3	.3	30.4
	LA	6	.2	.2	30.6
	MA	117	3.5	3.5	34.2
	MD	81	2.4	2.4	36.6
	ME	3	.1	.1	36.7
	Mexico	1	.0	.0	36.7
	MI	34	1.0	1.0	37.8
	MN	4	.1	.1	37.9

	MO	7	.2	.2	38.1
	MS	2	.1	.1	38.1
	NA	1	.0	.0	38.2
	NC	36	1.1	1.1	39.3
	New Zealand	1	.0	.0	39.3
	NH	1	.0	.0	39.3
	NJ	84	2.5	2.5	41.9
	NM	5	.2	.2	42.0
	Norway	2	.1	.1	42.1
	NV	5	.2	.2	42.2
	NY	438	13.2	13.2	55.5
	NY	1	.0	.0	55.5
	OH	70	2.1	2.1	57.6
	OK	2	.1	.1	57.7
	OR	7	.2	.2	57.9
	overseas	1	.0	.0	57.9
	PA	1016	30.7	30.7	88.6
	Philippines	2	.1	.1	88.6
	PRC	1	.0	.0	88.7
	Qatar	4	.1	.1	88.8
	RI	10	.3	.3	89.1
	S Korea	1	.0	.0	89.1
	SC	9	.3	.3	89.4
	SD	1	.0	.0	89.4
	SG	1	.0	.0	89.5
	Singapore	13	.4	.4	89.9
	SLO	1	.0	.0	89.9
	South America	1	.0	.0	89.9
	South Korea	3	.1	.1	90.0
	Spain (Madrid)	1	.0	.0	90.0
	Switzerland	3	.1	.1	90.1
	Taiwan	2	.1	.1	90.2
	Thailand	1	.0	.0	90.2
	TN	2	.1	.1	90.3

	Turkey	1	.0	.0	90.3
	TX	48	1.4	1.4	91.8
	UAE	5	.2	.2	91.9
	UK	12	.4	.4	92.3
	United Kingdom	2	.1	.1	92.3
	UT	2	.1	.1	92.4
	VA	140	4.2	4.2	96.6
	Virgin Islands	1	.0	.0	96.6
	VT	3	.1	.1	96.7
	WA	82	2.5	2.5	99.2
	WI	25	.8	.8	100.0
	WV	1	.0	.0	100.0
	Total	3311	100.0	100.0	

