

## **THE MYTH THAT COLLEGE AND MAJOR CHOICE DECIDES JOHNNY'S FUTURE**

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Though the importance of college is well recognized (Heckert & Wallace, 1998; Arney, Hardeback, Estrada & Permenter, 2006), there continues to be debate about whether a specific major or choice of college affects a person's future success as measured by position and/or compensation. As college costs have risen faster than income (Anonymous, 2008; Tozzi, 2009), parents and school counselors are increasing efforts to find the most affordable, yet worthwhile, options for higher education.

This research was undertaken to investigate whether there is a relationship among the many variables that a Chief Executive Officer (CEO) possesses on the way to leading a large company. Obviously, environment, the education of one's parents, opportunity, family wealth, and geography all play a part. But, should today's high school students put more or less emphasis on choice of college or major and do those factors have a correlation with their eventual career success as CEO of a Fortune 500 Company? College websites work hard to promote the success of their graduates. When a Bill Gates or Steve Jobs, neither one of whom have college degrees, enters the realm of spectacular success, "Johnny's" parents might do well to look at his or her own development rather than a particular institution of higher education.

### **Literature Review**

#### *Career Choice:*

Career choice is shaped by outcome expectancies, career interests, and career self-efficacy (Tang et al, 2008). The choice of major, discussed below, also affects the career of many people along with factors such as availability of jobs. In the words of a Harvard educated "virtual CEO", who went from one career to another, "Don't let a career drive you, let passion drive your life" (Komisar, 2000).

The top companies in the Fortune 500 have headquarters concentrated in the Eastern half of the United States. Clustering of industries (Porter, 1990) may have some effect on those brought up in a specific

area. For instance, 17% of the CEOs of the Fortune 500 companies in 2007 were born in New York, which could have contributed to where they went to school and who was visiting campuses on hiring visits.

#### *College choice*

There has long been a debate about whether choosing the right college is one of, if not the, most important decisions a student can make. The argument is either, a) The choice of school makes the difference; or b) It is the student who makes the difference and not the school. Given the variables affecting success, e.g. the student's interest, the school's product, and even the student population, the difficulty of measuring this is obvious:

Fortune 100 top corporate executives (Hoovers,2007):	Undergraduate Degree		
	<u>1980</u>	<u>2001</u>	<u>2007</u>
Ivy League	14%	10%	13%
Public college	32%	48%	29%

*Background (social capital, parental influence, etc) ) → College (opportunities, fellow students, networking) ) → Job environment (economy, opportunity, competition).*

Measuring the definitive effect of any one of these is difficult because some have a greater or lesser impact on the person. Some students react to being reared in a poor family by excelling in higher education and some do not. These are difficult variables to measure.

There exists both anecdotal and research evidence that attending an Ivy League School has a positive effect on salaries. The Wall Street Journal reported on a study that concluded “senior managers who graduated from Ivy League schools earned \$32,581 more per year and had significantly more promotions than those from other schools” (1994).

The voices rejecting the notion that the institution is the main factor include:

1. “Past experience suggests that the particular college a student attends is far less important than what the student does to develop his or her strengths and talents over the next four years” (Shellenbarger, 2009).
2. “After all, study upon study has shown that where a person went to college has no effect on personal happiness, income level or professional satisfaction in later life” (ibid).
3. “Looking at the schools themselves, the

various rankings...provide a boost in cachet. But there are far less fungible facts to consider, like alumni network, career services, proximity to major industrial centers, and real-world business building resources” (Feit, 2009).

Statistics show that a large percentage of the CEO’s of the top public corporations earned their degrees in state or local colleges. The percentage of those CEOs who earned their degrees at Ivy League schools actually decreased from 1980 to 2007.

The myriad surveys on post-graduation salaries do influence the decisions of prospective students, most certainly at the MBA level, even though salary increase is not necessarily the top reason people choose this type of advanced education (Tobias, 2001).

