

Does Degree Earned Matter? An Empirical Analysis Of CEOs From Large Firms

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Abstract

In this paper the educational backgrounds of the Highest Paid Chief Executive Officers (CEOs) in the United States are examined. Specifically, the extent to which the specific degree earned affects the salary received and other variables are examined. The data for the study is the Forbes 800 CEO compensation data. The time period for this study is the thirteen years from 1987-1999. The results indicate that the total compensation that individuals earn as the CEO of the firm depends upon the undergraduate and graduate degree that the individual earns. Those with differing degrees are found to have been with the firm for a differing number of years, earned their undergraduate and graduate degrees at different ages, started working for the firm at different ages, became the CEO at differing ages, and were with the firm for differing number of years prior to becoming the CEO.

1. Introduction

Each year since 1973, Forbes magazine has published a list containing information about the Chief Executive Officers (CEOs) of large United States Companies. Specifically, Forbes Magazine examines compensation for approximately 800 Chief Executive Officers each year. The 800 CEOs included in the list each year are identified from the Forbes 500 lists of largest companies ranked by sales, profits, assets and stock market value. A company that makes any of the Forbes 500 lists is included in the Forbes 800 Compensation List. This Forbes 800 Compensation List contains background information about each firm's CEO, the compensation of the CEO, as well as firm performance data for the firm. This Forbes 800 Compensation List is the foundation for this study. Specifically, in this study, the age of CEOs, the type of degrees the CEOs have earned and the compensation of CEOs are examined.

Two competing theories of the relationship between education and future earnings are frequently forwarded. The human capital theory is that the credential of having a degree is not what is important in determining future successes. Rather, the skills learned allow individual to achieve higher employment status. The screening theory argues that credentials afford the individual something above and beyond the skills attained. That is, individuals can only realize the value of the skills they have learned when accompanied by the acquisition of a recognized credential. Employers, lacking complete information about an individual, rely on credentials as a screening device. Students select an educational level that signals their abilities to employers. This debate has continued for many years. The general method used to distinguish between screening and human capital theories is to decompose the role of education into a skills component and an information component. Studies typically do this by including both degrees earned and number of years of education variables into earnings regressions. (Park, 1999, Gullason, 1999 and Heywood, 1994). Park (1999) estimated the certification value of different levels of education achievement. An earnings gain of 21 percent was found for obtaining a bachelor's degree. Heywood (1994) examined differences in signaling effects across public, private unionized, and non-unionized, labor markets. He found that signaling effects are strongest in private sector and nonunion labor markets. Gullason (1999) examines signaling effects across

five age cohorts. He finds that the returns to educational signals have reduced value as additional work experience permits a more direct observation of employee quality.

Wiersema and Bantel (1992), established that CEO demographic attributes, such as youth, tenure, educational level, and functional background, affect firm performance and the firm's strategic business decisions. A study by Stevens, Beyer & Trice (1978) indicates that younger, or less mature CEOs are more innovative, seek more risk and seek more growth relative to their older, more seasoned counterparts. Confirming these findings, a study conducted by

Thomas and Peyrefitte (1996) conducted a study of multinational firms that are based in the U.S. They examined the electronics and computer industries and chemical and petroleum industries. They hypothesize that the performance of multinational firms is a function of environmental, organizational, and leadership factors. The leadership traits that were identified included age, tenure with the company, position tenure, and education. Their findings suggest that older CEOs have a positive impact on firm performance, regardless of industry, when compared with their younger counterparts. They also find evidence to suggest that position tenure is negatively related to firm performance. They argue that this may be indicative that senior CEOs are resistant to positive change.

Berry, Bisjak, Lemmon, and Naveen (2000) examine the Forbes 1991 annual compensation survey augmented with accounting data in a study of CEO turnover and firm diversification. Their results indicate that the average CEO age varies from 56.2 and 57.3. Lucier, Schuyt, and Spiegel (2003), find that CEO average age when promote to the CEO position is 50 years of age. They also find that average CEO's tenure has decrease by 2.2 years between 1995 to 2001. Palia and Ravid (2002) use CEO compensation data covering the periods of 1981-1993. They find that on average CEO stay in office for 8.76 years. They find that the average CEO age is 57.5 years. Moreover, 27% of the CEOs attended a top-ranked school. Murphy and Zimmerman (1993) compile data using Forbes annual executive compensation reports and develop a study of these firms and their CEOs between 1971 and 1990. They found that CEOs tend to leave their appointment at ages 64 and 65.

Kato and Rockel (1992) completed a comparative study of 1000 large, Japanese versus U.S. firms. They find that 60 percent of the Japanese CEOs had 15 or more years of experience with the firm prior to being appointed as the CEO, compared to 50 percent of the CEOs of U.S. firms. Both Japanese and U.S. CEOs join the firm on average at age 29. However, the Japanese averaged becoming the CEO at a later date. Specifically, the Japanese CEO accepted the CEO position at age 56, while the U.S. CEO accepted the CEO position at age 49. Japanese CEOs were found to work for the firm 27 years, while U.S. CEOs were found to work for the firm for 20 years. Kato and Rockel (1992) also observe that 95 percent of Japanese CEOs and 97 percent of US CEOs had a college degree. However, while nearly 30% of the Japanese CEOs attended the University of Tokyo with preferred majors of Economics and Business, only 10% of the US CEOs attended Harvard, with a smaller proportion majoring in business and economics.

Jalbert, Rao and Jalbert (2002) provide an analysis of the compensation and educational background of the CEOs of major corporations. They use the Forbes Compensation Survey data spanning a ten year period and including 8,000 observations. They examine the university where the individual earned his degree. They find that there are preferred educational backgrounds for selection as the CEO of a major corporation. They also examine how the educational background of the CEO is related to the CEO's total compensation after controlling for industry, firm size and other mitigating factors. The evidence indicates that those CEOs that do not have a degree earn significantly more than those CEOs that do have a college degree. They find little evidence that the school attended affects the compensation that the CEO receives. They find that the age of the CEO as well as the number of years that the individual has been the CEO have a positive impact on the compensation of the CEO. They find that the number of years that the individual has been with the firm is negatively related to the compensation that the CEO earns. They argue that this finding suggests that salary compression that is well known in academics also occurs in the highest levels of the corporate world. Finally, they examine firm ROA and Tobin's Q based on the educational background of the CEO. They find an association between possession of a degree as well as where the degree was earned and the ROA and Tobin's Q of the firm.

Brick, Palmon and Wald (2003) use a data sample from COMPUSTAT and Execucomp. The data covers the period from 1992 to 1999. They examine CEO compensation as it related to skill and risk preferences as well well-documented determinants such as CEO's compensation sensitivity to firm performance, CEO age, gender and experience. They find that age is not significantly related to CEO compensation. Finally, the find evidence to indicate that experience is positively related to compensation.

