An Investigation of University Success: How Much Do Our Graduates Make?

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ABSTRACT

This research examines one outcome, Starting Salary, as a measure of the success of an academic program and as an extension, the institute offering the program. Other factors affecting salary will be examined. A comparison of between the salaries of graduates of academic program was performed and several Hypotheses were examined.

The questions this research attempts to answer are as follows: Do graduates working in there major area, have higher average salaries than graduates working outside there area? Do graduates in technical majors have higher average salaries and non-technical major graduates? Will there be a difference in average salaries of graduates from different institutions? Is there a difference in average salaries of graduates from different majors? Does the location of employment make a difference between the average salaries of graduates in the same major? Does the location of employ will make a difference between the average salaries of graduates in the same institution? Does additional training and certifications make a difference between the average salaries of graduates in the same major? Is there a gender difference between the average salaries of graduates in the same major? And how long does it take to find a job?

The preliminary results on a small sample from one institution indicate location and additional training do make a significant difference in starting salaries, but not major, gender, or working in your major area.

INTRODUCTION

This research is a response to common questions students ask about degree programs. How much money can I make if I choose this major? What kind of job can I get? Who will hire me? What is the career path?

To answer these and similar questions I developed a simple questionnaire, that in a straight forward manner requests data within the parameters of the study. What is your degree, major, etc. The questionnaire is web based and raw data results are available for immediate review.

Salary, pay, wages, compensation, etc. have been an area of interest since man realize the concept of greed. Comparisons of who makes more is of interest to everyone and the basis of wide variety of research. Several disciplines have important works of research on compensation and it affects. In the behavioral sciences several theories include compensation as an important factor (equity theory, Hertzberg's Motivator-Hygiene theory). New studies of CEO, professional athletes, as well as specific occupations appear almost daily. A major portion of Human Resource manage is devoted to the study of compensation.

This study will examine salary as the outcomes of specific programs. Salary is the market place evaluation of the quality and utility individuals. By extension it is an evaluation of the preparation the individual received in a specific program from a specific institution.

HYPOTHESIS

Several Research Hypothesis were test in this research. These are:

H1: Graduates working in there major area will have higher average salaries than graduates working outside there area.

H2: Graduates in technical majors have higher average salaries and non-technical major graduates.

H3: There will be a difference in average salaries of graduates from different institutions.

H4: There will be a difference in average salaries of graduates from different majors.

H5: Location of employ will make a difference between the average salaries of graduates in the same major.

H6: Location of employ will make a difference between the average salaries of graduates in the same institution.

H7: Additional training and certifications will make a difference between the average salaries of graduates in the same major.

H8: Gender will make a difference between the average salaries of graduates in the same major.

H9: It takes about 6 months to find a job.

RESEARCH METHODOLGY

An email invitation to complete a web based salary survey was be sent to a sample of the population of the graduates of selected institutions of higher education in the Southeast United States. Results were collected in a data base and analyzed using appropriate statistical techniques in SPSS.

RESULTS

Forty-eight useable responses were received. Five responses were removed due to incomplete data. This small sample size limits the generalizability of the results and the accuracy of the statistical analysis.

H1: Graduates working in there major area will have higher average salaries than graduates working outside their area.

Results - 30 of the 48 respondents were working inside their major area with an average starting salary of $35,279.27 (n=30) versus those working outside their major area average of $31,044.44

(n=18) for a difference of $4,234.83 or 12.1%. A T-Test comparing these mean starting salaries showed no significant difference. F-value=2.692 Sig.=0.108, see Appendix A.

H2: Graduates in technical majors have higher average salaries and non-technical major graduates.

Results – 44 of the 48 respondents have technical majors area with an average starting salary of $34,629 (n=44) versus those with non-technical majors average of $23,375 (n=4) for a difference of $11,254 or 35.5%. A T-Test comparing these mean starting salaries showed no significant difference. F-value=1.738 Sig.=0.194, see Appendix A.

H3: There will be a difference in average salaries of graduates from different institutions.

Results – this could not be tested since all respondents were from the same institution.

H4: There will be a difference in average salaries of graduates from different majors.

Results – The average starting salary with count by major is shown in the following table 1.