Networking is often cited as one of the best benefits to an Ivy League education. One piece of evidence is in the career of Chuck Feeney, the founder of Duty Free Shops, whose Cornell classmates benefited and caused him to benefit, enormously, in both contributions to Cornell and to humanitarian projects around the world (O’Cleary, 2007).

#### *Choice of major*

The literature covers the influences that gender, ethnicity, interest, etc. have on major and college choice. There are opinions about the effect the choice of major

has or does not have, but some of the literature simply points to choices that are influenced by background and do not necessarily act as predictors of success. Malgwi, Howe & Burnaby (2005) and McInerney, Dinsto, Giagnacova & O'Donnell (2006) found that interest in the subject was the primary influence on major choice for freshman, regardless of gender. As a secondary influence, however, they did find that males were more influenced by career advancement and compensation potential, while females were influenced by aptitude for the subject. Beggs, Bantam & Taylor (2008) found interest in the subject also the most important, but they did not find a matching body of evidence that the students, given the Internet options, actually did a great deal of research on their choices; rather, the influence of friends and family played a larger part. However, for business students, Kim, Markham & Cangelosi (2002) found parents and friends were among the last influences in choosing a major, supplanted by interest in a career associated with that major and good job opportunities.

The United States is continuing to struggle with declining scholarship in math and science, with not enough computer scientists and engineers to fill all the open jobs at technology companies (Duffy Marsan, 2009). Many schools and corporations are and will be in the process of developing coaching and mentoring programs to encourage these majors (Stafford, 2008). IBM actually has a program called Academic Initiative to provide free software and tools to college professors in disciplines other than computer science (Duffy

Marsan, 2009).

Business remains a popular field of study, with business and management degrees ranking among the top five majors pursued in the United States (Arney et al, 2006). Employment opportunities and starting salaries are primary reasons for choosing the business degree (Kim et al, 2002).

Some studies find links between the type of CEO needed and the point in history for that company. For instance, "successful prospector firms tend to be headed by CEOs from research/engineering and general management backgrounds" (Wheelen & Hunger, 2008). This means that companies looking for opportunities to expand (prospect) do well to choose CEOs with those backgrounds.

It is not uncommon for students to change majors, either for reasons of interest or opportunity. Even then, many graduates report being unable to find work related to their major (Heckert & Wallace, 1998), though research does not seem to show great unhappiness with a career not specifically related to their major.

The opposite sides of the "major" argument are discussed below:

1. *The major does not matter in terms of career success.*

E. Nevill Ivester, former CEO, Coca-Cola, states:

I would want to teach students to understand different backgrounds, cultures, religions, and perspectives, even if those perspectives are antithetical to their own. They should never give up their own principles, but they need to be able to find

common ground... To be hired for a leadership position, they must of course have good business skills, but that's not enough. The differentiator is whether they are able to lead and manage people, whether they have genuine spark, drive, and enthusiasm... Most importantly, they also must have a sense of curiosity (Bisoux, 2008).

Even technology companies are looking for skills not necessarily developed in a specific major: collaboration, problem solving and communication (Marsen, 2009). "Computer science degrees mattered a lot 15-20 years ago... But the job of being in IT has completely changed. The huge IT budgets are not even under CIOs; they are under the lines of business... This has brought in a whole new group of IT skills that come out of mathematics, economics, business and marketing."

2. *The college major does matter in terms of career success.*

A study in *Economics of Education Review* in 2007 "found that across all fields, new grads who were in jobs matching their majors earned more than those who weren't (Barrett, 2008). Porter & Umbach (2006) found that undergraduate major is significantly correlated with job stability and job satisfaction. Major choice may be affected by gender and race. It is most certainly affected by personality.

Simpson (2001) found that college students are likely to choose majors where they would follow in their parents' footsteps, though some generations eschew this sign of allegiance.