Hecker (1995) conducted a study based on the National Science Foundation (NFS) survey and 1990 census data. He examines the earnings differences among fields of study. The study included 215,000 people, across 31 fields of study and 34 occupations. He finds that, regardless of age and gender, in general there is a relationship between field of study and future earnings. He finds that people with a degree in most liberal art fields earn less than people with degrees in engineering, and economics. He also finds that Masters Degrees in Business are the top-ranked field regardless of gender or age. He also suggests that besides the field of study, other elements such as the amount of surplus personnel in a degree area, employer's perception of the rigorousness of the field, college attended, geographic location, and additional skill of the graduate may affect the individual's total earnings. Finally, he argues that getting a degree may not be the key to success, rather he calls for more studies that address issues related to school attended as well as individual characteristics associated with job and career earnings.

Mariani (1999) finds that individuals with a college degree earn a higher median income than that of individual with less than a bachelor degree. His study also shows a relationship between age and earnings, suggesting that the highest earnings are achieved by people with ages between 35 and 54. However, he also argues that individual with less than a bachelor degree can command high earnings if they have the right skills, experience and work in a field with limited highly skilled workforce.

In this paper we extend these lines of literature on several fronts. We provide a detailed analysis of the types of degrees that those people who ultimately become the CEOs of major firms hold. We examine the ages at which they earned both undergraduate and graduate degrees. We examine when the CEO became employed by the firm and when they became the CEO of the firm, both in terms of age and relative to when they earned their degree. Finally, we examine total compensation as it is related to each of the above issues. As such, the paper provides a substantial extension of several streams of literature.

2. Data

Data from 1992-1999 were obtained from Forbes Magazine. Data prior to 1992 was no longer available from Forbes Magazine. In order to complete the dataset the Forbes 800 Compensation List was recreated in electronic format from hard copies of the magazine for years prior to 1992 and after 1997. The combined dataset contains 23,284 annual observations spanning from 1972 through 1999 (published in years 1973-2000). The data contained in the dataset varies by year. Individual years contain as many as 30 variables. Since the 1988 publication, Forbes has included variables in their dataset indicating the University where the CEO received his/her undergraduate and graduate degrees. Of interest in this study is to examine these education variables. As such Forbes data covering the calendar years 1987 through 1999 are used in this study. This data contains 10,400 annual observations.

3. Results

We begin by analyzing the number of degrees earned. The results are presented in Table 1. In Panel A of Table 1, an analysis of the undergraduate degrees is presented. In Panel B, the results of the graduate degree analysis are reported. The notation is as follows: BA = Bachelor of Arts, BS = Bachelor of Science, BE = Bachelor of Engineering, BBA is a Bachelor of Business Administration. BSBA is a Bachelor of Science in Business Administration, MBA = Master of Business Administration, MA is the Master of Arts, MS = Master of Science, MD = Medical Doctor and Ph.D. = Doctor of Philosophy. All other notation is self explanatory.

The data contained 10,131 observations where undergraduate degree data were reported. The results indicate that most CEOs have earned a bachelors degree. From these 10,131 observations, 9,259 management years

were performed by individuals having an undergraduate degree. 872 management years were performed by individuals that did not have an undergraduate degree. The most popular undergraduate degree was the Bachelor of Science degree with 3982 observations followed closely by the Bachelor of Arts degree with 3570 observations. Interestingly those classified as having a Bachelor of Business Administration Degree or a Bachelor of Science in Business Administration account for only 701 management years. This was somewhat less than anticipated.

In Panel B, the results of the analysis on graduate degrees are reported. From 10,400 observations, 10,381 observations reported graduate degree data. Of these 10,381 management years, 5,145 were performed by managers that did not have a graduate degree and 5,236 management years were performed by individuals that have a graduate degree. Thus just over 50 percent of the observations were performed by an individual having a graduate degree. The most popular graduate degree to have is the MBA degree. MBA's are responsible for 52.3 percent of the management years completed by individuals having a graduate degree.

We continue the analysis by examining the total compensation earned by individuals having various degree levels. To complete this analysis, CEO compensation data is deflated using the Consumer Price Index to 1999 equivalent dollars. The analysis Begins by examining the undergraduate degrees. The most interesting result is that those not reporting their degree are the highest paid CEOs averaging \$4,128,633. Also interesting is that those that do not have a degree earn more than those having an undergraduate degree. This finding is consistent with those of Jalbert, Rao and Jalbert (2002). These findings extend the analysis of Jalbert, Rao and Jalbert (2002) in two ways. First, the analysis covers a longer period of time. Second, by breaking down the results by type of undergraduate degree, it can be determined if these differences are concentrated among those with a certain degree. This analysis allows us to say that those without an undergraduate degree earn more than those having an undergraduate degree, *regardless of what the degree is!* Jalbert, Rao and Jalbert (2002) provide several explanations for this finding. One explanation is the possibility that there is a preponderance of CEOs that are firm founders among the non-degree group. This issue is explored later in a forthcoming paper. A second potentially confounding factor is the possibility that CEOs who are family members of major shareholders are represented more heavily in the non-degreed group. Unfortunately, the data does not contain the necessary information to explore CEO family background.

A Mann-Whitney test is performed to determine if the differences in compensation by degree are significant. The Mann Whitney test is selected because of the substantial difference between the mean and the medians of the observations. These substantial differences indicate a non-normal distribution of earnings within the group. Specifically, it indicates skewness in the compensation data. That is, there are outliers who are paid substantially more than would be expected if the data were from a normal distribution. The results of the Mann-Whitney test indicate that those with a Bachelor of Arts degree or No Degree earn significantly more than those with other degrees. Those with a Bachelor of Science or a Law degree earn significantly less than those with other degrees, a finding that is in stark contrast to those of Hecker (1995). Those with a Bachelors Degree in Engineering, Bachelor of Business Administration, Bachelor of Science in Business Administration or those that do not hold a degree are not significantly different from each other.

The most striking results are found among the compensation of CEOs having graduate degrees. Specifically noteworthy is the compensation of CEOs that have a Medical Doctor Degree. These CEOs earn a mean annual total compensation of \$8,781,645. This figure is just short of twice the total compensation of next highest paid CEOs. Those CEOs having a Ph.D. are the second highest paid averaging \$4,391,071.

Again, a Mann-Whitney test is performed to identify if these differences are significant. The test statistics indicate that MBA's, Medical Doctors, Ph.D. and those holding a degree classified as other are found to earn more than those with other degrees. Those with no graduate degree are found to earn less than others. The substantial differences between the median and the mean should again be reiterated here. Specifically, it should be noted that while those without a graduate degree earn more than others when considering the mean, the exact opposite is true when the median is analyzed.