Table 1

H4		
Major	**Count**	**AvgOfStarting_Salary**
AAS in Computer Science	1	$65,258.00
Healthcare Management	1	$26,000.00
Management	3	$22,500.00
MIS	41	$33,851.71
MIS & Marketing	1	$27,500.00
Technology Management (masters)	1	$43,000.00

A Oneway ANOVA comparing these means showed no significant difference. F-value=1.924 Sig.=0.111, see Appendix A.

H5: Location of employ will make a difference between the average salaries of graduates in the same major.

Results – The average starting salary with count by major is shown in the following table 2.

Table 2

H5			
State	**City**	**AvgOfStarting_Salary**	**CountOfCity**
CO	Denver	$48,000.00	1
D.C.	Washington D.C.	$35,000.00	1
DC	Washington DC	$36,000.00	1
FL	Bartow	$30,000.00	1
FL	Islamorada	$48,000.00	1
FL	Lake Mary	$35,000.00	1
FL	Orlando	$37,500.00	1

H5			
State	**City**	**AvgOfStarting_Salary**	**CountOfCity**
KY	Ashland	$30,000.00	1
KY	Grayson	$16,000.00	1
NC	Charlotte	$19,000.00	2
OH	Bowerston	$38,000.00	1
OH	Cincinnati	$28,000.00	1
PA	Pittsburgh	$35,000.00	1
SC	Charleston	$37,500.00	2
SC	Greenville	$28,300.00	1
VA	Arlington	$75,000.00	1
WV	Barboursville	$24,000.00	1
WV	Charleston	$35,019.85	13
WV	Fairmont	$59,000.00	2
WV	Huntington	$26,646.67	9
WV	Hurricane	$27,650.00	2
WV	Morgantown	$43,000.00	1
WV	Moundsville	$19,000.00	1
wv	St. Albans	$30,000.00	1

A Oneway ANOVA comparing these means showed a significant difference at the 0.05 level. F-value=2.352 Sig.=0.020, see Appendix A.

H6: Location of employ will make a difference between the average salaries of graduates in the same institution.

Results – this could not be tested since all respondents were from the same institution.

H7: Additional training and certifications will make a difference between the average salaries of graduates in the same major.

Results – The average starting salary with count of respondents who received additional training is shown in the following table 3.

Table 3

H7		
Additional Training	**AvgOfStarting_Salary**	**CountOfadditional**
None	$28,080.00	24
Some	$39,302.42	24

A T-Test comparing these mean starting salaries showed a significant difference at the 0.10 level. F-value=3.083 Sig.=0.086, see Appendix A.

H8: Gender will make a difference between the average salaries of graduates in the same major.

Results – The average starting salary with count by gender is shown in the following table 4.

Table 4

H8		
Gender	**AvgOfStarting_Salary**	**CountOfGender**
Female	$31,947.25	8
Male	$34,040.00	40

A T-Test comparing these mean starting salaries showed no significant difference. F-value=0.082 Sig.=0.775, see Appendix A.

CONCLUSIONS

This research is a beginning point for understanding some of the issues and variables that can be used to measure the success of academic programs. There are several limitations to this study. Only one variable, starting salary was use as a measure of programs success. The sample size is small and limited to one institution. Not all needed information was collected.

Further research is needed to begin to understand the variables affecting starting salary and academic program success.

SELECTED REFERENCES

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Appendix A – Statistical Result Tables

H1: Graduates working in there major area will have higher average salaries than graduates working outside there area.

	Working in Major area	N	Mean	Std. Deviation	Std. Error Mean
Starting_Salary	1 – Yes	30	$35,279.2667	$15,099.65662	$2,756.80751
	2 – No	18	$31,044.4444	$9,525.45952	$2,245.17234

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Starting_Salary	Equal variances assumed	2.692	.108	1.067	46	.292	$4,234.82222	$3,969.56385	-$3,755.49537	$12,225.13982
	Equal variances not assumed			1.191	45.832	.240	$4,234.82222	$3,555.38838	-$2,922.51058	$11,392.15502

H2: Graduates in technical majors have higher average salaries and non-technical major graduates.

	MIS related degree	N	Mean	Std. Deviation	Std. Error Mean
Starting_Salary	1 – Yes	44	$34,629.0	$13,458.0694	$2,028.88

2 – No	4	455 $23,375.0000	6 $5,878.98801	031 $2,939.49400	

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Starting_Salary	Equal variances assumed	1.738	.194	1.645	46	.107	$11,254.04545	$6,840.28627	-$2,514.73668	$25,022.82758
	Equal variances not assumed			3.151	6.437	.018	$11,254.04545	$3,571.69152	$2,656.34954	$19,851.74137

H4: There will be a difference in average salaries of graduates from different majors.