Some of the findings of the Porter and Umbach study (2006) include:

- Females are significantly more likely than males to choose interdisciplinary and social science majors over science majors.
  - Blacks were more likely than whites to choose interdisciplinary and social science majors over sciences majors, while Hispanics are more likely than whites to choose an arts & humanities, interdisciplinary or social science major over a science major.
  - Students with more liberal views are likely to choose a non-science major.
- Song and Glick (2004) found the following:
- Asian-origin youth choose college majors with greater early economic expectations based on immigrant status, family background and parental expectations. As they are expected to take care of their parents, their career choices often take that into consideration.
  - Women may choose undergraduate majors like the arts and letters that are less subject to the "atrophy" that would result from intermittent labor force participation due to pregnancies and child rearing.
  - Home language environment (whether English is spoken in the home) is a significant predictor for men only.
  - Paths to economic mobility are largely shaped by educational attainment. In addition, the specific major the students choose influences their career opportunities, leading to more or less earning power.

It can be seen that the arguments on both sides are difficult to quantify, so this

research used descriptive statistics to test the hypotheses.

The following hypotheses were tested:

1. **Hypothesis 1 (H<sup>01</sup>): There is no difference in success, measured by ranking in the Fortune 500, in whether the CEO was educated at an Ivy League School or a state or regional school for their undergraduate degree.**
2. **Hypothesis 2 (H<sup>02</sup>): There is no difference in total compensation, measured by the Fortune 500 CEOs in 2007, between any one college major.**
3. **Hypothesis 3 (H<sup>03</sup>): There is no difference in sales ranking between Fortune 500 companies led by CEOs with and without graduate degrees.**
4. **Hypothesis 4 (H<sup>04</sup>): There is no difference in total compensation between CEOs of Fortune 500 companies who have graduate degrees from Ivy League colleges and those with graduate degrees from other schools.**
5. **Hypothesis 5 (H<sup>05</sup>): There is no difference in the sales ranking of companies led by CEOs who have graduate degrees from Ivy League colleges and those with graduate degrees from other schools.**

#### Methodology

Through a variety of research methods, including Hoovers, corporate web sites and news articles, the following pieces of information were collected for the CEOs of the Fortune 500 companies starting in the spring and summer of 2007:

1. Corporation name
2. Sales
3. Name of the CEO (not Chairman, though they were often the same).
4. Total Compensation
5. Birthplace
6. Age
7. Education, both undergraduate and graduate, including major

The data were coded so that variables could be tested using ordinal scales. Using SPSSX, the hypotheses were tested, using primarily ANOVA.

#### Results

Space does not allow for a visual representation, but the top ten companies for 2007 and 2009 were compared as this research was being finalized. The GDP of the United States is \$14.3 Trillion, so these 10 companies (Hoovers) comprise over 15% of our economic product.

Comparing the two periods of time yields the following information:

1. In both cases, 4 of the CEO's, or 40%, have advanced degrees from Ivy League institutions.
2. In 2007, two were from the British Isles; in 2009, one person is from the British Isles.
3. In 2007, five had advanced degrees; in 2009, six have advanced degrees.
4. In 2007, two had undergraduate degrees in engineering; in 2009, five do, the largest change.
5. In both years the top companies are clustered in the eastern half of the country.

Table 1 ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.612	2	.306	.157	.855 <sup>a</sup>
	Residual	763.449	392	1.948		
	Total	764.061	394			

a. Predictors: (Constant), TypeCol, Major

b. Dependent Variable: Sales707

Table 2: 2007 CEO College

<i>N</i> = 494	%	<i>N</i> (397 net)
Regional college	40%%	157
State college or university	36%	144
Ivy League	16%	63
Foreign school	6%	25
Military Academy	2 %	8
Not available	20%	97

#### *Discussion of the hypotheses*

**Hypothesis 1 (H01): There is no difference in success, measured by ranking in the Fortune 500, in whether the CEO was educated at an Ivy League School or a state or regional school for their undergraduate degree.**

Table 1 displays ANOVA using the type of college and the major as independent variables and the sales of the corporation as the dependent variable.