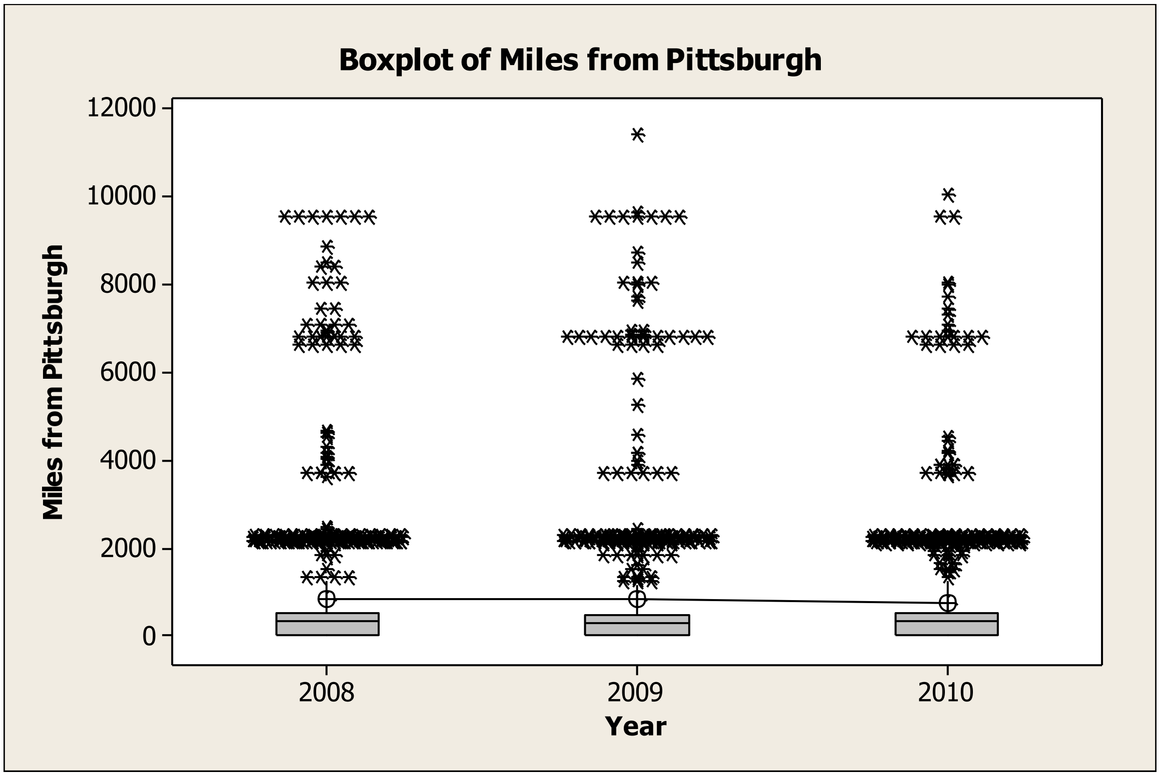
One-way ANOVA: Miles from Pittsburgh versus Year

```
Source     DF          SS       MS     F      P
Year        2     6110072  3055036  1.41  0.244
Error    3275  7091633329  2165384
Total    3277  7097743401

S = 1472   R-Sq = 0.09%   R-Sq(adj) = 0.03%


                          Individual 95% CIs For Mean Based on Pooled StDev
Level     N  Mean  StDev    +---------+---------+---------+---------
2008   1022   833   1551                 (----------*----------)
2009   1134   800   1577             (----------*----------)
2010   1122   729   1273    (----------*----------)
                            +---------+---------+---------+---------
                          640       720       800       880

Pooled StDev = 1472
```



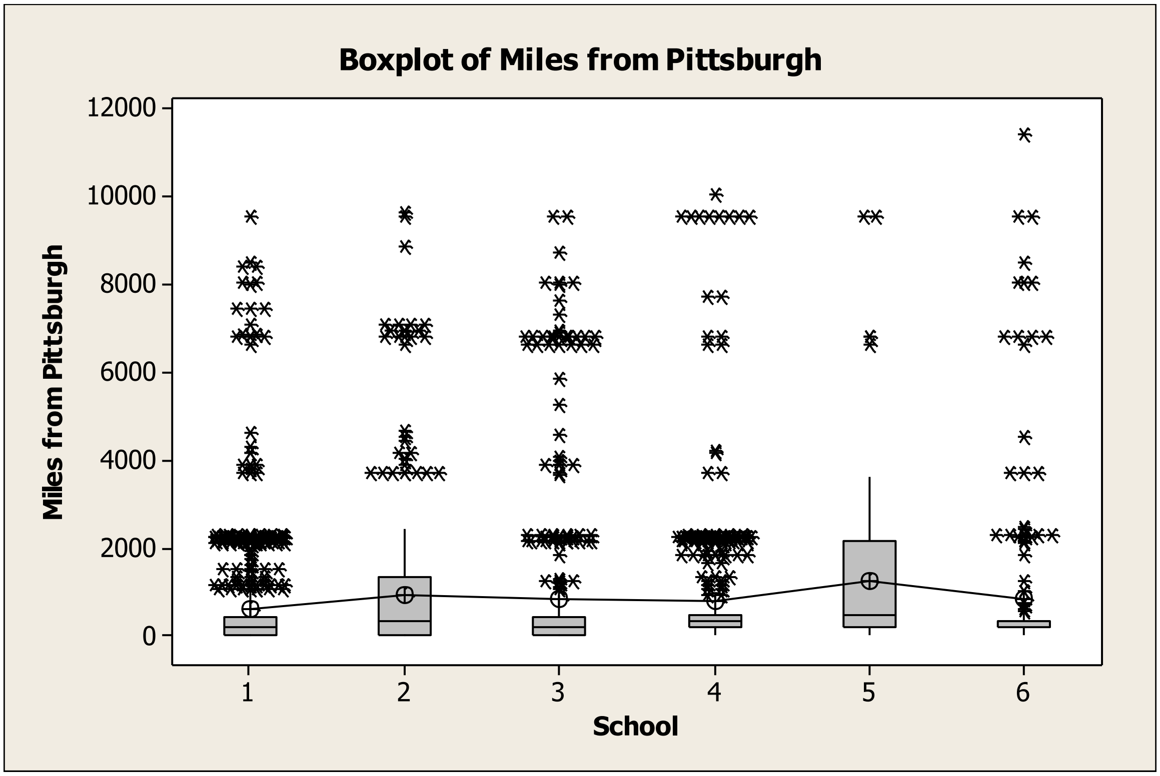
One-way ANOVA: Miles from Pittsburgh versus School

```
Source    DF          SS        MS      F      P
School     5   121648622  24329724  11.41  0.000
Error   3272  6976094779   2132058
Total   3277  7097743401

S = 1460   R-Sq = 1.71%   R-Sq(adj) = 1.56%


                                Individual 95% CIs For Mean Based on Pooled StDev
Level     N  Mean  StDev    +---------+---------+---------+---------
1      1059   576   1209    (--*---)
2       519   928   1508                (----*----)
3       532   801   1742          (----*----)
4       574   764   1488         (----*---)
5       345  1217   1286                              (-----*-----)
6       249   808   1800        (------*-------)
                            +---------+---------+---------+---------
                          500       750      1000      1250

Pooled StDev = 1460
```