We continue by performing a pairwise Analysis of Variance (ANOVA) to obtain additional information regarding the differences in total compensation at various degree levels. Degree is the treatment and total compensa-

tion as the response in the ANOVA analysis. The analysis rejects the null hypothesis that the mean compensation by degree is equal for both the undergraduate analysis and the graduate analysis. For the undergraduate sample the F-value is 2.33 with a p-value of 0.0302, rejecting the null hypothesis at the 5 percent level. For the graduate sample, the F-value is 1.99 with a p-value of 0.044, again rejecting the null hypothesis at the 5 percent level.

Table 1: Degree Earned

Panel A: Undergraduate Degree	N	N with Comp. Data	Total Comp. (Mean)	Total Comp. (Median)	Standard Deviation	MW Test
BA	3570	3532	\$3,644,476	\$1,519,440	\$13,202,634	-6.54***
BS	3982	3945	\$2,986,281	\$1,383,478	\$12,206,531	2.76***
BE	810	798	\$2,881,165	\$1,423,612	\$4,795,823	-0.34
BBA or BSBA	701	693	\$2,743,990	\$1,369,755	\$4,975,610	1.20
Law	93	92	\$1,433,585	\$965,897	\$1,430,992	4.96***
Other	103	101	\$3,738,393	\$1,328,440	\$11,325,455	0.92
No Degree	872	851	\$3,981,192	\$1,262,479	\$10,944,826	-2.63***
Not Reported	269	260	\$4,128,633	\$1,291,914	\$1,7143,080	1.62
Total Observations	10,400	10,272	3,292,916	1,419,082	11,806,192	
Panel B: Graduate Degree	N	N with Comp. Data	Total Comp. (Mean)	Total Comp. (Median)	Standard Deviation	MW Test
MBA	2738	2700	\$3,246,657	\$1,520,754	\$7,156,209	-4.98***
MA	219	219	\$2,413,911	\$1,373,254	\$3,546,258	0.94
MS	549	546	\$2,786,209	\$1,510,030	\$4,779,336	-1.17
MSE	100	99	\$3,165,489	\$1,619,975	\$4,939,029	-0.98
MD	37	34	\$8,781,645	\$3,425,258	\$24,095,333	-2.62**
Law	972	956	\$2,834,575	\$1,341,017	\$5,208,641	0.59
Ph.D.	508	507	\$4,391,071	\$1,549,386	\$11,676,545	-2.27**
Other	113	113	\$2,742,254	\$1,772,253	\$3,089,595	-1.88*
No Graduate Degree	5145	5080	\$3,369,873	\$1,350,503	\$15,102,075	6.09***
Not Reported	19	19	\$1,779,050	\$1,296,569	\$2,004,255	0.99
Total	10,400	10,063	\$3,292,916	1,419,082	\$11,806,192	

Table 2: Analysis Of Variance For Degrees Earned

Panel A: Undergrad. Degree								
	BA	BS	BE	BBA, BSE	Law	Other		
Ba								
BS	658,195**							
BE	763,311	105,116						
BBA, BSBA	900,486	242,291	137,174					
Law	2,210,891	1,552,696	1,447,579	1,310,405				
Other	93,917	752,112	857,228	994,403	2,304,808			
No Degree	336,716	994,912**	1,100,028	1,237,202**	2,547,607**	242,799		
Panel B: Graduate Degree								
	MBA	MA	MS	MSE	MD	Law	Ph.D.	Other
MBA								
MA	832,746							
MS	460,449	372,297						
MSE	81,168	751,578	379,281					
MD	5,534,989**	6,367,735**	5,995,437**	5,616,157**				
Law	412,082	420,664	48,367	330,914	5,947,071**			
Ph.D.	1,144,414**	1,977,160**	1,604,863**	1,225,582	4,390,575**	1,556,496**		
Other	504,403	328,343	43,955	423,235	6,039,392**	92,321	1,648,817	
No Degree	123,216	955,962	583,664	204,384	5,411,773**	535,298	1,021,198	627,619

In order to identify the source of these differences, we tests for differences in means using Fisher's Least Significant Difference Test. The results are presented in Table 2. The results indicate that most of the significant differences in the undergraduate sample occur between those without a degree and all others. The one exception is between those with a BS versus those with a BA degree. Those with a BS degree earn significantly more than those

with a BA degree. More significant differences are found in the graduate sample. Medical doctors earn significantly more than those with any other degree. Those with Ph.D.'s earn significantly more than those with all other degrees with the exceptions of Medical Doctors and those with a Masters Degree in Engineering, and those with an unspecified degree. It is interesting that those with advanced graduate degrees, a Ph.D. and a MD, earn more than the others. This evidence certainly suggests that the skills earned through an advanced graduate degree are valuable in the marketplace.

The analysis continues by examining the average age of the CEO by the degree that they hold. The results are presented in Table 3. The first figure in each cell is the age while the number in parentheses indicates the number of observations. The number in the second line of each cell is the test statistic for the Mann-Whitney test for difference in means. Where * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level and *** indicates significance at the 1 percent level in the usual fashion. The notation is as follows Age UG is the age at which the individual earned the undergraduate degree, Age Grad is the age at which the graduate degree was earned, Age Start is the age at which the individual started working for the company, AGE CEO is the age at which the individual became the CEO and Yrs Firm Prior is the number of years the individual was with the firm prior to becoming the CEO. The evidence indicates that CEOs have similar ages regardless of the degree they hold, or whether they have a graduate degree. The overall average age of the CEOs is 56.20 years. The highest average is 60.57 years and the lowest is 55.05 years old. These findings are remarkably consistent with those of Berry Bisjak, Lemmon and Naveen (2002).

The analysis continues by examining the number of years the CEO has been with the firm. The overall average number of years the CEO has been with the firm is 21.84, with a standard deviation of 12.56 years. Next, we examine the mean number of years the individual has been with the firm based on the degree they hold. It is expected that those CEOs having higher levels of education will be with the firm fewer years. The additional time required to complete their education, reducing the number of years they have in the work force, as well as the number of years that they have been with their current firm. As would be expected, those CEOs that do not have a degree are with the firm longer than those CEOs that do have an undergraduate degree. Those without a degree have been with the firm on average 25.29 years while the highest average for those with a reported degree is 23.76. The evidence clearly suggests that CEOs that have a graduate degree are with the firm less time than those CEOs that have a bachelor degree. Those without a graduate degree have been with the firm 24.23 years on average, while those with a graduate degree have been with the firm for as little as 14 years. Those with advanced graduate degrees (Ph.D. and Medical Degree's) have the lowest averages at 16.52 and 13.87 years respectively.