There is no significance of either the major or the type of college attended, measured by overall company sales. Thus, Hypothesis 1, the null hypothesis, is not rejected. Table 2 shows the breakdown of type of college. Ivy League colleges are: Brown, Dartmouth, Harvard, MIT, U. of Pennsylvania, Princeton, and Yale

The comparison group of the top ten between 2007 and 2009 showed that, though 40% have advanced degrees from

Ivy League schools for both years, only one has a bachelor's degree from an Ivy League school for 2009 and none for 2007.

Table 3 represents the analysis of total compensation and major. Net N= final number for whom information was available:

General conclusions for the above Table:

1. The highest compensation in the Fortune 500 does not go to the CEOs of the companies with the highest sales.
2. Though the largest 10 companies have several engineering majors, by compensation, the engineering majors are more concentrated in those earning under \$8 million.
3. By sales, the largest number of companies is in the \$2-2.99 billion range and the under \$1 billion. Table 4 lists their college majors:

Table 3 Total Compensation and College Major

Total Comp in millions	Net N	BA	Bus Adm	Science	Math	Engineering	Finance	Acct	Economics	AA
21-25	2		100%							
16-20	3	100%								
13-15	4	75%	25%							
10-12	4	25%	25%			25%			25%	
9-9.99	1	100%								
8-8.99	6	50%	16%	0	16%	16%	0	0	0	0
7-7.99	4	50%	25%	0	0	0	25%	0	0	0
6-6.99	6	83%	0	0	16%	0	0	0	0	0
5-5.99	14	21%	29%	0	0	17%	4%	0	4%	4%
4-4.99	23	43%	21%	0	0	22%	4%	4%	0	4%
3-3.99	43	39%	21%	9%	2%	21%	0	2%	1%	2%
2-2.99	80	32%	32%	4%	1%	10%	5%	2%	10%	2%
1-1.99	58	34%	25%	1%		19%	2%	7%	9%	2%
<1	89	41%	26%	0	2%	9%	3%	5%	14%	0
Total	338									

Table 4: Major by sales.

\$ Sales in Billion	Net N	BA	Bus Adm	Science	Math	Engineering	Finance	Acct	Econ
2-2.9	80	32%	32%	4%	1%	10%	5%	2%	10%
<1	89	41%	26%	0	2%	9%	3%	5%	14%

Table 5 Sales and choice of college

Sales in billions	Ivy League <sup>1</sup>	State University	Regional School	Military academy	Foreign School	Not available	Total
350 +		1					1
325-349		1					1
200-224	1					1	2
150-174	1	2					3
125-149	1						1
100-124		1					1
75-99	2	2	5		1		10
50-74	2	8	4	1	5		17
25-49	10	19	12	1	5		47
<25	55	108	116	12	17	4	312
Total	72	142	137	14	25	5	395
	18%	36%	35%	3.5%	6%	1%	

Note: There are no companies in the Fortune 500 with sales between 225 billion and 324 billion dollars.

Table 6: College Major, Independent; Total Compensation, Dependent Variable

	Sum of squares	Df	Mean Square	F	Sig.
Bet. groups	627,277	23	27.273	.604	.926
Within groups	15536.625	344	45.165		
Total	16163.902	367			

Most of these people have degrees in business (or BA) measured by BA, Bus Admin, Finance, Acct, Economics—82% for companies from \$2-2.9 billion and 89% for those < \$1 billion.

With the independent variable the type of college and the dependent the sales in 2007, the choice of college did not appear to be a significant predictor. Table 5 shows type of college cross-tabbed with sales in \$ billions.

There was no significance, using one-way ANOVA, in the college major as related to total compensation, seen in Table 6:

There is not a significant statistical relationship between college major at the undergraduate level and total compensation.