ONEWAY Starting_Salary BY Major_Number /MISSING ANALYSIS

ANOVA

Starting_Salary

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1557387273.429	5	311477454.686	1.924	.111
Within Groups	6798840780.488	42	161877161.440		
Total	8356228053.917	47			

H5: Location of employ will make a difference between the average salaries of graduates in the same major.

ONEWAY Starting_Salary BY City_Code /MISSING ANALYSIS

ANOVA

Starting_Salary

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5309167490.167	20	265458374.508	2.352	.020
Within Groups	3047060563.750	27	112854094.954		
Total	8356228053.917	47			

H7: Additional training and certifications will make a difference between the average salaries of graduates in the same major.

	Additional Training	N	Mean	Std. Deviation	Std. Error Mean
Starting_Salary	0 – None	24	$28,080.0000	$9,138.66321	$1,865.42182
	1 – Yes	24	$39,302.4167	$14,631.81112	$2,986.70594

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the

									Difference	
									Lower	Upper
Starting_Salary	Equal variances assumed	3.083	.086	-3.187	46	.003	-$11,222.41667	$3,521.39332	-$18,310.61378	-$4,134.21955
	Equal variances not assumed			-3.187	38.574	.003	-$11,222.41667	$3,521.39332	-$18,347.62088	-$4,097.21245

H8: Gender will make a difference between the average salaries of graduates in the same major.

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Starting_Salary	Male	40	$34,040.0000	$13,318.48147	$2,105.83682
	Female	8	$31,947.2500	$14,188.19783	$5,016.28545

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper

Starting_Salary	Equal variances assumed	.082	.775	.402	46	.690	$2,092.75000	$5,210.88869	-$8,396.22492	$12,581.72492
	Equal variances not assumed			.385	9.631	.709	$2,092.75000	$5,440.37392	-$10,092.41418	$14,277.91418

Appendix B – QUESTIONNAIRE

Salary Survey

This salary survey is a place for you to review Salaries paid to Graduates.
Students often ask "how much will I make when I graduate". This survey is to answer that question.

Your participation is requested, but in no way is required, tracked or reviewed. This salary data is not verified. So the accuracy is not guaranteed. Please enter your salary history. If you have had several jobs, please make a separate entry for each job. You can submit anonymously or reveal who you are.

If submitted non-anonymously: there is NO WAY for anyone but the site administrator to discover your identity. Your name and e-mail will be hidden from the displayed results table. The site administrator may contact you to verify the accuracy of your entry.

Privacy Statement: You have your choice of submitting the form anonymously or non anonymously. Anonymous submissions are certainly appreciated, but some people may not pay attention to anonymous data. We need a substantial body of verified/verifiable data for extending the impact of the survey.

Federal Code Regulation Required Statement: There is no penalty if you choose not to participate and you can withdraw from the study at any time without penalty. If you have any questions concerning you rights as a research participant please contact Dr. Stephen Cooper, IRB#2 Chair, at (304) 696-7320.

Education Information:

What is your Major or Program? _____ (ex. MIS, English, Finance, etc.)

What is your highest Degree? ☐ Associates ☐ Bachelors ☐ Masters ☐ Doctorate ☐ Not Yet

When did you graduate (Year)? _____

What College or University did you attend? _____

Job Information:

What is your Job Title? _____ (ex. Manager, Salesman, DBA, etc.)

When did you start work? _____ (mm/yyyy)

What is/was your Starting Salary? _____ (ex. $27,500)

What is/was your current or highest salary? _____ (ex. $27,500)

Where is/was your Job? City: (ex. Huntington) State: (ex. WV)

How long did you search for this job? (ex. 6 months)

Work and other experiences impacting salary:

How many years of total work experience is listed on your resume? years (ex. 2)

How many years of total work experience do you have in your degree area? years (ex. 2)

What other training have you received? (ex. Oracle Course)

What Certifications or other Honors have you received?

(ex. MCSE)

What is your gender? Male Female

Comments?

Non-Anonymously - Complete the follow only for verification purposes. Your name and e-mail will be hidden from the displayed results table.

What is your name? (optional)

What is your email address? (optional)

Submit Reset

THANK YOU FOR PARTICIPATING IN THIS SURVEY