We continue by examining how old the CEO was when the individual earned his undergraduate degree. The results are presented in Column 4. The overall average is 22.93 years old when the undergraduate degree is earned. The most notable difference is that those with a Law degree earn their degree later than others. Those with a BA degree, those with a BE degree and those that did not report their degree, earned their degrees at different times than the others. Overall, the differences in age when the undergraduate degree is earned do not seem to be large, even in those cases where the difference is significant.

Next, the age at which the individual earned their undergraduate degree, for each graduate degree is examined. The results are in the fourth column in Panel B. Interestingly, those without a graduate degree earn their undergraduate degree at a later age. This may be an indicator that those not pursuing a graduate degree, spend additional time in their undergraduate program taking additional classes. Alternatively, it may suggest that those that pursue a graduate degree are more motivated individuals, finishing their undergraduate work earlier.

The analysis continues by examining the age of the CEO when he or she first became employed by the firm that they manage. The results are presented in Column 5 of Table 3. The overall mean age when the CEO began working for the firm that he/she manages is 34.36 years old, with a standard deviation of 11.31 years. Comparing the time that the individual earned his/her undergraduate degree (22.93 years of age) to the time that the individual started working for the firm (34.36 years of age), we find that individuals spend 11.43 years on average in alternative roles prior to starting work for the company that they will ultimately become the CEO of. Those with a BA degree, law undergraduate degree and those that did not report their degree, started with the firm at a later date than

the others. Those with a degree classified as “other”, started with the firm earlier. The difference between the minimum age and the maximum age is not trivial. Those with a degree classified as other, started with the firm at 31.96 years of age, while those that did not report their degree started at the age of 35.75 years. The difference of 3.79 years is substantial.

Examining the age when the individual started working for the firm for each graduate degree is revealing. The results are presented in Column 6 of panel B. The results indicate that those with a MA degree, a MD degree, a Ph.D. degree, and those that did not report their graduate degree started working for the firm later than others. This result is not surprising for the MD and PH.D. However, it is somewhat surprising for those with an MA degree and those not reporting their degree. Most interestingly, those that did not report their graduate degree, started working for the firm substantially later than others at 45 years of age. Those without a graduate degree started working for the firm at a younger age than those with a graduate degree as would be expected.

Table 3: CEO Age By Degree Earned

Panel A: Undergrad Degree	Mean Age	Years Firm	Age UG	Age Grad	Age Start	Age CEO	Yrs Firm Prior
BA	55.66(3570) 5.42***	21.01 (3568) 5.05***	22.69 (3528) 7.49***	26.91 (2150) 5.61***	34.67 (3568) -3.36***	47.81 (3570) 3.94***	13.14 (3568) -2.05**
BS	56.17(3982) 0.56	21.94 (3982) -0.92	22.93 (3955) 0.11	27.65 (2025) -3.83***	34.23 (3982) 0.94	48.22 (3982) -0.44	13.99 (3982) -1.85*
B of Engineering	56.61(810) -2.81***	21.48 (810) 0.44	23.08 (796) -4.03***	28.01 (495) -4.46***	35.13 (810) -1.07	51.20 (810) -13.46***	16.07 (810) -4.00***
BBA or BSBA	55.30(701) 4.53***	21.66 (701) 0.78	23.49 (691) 3.30 ***	27.55 (327) 1.65*	33.64 (701) 1.35	46.72 (701) 5.00***	13.08 (701) 0.97
Law	60.57(93) -7.42***	23.76 (93) -1.77*	24.74 (93) -10.81***	25.94 (31) 2.09*	36.80 (93) -2.18*	51.42 (93) 5.23***	14.61(93) -0.78
Other	57.04(103) 2.77***	25.08 (103) -2.85***	23.83 (99) -1.28	34.57 (42) -0.91	31.96 (103) 2.28*	48.40 (103) -0.66	16.44 (103) -2.10**
No UG Degree	58.47(871) -7.61***	25.29 (871) -7.26***	N/A (872) N/A	N/A (872) N/A	33.18 (871) 4.93 ***	46.37 (871) 3.45***	13.19 (871) 2.68***
Not Reported	55.73(269) 0.04	19.96 (268) 2.08**	23.42 (187) -3.33***	27.11 (106) 0.67	35.75 (268) -2.05*	47.86 (269) 0.82	12.10 (268) 2.60***
Total Observations	56.20(10399)	21.84 (10,396)	22.93 (10,221)	27.41 (6048)	34.36 (10396)	48.08 (10,399)	13.71 (10,396)
Panel B: Graduate Degree	MEAN AGE	Years Firm	Age UG	Age Grad	AGE Start	Age CEO	Yrs Firm Prior
MBA	54.67(2738) 14.44***	19.69(2738) 11.18***	22.74 (2687) 8.27***	27.49 (2700) -1.47	34.97 (2738) -5.78***	47.71 (2738) 5.26 ***	12.74 (2738) 3.80***
MA	55.93(219) 0.51	16.90(219) 5.87***	21.97 (218) 5.86***	25.72 (218) 6.87***	39.03 (219) -6.30***	47.99 (219) 1.17	8.95 (219) 6.77***
MS	55.41(549) 3.42***	21.16(549) 1.67 *	22.43 (532) 6.80***	27.18 (541) 5.18***	34.25 (549) 0.65	47.87 (549) 0.46	13.62 (549) -0.19
MSE	57.88(100) -2.98***	23.38(100) 1.09	22.63 (100) 0.53	25.70 (100) 3.54***	34.50 (100) 0.29	51.74 (100) -5.51***	17.24 (100) -1.59
MD	57.46(37) 0.58	13.87(37) 5.20***	22.19 (37) 2.64**	25.94 (37) 1.88*	43.59 (37) -9.16***	49.81 (37) -1.20	6.22 (37) 4.90***
Law	56.56(972) -2.36**	19.84(971) 5.93***	22.57 (962) 5.24***	26.94 (965) 0.96	36.73 (971) -11.30***	48.56 (972) -1.09	11.84 (971) 4.86***
Ph.D.	55.05(508) 4.73***	16.52(508) 10.82***	22.42 (469) 5.43***	28.83 (489) 10.96***	38.53 (508) -11.33***	48.12 (508) 0.43	9.59 (508) 8.81***
Other	56.78(113) -1.47	20.97(113) 0.64	22.72 (112) 0.97	29.16 (112) -4.54***	35.80 (113) -1.47	51.07 (113) -6.02***	15.27 (113) 1.21
No Graduate Degree	57.11(5145) -13.82***	24.23(5142) -19.93***	23.33 (4196) -18.73***	N/A (5145) 119.81***	32.87 (5142) 16.90***	48.03 (5142) -2.29**	15.16 (5142) -10.73***
Not Reported	56.05(19) 0.35	15.89 (19) 1.67	23.12 (16) 0.09	31.55 (11) -5.88***	45 (19) -1.19	51.68 (19) -1.70	11.53 (19) 1.00
Total	56.20 (10,399)	21.84 (10,396)	22.93 (10,396)	27.41 (10,318)	34.36 (10,396)	48.08 (10,397)	13.71 (10,396)