Comparing companies with sales of 25-49 billion to those of less than 25 billion, the percentages of college choices are listed in Table 7:

Table 7 Type of College by Size of Company in \$ Billions

Sales in billions	Ivy League	State University	Regional College or University	Military academy	Foreign School	Not available	Total N
25-49	10 (21%)	19 (40%)	12 (25%)	1 (2%)	5 (11%)		47
<25	55 (18%)	108 (35%)	116 (37%)	12 (4%)	17 (5%)	4	312

Figure 1 shows type of college and sales:

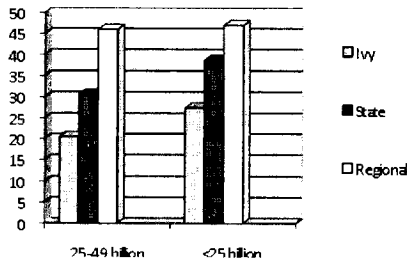


Table 8 Type of College

<i>N = 494</i>	%	<i>N (397 net)</i>
State college or university	36%	144
Regional college	40%	157
Ivy League	16%	63
Foreign school	6%	25
Military Academy	2 %	8
Not available	20%	97



Table 9 Birth Date vs. Choice of Major

<i>Major/Birth Date</i>	<i>1931-35</i>	<i>1936-40</i>	<i>1941-45</i>	<i>1946-50</i>	<i>1951-55</i>	<i>1956-60</i>	<i>1961-65</i>	<i>1966-70</i>	<i>Total</i>
N	4	9	30	148	152	78	53	5	480
%	<1%	2%	6%	31%	32%	16%	11%	1%	480
BA		11%	43%	29%	34%	28%	28%	0	30%
Bus. Adm.		11%	13%	16%	20%	19%	30%	20%	19%
Science				2%	3%	0	0		2%
Math				1%	1%	1%	0		1%
Engineering		22%	17%	13%	12%	8%	6%	20%	11%
Finance	25%			1%	1%	4%	6%		2%
Acct			3%	2%	3%	1%	6%	20%	3%
Economics		11%	6%	3%	6%	12%	4%	20%	6%
AA		11%		<1%	1%	3%	2%		1%
Not available	75%	33%	17%	32%	18%	24%	19%	20%	24%

Note: The major for the one CEO born before 1930 was not available

Seen visually, the number who attended regional colleges is similar, but more CEOs attended state colleges and universities in the companies where sales are under \$25 billion. The percentage attending foreign schools was twice as much for companies between 25 billion and 49 billion companies as those under \$25 billion. Table 8 shows college choice for those CEOs where the information was available:

Was there a difference in major choice for older vs younger CEO's, perhaps affected by popular choices when they were going to college? Table 9 shows these data:

From these data, the following can be said:

1. The number of CEOs with an engineering background has decreased steadily, from 22% of those who would currently be 69-73 years of age, to 6% of those who would currently be 44-48 years of age. (There are only 5 people born after 1960, so percentages would not be valid there). But, the top ten currently has more engineering majors than

in 2007.

2. Science in majors for corporate leaders is decreasing. The literature covered above discussed both the need for more sciences majors and the need for skills that any major can master.
3. Business Administration continues to increase. Some of the BA degrees are in business, given that some schools award both a BA and BS in business.

Notes:

1. As the world has become smaller (e.g. more connected), international experience and education is more desired. The majority of the Fortune 500 CEOs were 52 to 61 in 2007 and 7% of them have foreign degrees. Foreign experience has become more important.
2. Again, the majority of these people have degrees from regional or state schools. The percentage of Ivy League degrees decreased by 18% from those born from 1936 to 1945 as opposed to those born 1946-1950.

Figure 2:ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	87.913	4	21.978	.469	.758 <sup>a</sup>
	Residual	11153.495	238	46.863		
	Total	11241.407	242			

a. Predictors: (Constant), GradWher, Major, GradDegree, TypeCol

b. Dependent Variable: TotalCo

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.502	1.415		4.594	.000
	Major	-.169	.142	-.077	-1.191	.235
	TypeCol	-.174	.415	-.028	-.419	.676
	GradDegree	-.084	.159	-.035	-.532	.596
	GradWher	.153	.353	.029	.434	.665

a. Dependent Variable: TotalCo

Based on the above, Hypothesis 2 is not rejected.