One-way ANOVA: Miles from Pittsburgh versus Major

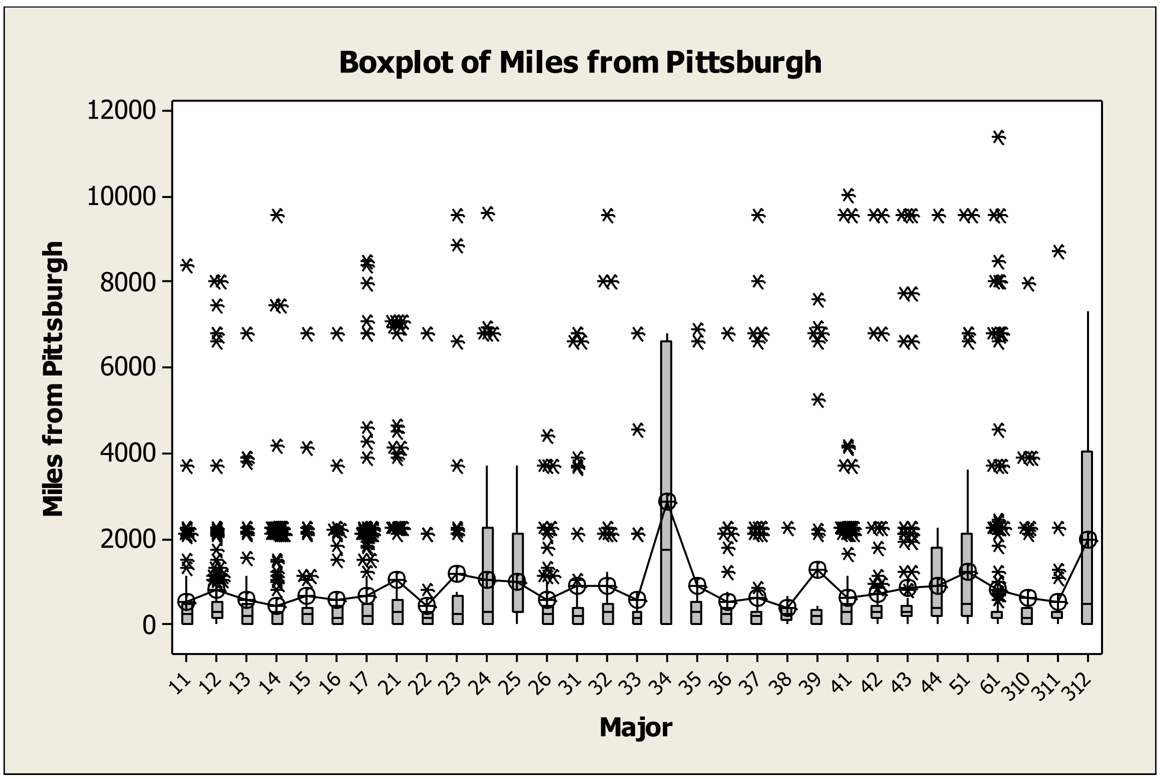
```
Source     DF           SS       MS     F      P
Major      30    273202911  9106764  4.33  0.000
Error    3247   6824540490  2101799
Total    3277   7097743401

S = 1450   R-Sq = 3.85%   R-Sq(adj) = 2.96%


                              Individual 95% CIs For Mean Based on
                              Pooled StDev
Level     N  Mean  StDev  ---+---------+---------+---------+------
 11     108   525   1029       (-*--)
 12     143   795   1514          (-*-)
 13      80   573   1140       (--*-)
 14     363   435   1019       (-*)
 15      53   665   1207       (---*--)
 16      65   582   1127       (--*--)
 17     247   660   1361         (-*)
 21     105  1046   1913           (--*-)
 22      40   438   1134     (---*--)
 23      37  1167   2347           (---*---)
 24     140  1038   1578            (-*-)
 25     120  1017    945           (-*--)
 26      77   569    966       (--*-)
 31      54   915   1870         (---*--)
 32      58   888   1920         (--*---)
 33      33   602   1430      (---*---)
 34      12  2881   3053                           (------*------)
 35      19   923   2066       (-----*----)
 36      64   519    996      (--*--)
 37     128   623   1540        (-*-)
```

```
 38      15   371    552  (-----*-----)
 39      38  1267   2432            (---*--)
 41     225   627   1312        (*-)
 42      89   725   1709        (-*--)
 43     135   883   1838         (-*-)
 44     125   912   1149         (--*-)
 51     345  1217   1286              (*)
 61     249   808   1800         (-*)
310      54   647   1429     (--*---)
311      42   523   1350    (--*---)
312      15  1980   2683              (-----*------)
                          ---+---------+---------+---------+------
                             0      1200      2400      3600

Pooled StDev = 1450
```