Next, the age of the individual when they became the CEO of the firm is examined. The results are presented in Column 6. The average age of the individuals when they became CEO is 48.08 with a standard deviation of 8.15. The Undergraduate degree results indicate that CEOs without an undergraduate degree and those with a business degree become the CEO of a major firm at the earliest age. Those with a law or engineering degree be-

come the CEO later. Individuals with a Business undergraduate degree become the CEO nearly 5 years earlier than those with Engineering or Law degrees.

The analysis continues by examining how many years the individuals have been employed by the firm prior to becoming the CEO of the firm. The results are presented in Column 7. The overall average is 13.71 years with a standard deviation of 11.88. The averages by undergraduate degree vary between 12.10 years and 16.44 years. Those with a degree classified as other work with the firm the longest prior to becoming the CEO while those that did not report their degree are with the firm the shortest amount of time prior to becoming the CEO.

An analysis of how many years the individual has been with the firm for each graduate degree is presented in Column 7 of Panel B. The results indicate that those with an MD degree are with the firm only 6.22 years prior to becoming the CEO of the firm. Those without a graduate degree are with the firm 15.16 years prior to becoming the CEO of the firm. The difference of 8.94 clearly suggests that there is a fast track for those individuals that have hither level degrees.

The analysis continues by performing several regression analyses by regressing the age, founder and degree earned variables on the Total Compensation of the CEO. The results are presented in Table 4. The results indicate that Founders earn more than other CEOs. There is a \$97,847 salary increase for each year the CEO serves in that capacity an amount that is higher than those figures found in Jalbert, Rao and Jalbert. Those without an undergraduate degree earn more than those that do have an undergraduate degree. The age of the CEO, as well as having a graduate degree are not important in explaining the compensation of the CEO. While no relationship is found in the single regression, a negative relationship between the years with the firm and the compensation of the CEO in the multiple regression is found. This finding suggests some degree of salary compression in the highest ranks of the corporate world that is similar to that is well known in the educational arena.

Table 4: Regressions On Total Compensation.

Constant	CEOAGE	YRFRM	YRCEO	UGATT	GATT	R2/Fstat
2,064,680 10,271	21,842 1.30					0.0002 1.70
2,994,548 10,271						0.007 66.88***
3,559,910 10,268		-12,170 -1.30				0.0002 1.70
2,489,404 10,271			97,847 6.78***			0.005 46.03***
3,976,855 10,257				-748,962 -1.78*		0.0003 3.15*
3,369,596 10,267					-150,393 -0.65	0.0000 0.42
3,878,431 10,254	-5508 -0.28	-43,110 -3.99***	124,225 7.50***	-381,924 -0.9		0.0063 16.38***
3,608,359 10,265	-5562 -0.28	-44,057 -405***	125,814 7.65***		-131,162 -0.55	0.0063 16.33***
3,902,563 3.52	-5671 -0.29	-43,696 4.01***	124,254 7.5***	-339,468 -0.76	-80,109 -0.32	0.0064 13.12***

We continue by replacing the undergraduate and graduate school attendance variables with dummy variables indicating the degree earned. Dummy variables are assigned to each degree in the following manner D1=1 if the degree is a bachelor of arts, 0 otherwise. Similarly, a dummy variable is created for each degree. We regress total compensation on each degree level, and then include control variables to mitigate the effects of several factors. The results are presented in Table 5. The results indicate that those with a Bachelor of Science Degree earn significantly less than those with other degrees, while those without a degree and those with a Bachelor of Arts degree earn more than all others. The finding that those without an undergraduate degree earn more than others is consistent with the findings of Jalbert, Rao and Jalbert (2002). After incorporating the control variables, CEO AGE YRFRM, and YRCEO, the only remaining significant result is with regard to the CEOs that have a Bachelor of Arts degree.

Finally, we examine the starting age as the CEO as it relates to a number of variables. The age at which the individual becomes the CEO of the firm is critical. Given the compensation packages that these individuals earn, it is critical to know what variables might be related to how early in an individual is able to place himself/herself in this position. The results are presented in Table 6. The results indicate that those with an undergraduate degree become the CEO at a later date than those without an undergraduate degree. The year variable is included in the analysis to identify changes in the pattern of CEO start ages over time. The insignificance of the variable indicates that the starting age for CEOs does not change significantly throughout the sample time period. The age at which the individual received his undergraduate and graduate degree is positively related to the age at which the individual became the CEO. That is, those that earn their undergraduate degree at a later age, also become the CEO of the firm at a later age.

Table 5: Regression of variables on Total Compensation

Constant	BS	BA	BE	BBA, BSE	Other	Law	No Degree	Not Report	CEO AGE	Yrfrm	Yrceo	R2/Fstat
3,484,108 (10,271)	-497,827 0.0001***											0.0004 4.23**
3,108,685 (10,271)		535791 2.19**										0.0005 4.77**
3,327,598 (10,271)			-446,433 -1.03									0.0001 1.05
3,332,628 (10,271)				-588,638 -1.27								0.0002 1.61
3,288,492 (10,271)					449,901 0.38							0.000 0.15
3,309,719 (10,271)						-1,876,134 1.52						0.0002 2.30
3,230,744 (10,271)							750,449 1.78*					0.0003 3.15*
3,271,213 (10,271)								857,420 1.16				0.0001 1.34
3,669,105 (10,268)	-454,196 -1.9								-5125 -0.26	-42,908 -3.98***	125,423 7.263***	0.0066 17.16***
3,208,674 (10,268)		533,112 2.18**							-3544 -0.18	-42,547 -3.94***	125,867 7.66***	0.0068 17.44***
3,493,494 (10,268)			-85,496 -0.20						-4956 -0.250	-43,096 -4.00***	125,711 7.60***	0.0063 16.26***
3,603,409 (10,268)				-662,267 -1.43					-6419 -0.33	-43,028 -3.99***	126,799 7.71***	0.0065 16.76***
3,495,477 (10,268)					525,270 0.45				-5206 -0.27	-43,235 -4.01***	126,119 7.67***	0.0063 16.30***
3,414,771 (10,268)						-1,912,816 -1.55			-3292 -0.17	-43,325 -4.02***	125,797 7.66***	0.0065 16.85***
3,476,150 (10,268)							133,039 0.56		-5604 -0.29	-43,972 -4.04***	125,791 7.65***	0.0063 16.33***
3,466,167 (10,268)								751,345 1.01	-5019 -0.26	-42,942 -3.98***	125,943 7.66***	0.0064 16.51***
4,146,946 (10,268)	1,013,411 -1.34	-384,369 -0.51	-817,722 -0.97	-1,347,081 -1.57	-215,398 -0.16	-2,627,179 -1.84	-384,832 -0.46	Omit	-3536 -0.18	-42,714 -3.96***	123,900 7.45***	0.0074 7.66***