Figure 3: ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.696	4	2.674	2.253	.064 <sup>a</sup>
	Residual	282.489	238	1.187		
	Total	293.185	242			

a. Predictors: (Constant), GradWher, Major, GradDegree, TypeCol

b. Dependent Variable: Sales707

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.308	.225		63.521	.000
	Major	-.019	.023	-.055	-.860	.391
	TypeCol	.085	.066	.086	1.292	.198
	GradDegree	-.044	.025	-.111	-1.739	.083
	GradWher	.090	.056	.107	1.602	.110

a. Dependent Variable: Sales707

**Hypothesis 2 (H02):** There is no difference in total compensation, measured by the Fortune 500 CEOs in 2007, between any one college major. Figure 2 displays ANOVA:

**Hypothesis 3 (H03):** There is no difference in sales ranking between Fortune 500 companies led by CEOs with and without graduate degrees.

Figure 3 shows type of college/ graduate degree as the independent factor contributing to sales:

At the .01 or .05 level, attainment of a graduate degree is not significant, but the largest correlation is with company sales (ranking in the Fortune 500) rather than the major or type of college attended. Hypothesis 3 is not rejected.

Table 10 displays colleges where graduate degrees were earned.

**Hypothesis 4 (H04):** There is no difference in total compensation between CEOs of Fortune 500 companies who have graduate degrees from Ivy League colleges and those with graduate degrees from other schools. Figure 4 shows the analysis:

Hypothesis 4 is not rejected. The correlation is stronger with the graduate degree than with the Ivy League school, but still not significant at the .05 level.

**Hypothesis 5 (H05):** There is no difference in the sales ranking of companies led by CEOs who have graduate degrees from Ivy League colleges and those with graduate degrees from other schools

Figure 4 confirms that whether the degree is from Harvard, or a particular type of college, such as Ivy League vs. state or regional institutions, there is no statistical correlation. Hypothesis 5 is not rejected. Table 11 displays compensation and type of college for the graduate degree.

Table 10 Graduate degrees by type of school

	<i>N</i> 494	%
Ivy League	63	16%
State University	144	36%
Regional college/U.	157	40%
Military Academy	8	2%
Foreign school	25	6%
Not available	97	
Total Net	397	

Figure 4: ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	129.636	5	25.927	.553	.736 <sup>a</sup>
	Residual	11111.772	237	46.885		
	Total	11241.407	242			

a. Predictors: (Constant), Harvard, Major, TypeCol, GradDegree, GradWher

b. Dependent Variable: TotalCo

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.561	2.498		1.826	.069
	Major	-.173	.142	-.079	-1.223	.223
	TypeCol	-.137	.417	-.022	-.329	.743
	GradDegree	-.102	.160	-.042	-.638	.524
	GradWher	-.120	.457	-.023	-.262	.793
	Harvard	1.475	1.563	.080	.943	.346

a. Dependent Variable: TotalCo

Variables Entered/Removed<sup>b</sup>

Model	Variables Entered	Variables Removed	Method
1	Harvard, Major, TypeCol, GradDegree, GradWher <sup>a</sup>		Enter

a. All requested variables entered.

b. Dependent Variable: Sales707

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.916	.397		35.047	.000
	Major	-.020	.023	-.058	-.902	.368
	TypeCol	.093	.066	.093	1.399	.163
	GradDegree	-.048	.025	-.120	-1.869	.063
	GradWher	.035	.073	.041	.480	.632
	Harvard	.298	.249	.101	1.201	.231

a. Dependent Variable: Sales707

Table 11 Graduate Degree Correlated to Compensation

Compensation	Harvard	Ivy League	State	Regional	Foreign	Total
21-25 M				1		1
16-20 M	1 (30%)	1			1	3
13-15 M	2 (40%)	2 (40%)		1 (20%)		5
9-9.9M				1		1
8-8.9M	2 (33%)	3 (50%)	1 (17%)			6
7-7.9	1 (33%)	1 (33%)		1		3
6-6.9		1 (33%)		2 (66%)		3
5-5.9	2 (18%)	3 (27%)	1	2	2	11
4-4.9	2 (13%)	5 (33%)	3	5 (33%)		15
3-3.9	5 (16%)	5 (16%)	8 (26%)	10 (32%)	3	31
2-2.9	11 (20%)	15 (28%)	11 (20%)	16 (30%)	1	54
1-1.9	10 (16%)	15 (23%)	17 (27%)	21 (33%)	1	64
<1,000,000	5 (12%)	8 (19%)	12 (29%)	16 (38%)	1	42