16. Percentage of graduates electing to remain in Pittsburgh for employment or educational purposes
    a. Percentage of graduates electing to remain in Pittsburgh for employment
    b. Percentage of graduates electing to remain in Pittsburgh for education
    c. This variable would be calculated using the Career Center's data on job

Percentage of Students Remaining in Pittsburgh for Job/Education			
Year	**Count**	**Total**	**Percent**
Total	985	3311	29.74%
2008	289	1032	28%
2009	356	1149	30.98%
2010	338	1130	29.91%

Meta Analysis

Proportions Employed

Total

SRS 300

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Employment	299	.5786	.49461	.02860

One-Sample Test						
	Test Value = 0.417396557					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Employment	5.636	298	.000	.16120	.1049	.2175

SRS 900

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	900	.5978	.49062	.01635

One-Sample Test						
	Test Value = 0.417396557					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	11.030	899	.000	.18038	.1483	.2125

SRS 1800

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	1800	.58	.493	.012

One-Sample Test						
	Test Value = 0.417396557					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper

employed	14.225	1799	.000	.165	.14	.19

SRS 2700

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	2700	.6007	.48984	.00943

One-Sample Test						
	Test Value = 0.417396557					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	19.449	2699	.000	.18334	.1649	.2018

CIT

SRS 300

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Employment	99	.4646	.50129	.05038

One-Sample Test						
	Test Value = 0.482472325					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Employment	-.354	98	.724	-.01783	-.1178	.0822

SRS 900

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	293	.4778	.50036	.02923

One-Sample Test					
	Test Value = 0.482472325				
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference

					Lower	Upper
employed	-.159	292	.874	-.00466	-.0622	.0529

SRS 1800

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	614	.46	.499	.020

One-Sample Test						
	Test Value = 0.482472325					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	-.909	613	.364	-.018	-.06	.02