Table 6: Regression On Age At Which The Individual Became The CEO

Constant	UGATT	Year	ageug	Yrfrm	GATT	gradage	R2/Fstat
46.33 10,383	1.907 6.64***						0.0042 44.04***
51.07 10,398		-0.0322 -1.51					0.0002 2.27
40.07 9348			0.3575 12.03***				0.0152 144.7***
48.28 10,395				-0.0093 -1.47			0.0002 2.15
48.04 10,395					0.0785 0.49		0.0000 0.24
40.29 5175						0.2864 13.74***	0.0352 188.66***

Table 7: Year Undergraduate Degree Was Earned
Relative To The Year The CEO Started Working For The Firm.

RY	N	CO	CD	MC	MDC	RY	N	CO	CD	MC	MDC
.	1027	1027	0.099981	4,499,517	1,338,874	13	179	6538	0.636488	3,013,122	1,133,402
-27	8	1035	0.100759	940369.4	1164206	14	247	6785	0.660533	3683358	1598607
-26	3	1038	0.101051	437354	435955	15	230	7015	0.682924	2911669	1452861
-22	4	1042	0.101441	780467	804219	16	215	7230	0.703855	2948546	1501887
-21	3	1045	0.101733	1472058	1560839	17	149	7379	0.718361	4776598	1781973
-19	3	1048	0.102025	896226	891070	18	202	7581	0.738026	4123473	1625318
-18	2	1050	0.10222	6154302	6154301	19	235	7816	0.760903	8476666	1596035
-17	2	1052	0.102414	4368783	4368783	20	236	8052	0.783879	3776302	1695843
-16	1	1053	0.102512	424091	424091	21	158	8210	0.79926	2315906	1009383
-15	4	1057	0.102901	416173	408745	22	186	8396	0.817368	3772512	1537286
-14	3	1060	0.103193	2307645	2055670	23	198	8594	0.836643	2930473	1612488
-13	4	1064	0.103583	4290246	2958546	24	160	8754	0.85222	3161880	1489746
-12	13	1077	0.104848	2407170	1231894	25	242	8996	0.875779	2135095	1203689
-11	9	1086	0.105724	1421365	1563903	26	148	9144	0.890187	2447232	1387140
-10	23	1109	0.107963	1884465	1527128	27	153	9297	0.905082	2332430	1288445
-9	12	1121	0.109132	1349364	993678	28	149	9446	0.919587	3613706	1194337
-8	28	1149	0.111857	5378314	1940924	29	180	9626	0.937111	3787249	1347554
-7	38	1187	0.115557	2234230	1736531	30	128	9754	0.949572	6778472	1504394
-6	35	1222	0.118964	2831667	1712783	31	116	9870	0.960864	2405404	1539898
-5	30	1252	0.121885	1649935	1155388	32	96	9966	0.97021	3093164	1838671
-4	19	1271	0.123734	3758297	3567460	33	47	10013	0.974786	4911375	2694868
-3	20	1291	0.125681	1156043	839481	34	48	10061	0.979459	2354878	1618246
-2	92	1383	0.134638	2558368	1514223	35	55	10116	0.984813	2452203	1529055
-1	1026	2409	0.234521	2315905	1378477	36	36	10152	0.988318	2805963	2466060
0	377	2786	0.271223	2739027	1467795	37	27	10179	0.990946	1587492	853759
1	512	3298	0.321067	2416518	1520826	38	18	10197	0.992699	1209119	956557
2	434	3732	0.363318	3447878	1370074	39	27	10224	0.995327	2802662	1541000
3	417	4149	0.403914	2330255	1411119	40	11	10235	0.996398	1267875	583584
4	316	4465	0.434677	2898757	1467639	41	3	10238	0.99669	1548928	1577248
5	366	4831	0.470308	2246133	1211048	42	5	10243	0.997177	3979225	2075897
6	221	5052	0.491822	2886710	1399677	43	11	10254	0.998248	2899107	1856364
7	258	5310	0.516939	3375097	1632084	44	7	10261	0.998929	1108897	975573
8	253	5563	0.541569	5590819	1674882	46	1	10262	0.999026	942535	942536
9	193	5756	0.560358	3267184	1171827	47	1	10263	0.999124	0	0
10	243	5999	0.584015	3750682	1484658	48	3	10266	0.999416	2081857	793533
11	143	6142	0.597936	2046313	1176989	49	3	10269	0.999708	382450	446617
12	217	6359	0.619062	3047502	1355988	50	1	10270	0.999805	938499	938499
						52	2	10272	1	3636423	3636423

We continue by providing a cumulative distribution presentation of the ages at which various significant events occur in the CEO's life. The analysis is done by examining for example, the year at which the undergraduate degree was earned relative to the year the individual became the CEO of the firm. Relative year 0 in the tables indicates that the CEO started working for the company in the same year as he received his undergraduate degree, -1 indicates that the CEO started working for the firm one year before he/she received his undergraduate degree and +1 indicates that the CEO started working for the company one year after he received his undergraduate degree. We also report the Mean and Median total compensation for those in each category. The notation in the tables is as follows: RY = Relative Year, N = Number of observation, CO = the Cumulative number of observation, CD = the Cumulative Distribution, MC = Mean Compensation, MDC = Median Compensation. The results are presented in Table 6-9.

In Table 7, the year that the undergraduate degree was earned relative to the year that the CEO started working for the firm is presented. The first column is the relative year. The most interesting result in this table is the preponderance of CEOs that started working for the firm that they would manage in the year prior to their graduation from college. The data indicates that 1026 observations were performed by people who started working for the firm one year prior to their graduation. An additional 356 observations were performed by people who started working for the firm sometime prior to the year before they earned their degree. Several potential explanations can be forwarded with regard to this result. First, those people who ultimately become CEOs might do so through some type of internship program, thus they become an employee of the firm prior to graduating from college. A second explanation is that a large number of CEOs might be very near completing their degree when they take their jobs, finishing the final class or two of their degree while they are working for the firm. A third explanation rests in limitations of the data. Unfortunately, while the Forbes data contains the age of the CEO, it does not provide the exact birth date. Similarly, data regarding the date that the CEO began working for the firm is not available. As several imprecise variables were combined to compute the relative year that the CEO began working for the company, the resulting errors could be compounded in this table. As such, some caution must be exercised in interpreting the results.