Table 12 Sales707 \* Type of college and sales

		Type College						
		Ivy League	State U	Regional College	Military Aca	Foreign	NA	Total
Sales707	350+	0	1	0	0	0	0	1
	325-349	0	1	0	0	0	0	1
	200-224	1	0	0	0	0	1	2
	150-174	1	2	0	0	0	0	3
	125-149	1	0	0	0	0	0	1
	100-124	0	1	0	0	0	0	1
	75-99	2	2	5	0	1	0	10
	50-74	2	8	4	1	2	0	17
	25-49	10	19	12	1	5	0	47
	<25	55	108	116	12	17	4	312
	Total	72	142	137	14	25	5	395

Given the reputation of Harvard, a correlation was run on whether Harvard showed a correlation to total compensation (remembering the literature). Table 13 shows that it did not:

However, using Harvard as the independent variable and sales of the company as the dependent variable, the correlation is closer, though still not significant, shown in Table 14:

Harvard was slightly more significantly related to sales, at Sig. 065, than the type of school where the CEO earned his or her graduate degree, at Sig. 070.

None of the five hypotheses were rejected, though the following comments can be made:

1. For significance, a graduate degree was the closest to having an impact on total compensation and sales, but it was still not significant at the p=.05 level.

Table 13: Harvard as the Independent Variable affecting Total Compensation

<i>Model</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Regression	40.529	1	40.529	.880	.349
Residual					
Total					
	<i>B</i>	<i>Std Error</i>	<i>Beta</i>	<i>t</i>	<i>Sig</i>
Harvard	1.058	1.128	.057	.938	.349

Table 14: Harvard as the Independent Variable vs. Total Company Sales

<i>Model</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig</i>
Regression	3.756	1	3.756	3.435	.065
Residual	294.096	269	1.093		
Total	297.852	270			

- Of the 136 people who have MBA's, 24% are from Harvard. Twenty-one percent are from other Ivy League Schools, so 45% of these 136 CEOs did pursue their graduate degrees at an Ivy League institution.
- Of the 271 graduate degrees, 54% were in business, 18% law, 5% engineering, and 7% in science.

### Discussion

This research was designed to test a relationship between the academic ranking of the college a student chooses, their major, and their total compensation or the sales of the company where they are CEO, measured by the CEOs of the Fortune 500 companies in 2007. The closest any of the variables came was a relationship between the type of college where a graduate degree was earned and total sales of the company. The undergraduate choice of school was not significant for school or major.

The literature search continually found documents discussing the many interconnections of variables that lead up to a

person becoming the CEO of a Fortune 500 company, including family influences, luck, geography, and natural ability.

Future research can do several things:

- Compare the 2007 data with 2010 data, given the change and actually closing of some of the largest companies in 2007.
- Interview current CEOs for their feelings on the part their major played in their success. Having heard CEOs say that "the best thing I ever did was attend x school", these data make it difficult to make a statement that those people would have been less successful if they had chosen a different college or a different major.

Colleges and universities should continue to focus on the communication skills and quantitative skills that employers of today often find lacking. The good news is that those with degrees from state and regional schools have plenty of company in the Fortune 500 and that "Johnny's" parents can focus on his needs.

*Limitation of this research*

A person can earn a BA or a BS in business, so separating out the CEOs who had a BA in a program other than business was not possible unless it was explicit in the information provided by the corporation or the media in their biography.

Coding for type of college required that some schools one could consider "Ivy League", such as Duke, the University of Virginia, and Northwestern, had to be coded with the regional or state school. Even Stanford, a school that many would consider Ivy League, was coded with regional schools for accuracy.

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