SRS 2700

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	890	.48	.500	.017

One-Sample Test						
	Test Value = 0.482472325					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	.107	889	.915	.002	-.03	.03

CFA

SRS 300

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Employment	46	.7826	.41703	.06149

One-Sample Test						
	Test Value = 0.773512476					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Employment	.148	45	.883	.00910	-.1147	.1329

SRS 900

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	139	.8058	.39705	.03368

One-Sample Test						
	Test Value = 0.773512476					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	.957	138	.340	.03224	-.0343	.0988

SRS 1800

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	268	.78	.415	.025

One-Sample Test						
	Test Value = 0.773512476					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	.250	267	.803	.006	-.04	.06

SRS 2700

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean

employed	424	.79	.408	.020

One-Sample Test						
	Test Value = 0.773512476					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	.837	423	.403	.017	-.02	.06

HSS

SRS 300

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Employment	38	.5000	.50671	.08220

One-Sample Test						
	Test Value = 0.608208955					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Employment	-1.316	37	.196	-.10821	-.2748	.0583

SRS 900

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	161	.5714	.49642	.03912

One-Sample Test						
	Test Value = 0.608208955					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	-.940	160	.349	-.03678	-.1140	.0405

SRS 1800

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean

employed	300	.61	.488	.028

One-Sample Test						
	Test Value = 0.608208955					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	.182	299	.856	.005	-.05	.06

SRS 2700

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	438	.62	.485	.023

One-Sample Test						
	Test Value = 0.608208955					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	.651	437	.516	.015	-.03	.06

MCS

SRS 300

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Employment	54	.3333	.47583	.06475

One-Sample Test						
	Test Value = 0.385017422					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Employment	-.798	53	.428	-.05168	-.1816	.0782

SRS 900

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean

employed	139	.3885	.48917	.04149

One-Sample Test						
	Test Value = 0.385017422					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	.084	138	.933	.00347	-.0786	.0855

SRS 1800

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	294	.35	.478	.028

One-Sample Test						
	Test Value = 0.385017422					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	-1.244	293	.214	-.035	-.09	.02

SRS 2700

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	471	.39	.489	.023

One-Sample Test						
	Test Value = 0.385017422					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	.345	470	.731	.008	-.04	.05

SCS

SRS 300

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Employment	37	.8108	.39706	.06528

One-Sample Test						
	Test Value = 0.78962536					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Employment	.325	36	.747	.02119	-.1112	.1536

SRS 900

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	97	.8041	.39894	.04051

One-Sample Test						
	Test Value = 0.78962536					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	.358	96	.721	.01450	-.0659	.0949

SRS 1800

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	185	.81	.397	.029

One-Sample Test						
	Test Value = 0.78962536					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	.541	184	.589	.016	-.04	.07

SRS 2700

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean

employed	276	.79	.406	.024

One-Sample Test						
	Test Value = 0.78962536					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	.158	275	.875	.004	-.04	.05

TEP

SRS 300

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Employment	25	.9600	.20000	.04000

One-Sample Test						
	Test Value = 0.879518072					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Employment	2.012	24	.056	.08048	-.0021	.1630

SRS 900

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	71	.8732	.33507	.03977

One-Sample Test						
	Test Value = 0.879518072					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	-.158	70	.875	-.00628	-.0856	.0730