We continue by examining the year with the graduate degree was earned relative to the year that the individual started with the firm. The results are presented in Table 8. Again, those figures with negative numbers indicate that the individual started working for the firm 34 years prior to receiving his graduate degree. 6,510 individuals started working for the firm prior to earning their graduate degree. Of those 6510, 5157 observations were performed by individuals that never earned a degree. Thus, 1353 observations were performed by an individual who earned his graduate degree after starting to work for the company.

Next, we examine the year that the undergraduate degree was earned relative to the year that the individual became the CEO of the firm. The results are presented in Table 9. The results indicate from those CEOs that have a degree, only 25 observations were performed by an individual that earned his/her undergraduate degree after becoming the CEO of the firm. This is not particularly surprising given the demands of being the CEO of a major corporation. The time frame ranged from 14 years after becoming the CEO to 56 years before becoming the CEO of the firm.

Finally, in Table 10, the year that the graduate degree was earned relative to the year that the individual became the CEO of the firm is examined. Again, the results indicate that few CEOs earn their degree after they become the CEO of the firm. Only 24 observations were performed by individuals that earned their graduate degree after taking on CEO responsibilities. The figures ranged from 15 years after the individual became the CEO to 55 years before the individual became the CEO of the firm.

**Table 8: Year When Graduate Degree Was Earned
Relative To Year The Individual Started With Firm**

RY	N	CO	CD	MC	MDC	RY	N	CO	CD	MC	MDC
.	5157	5157	0.502044	3,376,792	1,348,431	7	96	7745	0.753991	3,929,267	1,640,389
-34	3	5160	0.502336	437354.1	435955.3	8	124	7869	0.766063	2583576	1221211
-30	8	5168	0.503115	1755628	1918517	9	155	8024	0.781153	3910028	1427988
-29	4	5172	0.503505	915187.2	913599.6	10	114	8138	0.792251	4518227	1767443
-28	6	5178	0.504089	2104915	2158370	11	61	8199	0.798189	3096573	1640756
-27	1	5179	0.504186	936474.7	936474.7	12	153	8352	0.813084	4011270	2093087
-26	7	5186	0.504868	1914149	1697000	13	201	8553	0.832652	3419052	1701766
-25	1	5187	0.504965	4877250	4877250	14	149	8702	0.847157	4103650	1249260
-22	6	5193	0.505549	722293.7	706021.1	15	140	8842	0.860787	5666608	1625743
-21	1	5194	0.505646	1937143	1937143	16	113	8955	0.871787	2934979	1168255
-20	2	5196	0.505841	2260070	2260070	17	124	9079	0.883859	2938288	1611525
-19	25	5221	0.508275	1112933	815625.8	18	135	9214	0.897002	3744502	1659805
-18	9	5230	0.509151	1096954	1054348	19	113	9327	0.908002	3794939	1454717
-17	10	5240	0.510125	984697.6	1033025	20	128	9455	0.920463	3012547	1691992
-16	16	5256	0.511682	1889889	1029756	21	72	9527	0.927473	2574147	1450424
-15	13	5269	0.512948	2457447	2351101	22	101	9628	0.937305	2211642	1429993
-14	18	5287	0.5147	1991703	1458003	23	77	9705	0.944801	2383792	1280000
-13	18	5305	0.516452	1571073	1102656	24	100	9805	0.954537	2759105	1703998
-12	28	5333	0.519178	9718741	2953488	25	93	9898	0.96359	5538595	2175365
-11	24	5357	0.521515	6643723	1650584	26	73	9971	0.970697	2013247	1308445
-10	41	5398	0.525506	1797185	831307.2	27	71	10042	0.977609	6674845	3371450
-9	51	5449	0.530471	1835295	1294835	28	34	10076	0.980919	1976167	1728418
-8	45	5494	0.534852	1201696	1054860	29	42	10118	0.985008	3805594	1790528
-7	61	5555	0.54079	1923198	1099790	30	48	10166	0.989681	2621069	1916312
-6	71	5626	0.547702	2002853	1429993	31	30	10196	0.992601	4001956	2783764
-5	81	5707	0.555588	3135796	1906120	32	13	10209	0.993867	1386313	1251000
-4	68	5775	0.562208	1884735	1170260	33	11	10220	0.994938	1665836	1604196
-3	23	5798	0.564447	1681258	946470.8	34	5	10225	0.995424	730772.6	767808.5
-2	59	5857	0.570191	2634224	1440029	35	18	10243	0.997177	1864375	1144682
-1	653	6510	0.633762	3574935	1598227	36	10	10253	0.99815	1677856	1107020
0	214	6724	0.654595	1803186	1308200	37	4	10257	0.99854	1253097	1359420
1	212	6936	0.675234	2119457	1540791	38	0	10257	0.99854	.	.
2	127	7063	0.687597	4309443	1626560	39	1	10258	0.998637	0	0
3	119	7182	0.699182	2605257	1677859	40	1	10259	0.998734	784963.6	784963.6
4	183	7365	0.716998	3195720	1308000	41	1	10260	0.998832	0	0
5	162	7527	0.732769	2545446	1474425	42	10	10270	0.999805	3211717	1885128
6	122	7649	0.744646	2627292	1481032	49	2	10272	1	3636423	3636423