SRS 1800

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean

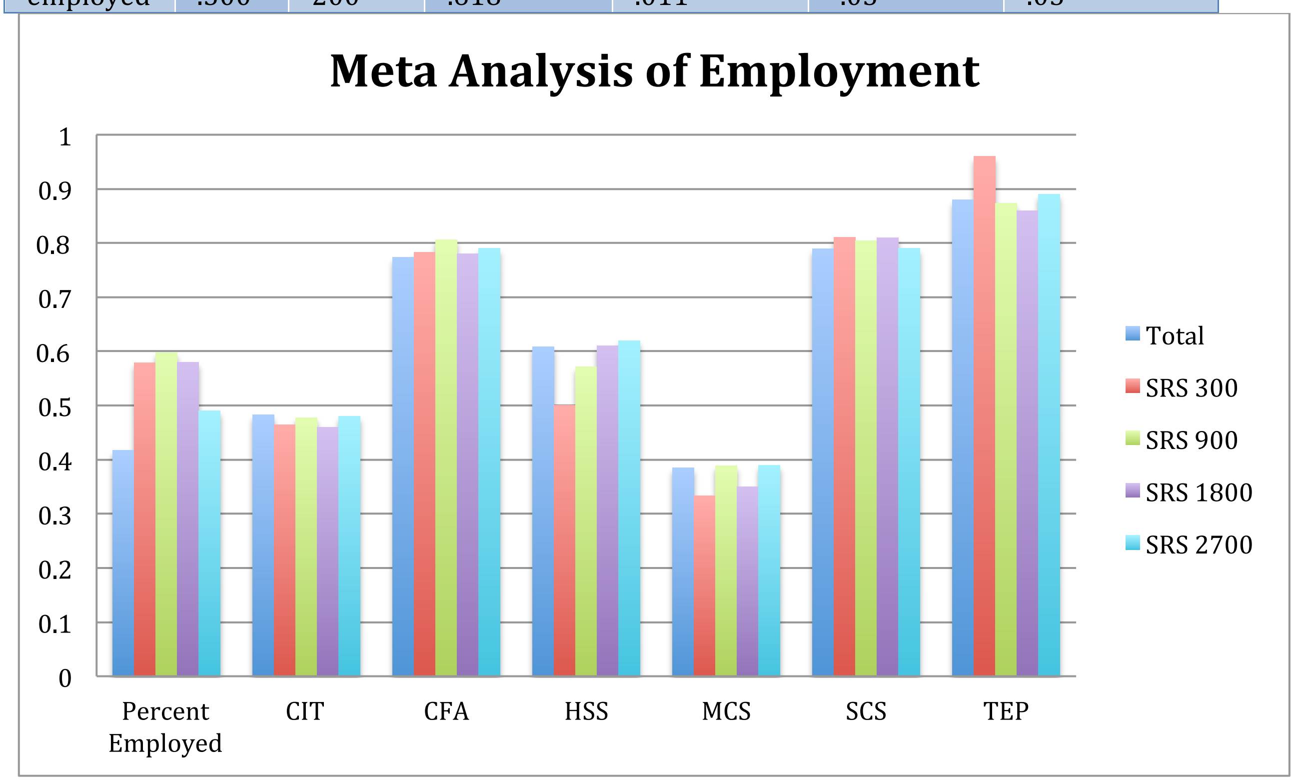
employed	139	.86	.352	.030

One-Sample Test						
	Test Value = 0.879518072					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	-.783	138	.435	-.023	-.08	.04

SRS 2700

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
employed	201	.89	.313	.022

One-Sample Test						
	Test Value = 0.879518072					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
employed	.500	200	.618	.011	-.03	.05



Employment Relating to Major

SRS 300

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
job-major correlation (yes=1, no=0)	165	.91	.288	.022

One-Sample Test

	Test Value = 0.894537588					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
job-major correlation (yes=1, no=0)	.648	164	.518	.015	-.03	.06

SRS 900

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
job-major correlation (yes=1, no=0)	506	.90	.296	.013

One-Sample Test

	Test Value = 0.894537588					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
job-major correlation (yes=1, no=0)	.655	505	.513	.009	-.02	.03

SRS 1800

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
job-major correlation (yes=1, no=0)	996	.89	.307	.010

One-Sample Test						
	Test Value = 0.894537588					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
job-major correlation (yes=1, no=0)	.004	995	.997	.000	-.02	.02

SRS 2700

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
job-major correlation (yes=1, no=0)	1521	.89	.308	.008

One-Sample Test						
	Test Value = 0.894537588					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
job-major correlation (yes=1, no=0)	-.049	1520	.961	.000	-.02	.02

Mean Salary

SRS 300

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Indeed.com	173	$73,599.3353	$3.04197E4	$2,312.76453

One-Sample Test						
	Test Value = 73456.0913					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Indeed.com	.062	172	.951	$143.24396	$-4,421.8113	$4,708.2993

SRS 900

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Indeed.com	531	$72,193.2580	$2.66971E4	$1,158.55652

One-Sample Test						
	Test Value = 73456.0913					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Indeed.com	-1.090	530	.276	$-1.26283E3	$-3,538.7597	$1,013.0931

SRS 1800

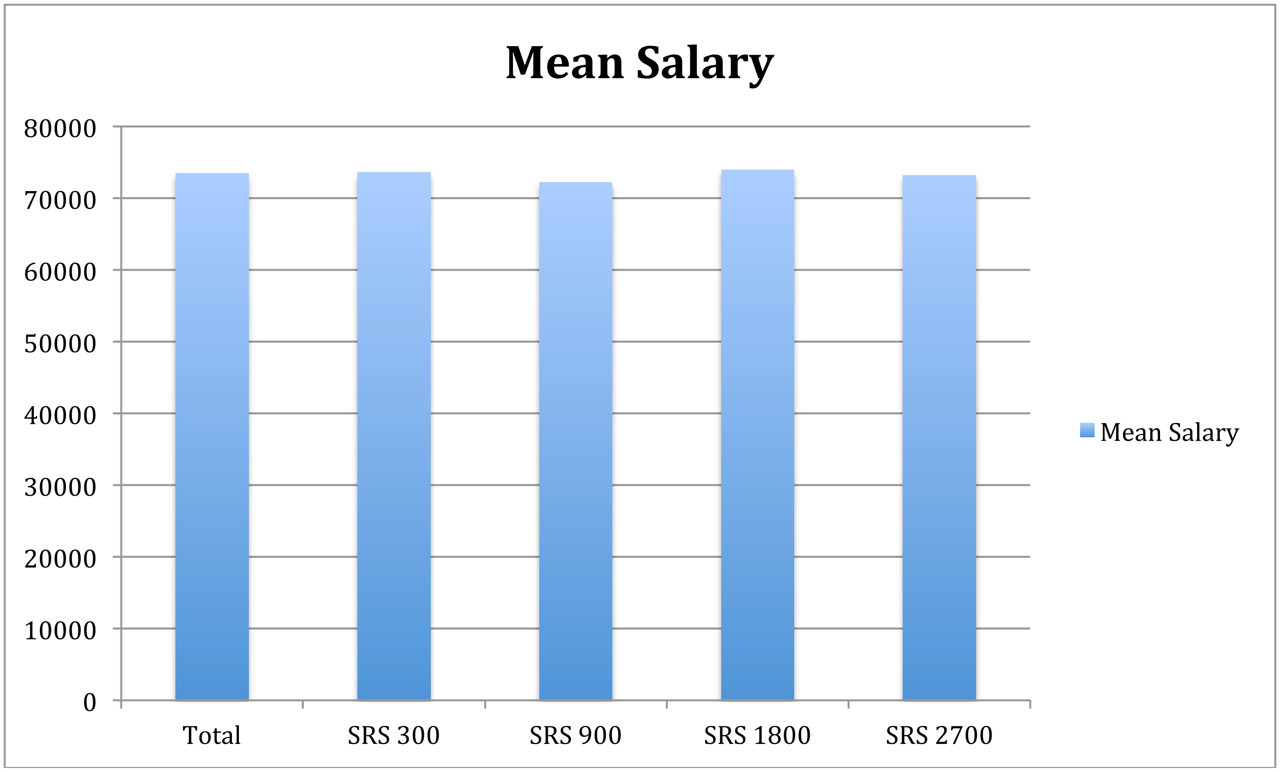
One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Indeed.com	1037	$73,915.4147	$2.65672E4	$825.00337

One-Sample Test						
	Test Value = 73456					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Indeed.com	.557	1036	.578	$459.41466	$-1,159.4535	$2,078.2829

SRS 2700

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Indeed.com	1598	$73,213.1446	$2.76627E4	$691.99910

One-Sample Test						
	Test Value = 73456.0913					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Indeed.com	-.351	1597	.726	$-242.94674	$-1,600.2688	$1,114.3753



Location (Percent remaining in Pittsburgh)

SRS 300

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Pittsburgh	300	.33	.470	.027