**Table 9: Year Undergraduate Degree Was Earned
Relative To The Year The Individual Became CEO Of The Firm.**

R/Y	N	CO	CD	MC	MDC	R/Y	N	CO	CD	MC	MDC
.	1024	1024	0.099688	4,494,479	1,337,677	24	365	4780	0.465343	2,110,176	1,272,164
-14	1	1025	0.099786	4231054	4231054	25	469	5249	0.511001	2272788	1398645
-12	1	1026	0.099883	1231894	1231894	26	608	5857	0.570191	2936017	1548303
-9	1	1027	0.099981	996953.3	996953.3	27	495	6352	0.61838	2705117	1332000
-3	8	1035	0.100759	852313	857398.6	28	546	6898	0.671534	3286044	1487214
-1	14	1049	0.102122	5648023	6264016	29	582	7480	0.728193	2638461	1316919
0	15	1064	0.103583	5448886	1616024	30	472	7952	0.774143	3683391	1511487
1	7	1071	0.104264	820328.5	1111158	31	409	8361	0.81396	2623978	1274811
2	21	1092	0.106308	2453085	1566248	32	429	8790	0.855724	2464933	1400936
3	38	1130	0.110008	2268991	2130960	33	287	9077	0.883664	2977441	1760000
4	26	1156	0.112539	2367640	1286073	34	296	9373	0.912481	2167311	1562762
5	35	1191	0.115946	2315468	1028536	35	228	9601	0.934677	2627275	1475918
6	68	1259	0.122566	3055161	1146363	36	155	9756	0.949766	2683112	1408257
7	39	1298	0.126363	5049364	1666818	37	147	9903	0.964077	2875130	1644251
8	49	1347	0.131133	15960007	1850459	38	120	10023	0.975759	2813080	1636949
9	69	1416	0.13785	6821803	2695260	39	87	10110	0.984229	3615288	1578611
10	41	1457	0.141842	4449873	1895458	40	54	10164	0.989486	2085574	1105566
11	89	1546	0.150506	1311675	792982.6	41	17	10181	0.991141	1369751	703562.7
12	127	1673	0.16287	5904857	1915938	42	28	10209	0.993867	2427322	1743966
13	81	1754	0.170755	2547050	1197692	43	18	10227	0.995619	4500153	1779260
14	119	1873	0.18234	4306892	1482752	44	18	10245	0.997371	1377341	1447053
15	123	1996	0.194315	2691708	1051463	45	1	10246	0.997469	296165.3	296165.3
16	133	2129	0.207262	2699836	1177445	46	5	10251	0.997956	2024744	1064179
17	256	2385	0.232185	2730865	1212296	47	1	10252	0.998053	0	0
18	236	2621	0.25516	3619181	1362613	48	6	10258	0.998637	3566490	2902785
19	321	2942	0.28641	5471969	1280638	49	4	10262	0.999026	832799.6	479272.1
20	346	3288	0.320093	3355851	1413605	50	6	10268	0.999611	1233788	1257250
21	371	3659	0.356211	2461569	1214648	51	0	10268	0.999611	.	.
22	367	4026	0.391939	3476376	1779805	52	2	10270	0.999805	3636423	3636423
23	389	4415	0.429809	4831482	1592032	56	2	10272	1	1488725	1488725

**Table 10: Year Graduate Degree Was Earned
Relative To The Year The Individual Became CEO Of The Firm.**

RY	N	CO	CD	MC	MDC	RY	N	CO	CD	MC	MDC
.	5156	5156	0.501947	3,377,440	1,348,919	20	267	7605	0.740362	4,677,682	1,697,681
-15	1	5157	0.502044	4877250	4877250	21	200	7805	0.759833	2695415	1214968
-10	1	5158	0.502142	1074215	1074215	22	249	8054	0.784073	1889878	1174713
-7	5	5163	0.502629	27985137	29937757	23	232	8286	0.806659	3400248	1972128
-5	5	5168	0.503115	944931.3	896129.2	24	285	8571	0.834404	2848105	1581708
-4	1	5169	0.503213	567919.6	567919.6	25	237	8808	0.857477	3247528	1497856
-3	6	5175	0.503797	3573471	3257547	26	307	9115	0.887364	4011027	1893554
-2	16	5191	0.505354	14743150	3230452	27	191	9306	0.905958	4060079	1580930
-1	10	5201	0.506328	5064404	1744926	28	186	9492	0.924065	2768044	1574914
0	27	5228	0.508956	1995484	1484319	29	170	9662	0.940615	2750080	1538195
1	36	5264	0.512461	1996844	1844379	30	177	9839	0.957847	2594264	1748829
2	8	5272	0.51324	1389407	963928.3	31	100	9939	0.967582	2819035	2498750
3	24	5296	0.515576	4308017	1677450	32	66	10005	0.974007	4645314	2116167
4	47	5343	0.520152	2351609	1119495	33	99	10104	0.983645	5974784	1991338
5	38	5381	0.523851	1957360	877499.1	34	32	10136	0.98676	2011257	984372.3
6	45	5426	0.528232	3152422	1222592	35	39	10175	0.990557	3019745	1361833
7	39	5465	0.532029	5192101	1517450	36	35	10210	0.993964	2018340	1658970
8	41	5506	0.53602	2630269	965325.8	37	7	10217	0.994646	1157894	1280619
9	106	5612	0.54634	2381607	1005703	38	20	10237	0.996593	2113582	1439091
10	88	5700	0.554907	2683830	1021699	39	9	10246	0.997469	6549249	4747189
11	38	5738	0.558606	1492510	892000	40	1	10247	0.997566	784963.6	784963.6
12	137	5875	0.571943	3622962	1455156	41	1	10248	0.997664	0	0
13	129	6004	0.584502	3152513	1457160	42	6	10254	0.998248	3655612	1648562
14	112	6116	0.595405	3247094	1336885	43	11	10265	0.999319	1570101	1711835
15	195	6311	0.614389	3157381	1259599	44	2	10267	0.999513	4778296	4778296
16	263	6574	0.639992	2701133	1381554	48	0	10267	0.999513	.	.
17	249	6823	0.664233	1979852	1322957	49	3	10270	0.999805	2569033	3556642
18	242	7065	0.687792	3419424	1268082	55	2	10272	1	1488725	1488725
19	273	7338	0.714369	3428776	1814553						

4. Concluding Comments

In this paper the educational backgrounds of the Highest Paid Chief Executive Officers (CEOs) in the United States are examined. Specifically, the extent to which the specific degree earned affects the salary received and other variables are examined. The data for the study is the Forbes 800 CEO compensation data. The time period for this study is the thirteen years from 1987-1999. The results indicate that the total compensation that individuals earn as the CEO of the firm depends upon the undergraduate and graduate degree that the individual earns. Those with differing degrees are found to have been with the firm for a differing number of year, earned their undergraduate and graduate degrees at different ages, started working for the firm at different ages, became the CEO at differing ages, and were with the firm for differing number of years prior to becoming the CEO. We find that CEOs frequently start working for their firms prior to earning their undergraduate and graduate degrees. However, we find that few CEOs earn either their undergraduate or graduate degrees after becoming the CEO of the firm.

While the findings of this study are an important advancement in the literature, there are several limitations of the study. First, the analysis does not control for the industry in which the firm operates. This has been found in other literature to be an important explanatory variable. Second, the analysis addresses only the total compensation of the CEO. It does not decompose the nature of the compensation into its various elements. Thirdly, the analysis does not decompose the data into those CEOs that are firm founders versus those that are not firm founders. Analyzing each of the above three points would shed additional light onto the CEO compensation literature. While the data is available to analyze the above issues, they are relegated to a future manuscript as a result of time and space limitations. 📖

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