One-Sample Test						
	Test Value = 0.297493204					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pittsburgh	1.076	299	.283	.029	-.02	.08

SRS 900

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean

Pittsburgh	900	.30	.457	.015

One-Sample Test						
	Test Value = 0.297493204					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pittsburgh	-.054	899	.957	-.001	-.03	.03

SRS 1800

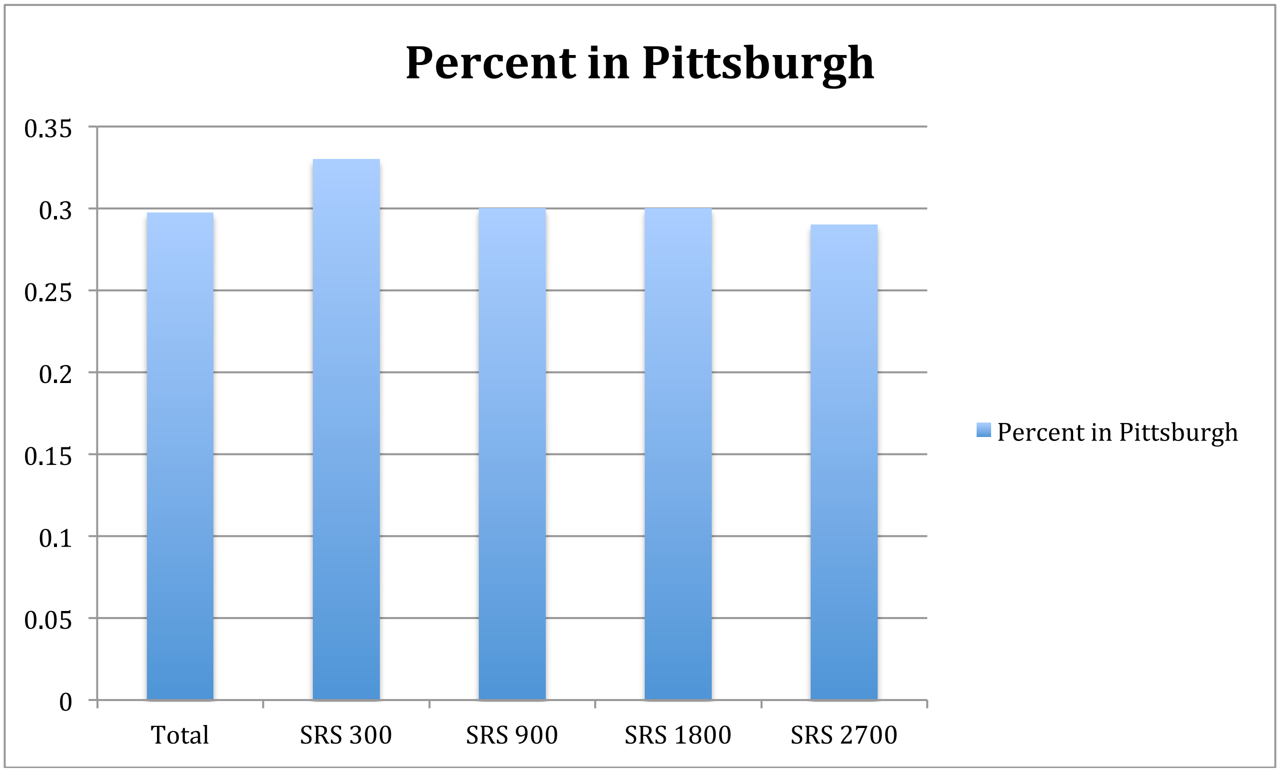
One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Pittsburgh	1800	.30	.456	.011

One-Sample Test						
	Test Value = 0.297493204					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pittsburgh	-.180	1799	.857	-.002	-.02	.02

SRS 2700

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Pittsburgh	2700	.29	.455	.009

One-Sample Test						
	Test Value = 0.297493204					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pittsburgh	-.517	2699	.605	-.005	-.02	.01


Percent in Pittsburgh
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Total
SRS 300
SRS 900
SRS 1800
SRS 2700
Percent in Pittsburgh