Gender And Executive Pay
In The S&P Mid-Cap
And Small-Cap Companies

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ABSTRACT

Gender pay equity among all levels of workers is a topic of interest to the public as well as to business researchers. Catalyst, a non-profit group devoted to the advancement of women in management, noted that women executives were paid only 68% of the earnings of their male counterparts in 1997. In this current study of the S&P Mid-Cap and Small-Cap companies, we find that variations in annual and long-term executive pay are generally not associated with gender, but rather with the size of the company, CEO pay (a control for pay-scale strategy), and whether the executive is in a line position. While women appear to be earnings equal amounts of total remuneration in these smaller companies, it should be noted that only 3.6% of the S&P Mid-Cap and Small-Cap five top-paid executives were female in 1998.

BACKGROUND

*G*ender pay equity among all levels of workers is a topic of interest to the public as well as to business and economic researchers. Rose, Macro, and Hartmann (2004) note that for all full-time workers, the current female-to-male ratio of weekly earnings is 77 percent. Catalyst, reporting on the pay of top corporate executives, stated that women executives were paid only 68 percent of the earnings of their male counterparts in 1997 (Catalyst, 1998). Catalyst used a simple model testing for pay differences for male versus female executives. The accounting and compensation literature, however, indicates that many factors influence chief executive officer (CEO) compensation. Studies by Mayer-Sommer and Bedingfield (1989) and Veliyath, Ferris, and Ramaswamy (1994) both reported that executive compensation was related to sales. Deckop (1988) concluded that compensation of CEOs was related to firm profit. Blau and Kahn (1997) associated occupational distributions and experience levels with pay and suggested that women's occupational choices and lower experience levels contributed to the pay gap.

Bertrand and Hallock (2001) conducted an extensive study of executive compensation and gender differences for the years 1992-1997. They concluded that all but five percent of the gender pay gap could by explained by two items; first, female executives were younger and less experienced than male executives and, second, women executives worked at smaller companies.

Renner, Rives and Bowlin (2002) addressed the shortcomings of Catalyst's report in a study of the Standard and Poors (S&P) 500 companies using 1997 data. They found that, after controlling for company and executive characteristics, annual compensation for women executives equaled that of men, but total compensation for women was less than for men. One limitation of Renner *et. al*. was the few number of women executives. There were 54 women among the five top-paid executives of the S&P 500 in 1997; thus women represented 2.2 percent of the S&P 500 top-paid 2500 executives. To determine if these results would generalize to companies with a larger representation of top executive women, we hypothesize that women would be more successful in smaller companies and, therefore, would be present in higher numbers among the executive ranks. We examine the S&P Mid-Cap and Small-Cap companies, which represent, respectively, Standard and Poors rankings of the 501st through 900th and 901st through 1500th largest companies in the

U.S. In this group of companies for 1998, we identify 174 women out of a potential of 5,000 executives, or 3.6 percent of the total population.

Our study is unique in that we control for pay-level strategy. Pay-level strategy is the idea that a firm's pay scale will lead, lag or match the pay scale in the market. Freedman and Bout (1999) suggested that a firm uses a consistent pay philosophy in setting compensation standards for company leaders, that is, across the top 200-250 executives. To control for pay-level strategy, we include CEO pay as a covariate. When we include this variable, there are limited pay differences between male and female executives.

In this paper we report on a model based on the idea that an executive's compensation is a function of both company and executive characteristics. We include company variables (company size or performance, industry, and company pay-scale) and executive attributes (gender, age, and line/staff position) in the models to control for their influence on executive pay. We test the influence of these company and executive attributes on two representations of executive remuneration. First, we test for differences in annual pay (base pay plus bonuses and other annual compensation) across male and female executives, controlling for company and executive characteristics. Second, we test for differences in total executive pay (defined as annual pay plus long-term pay) controlling for company and executive characteristics. Long-term pay equals the forecasted value of executives' stock options awarded during the year and other long-term incentive payouts and other long-term pay, as defined by the Securities and Exchange Commission (SEC.)

DATA

The SEC requires all companies to report in their proxy statements the remuneration of the five top-paid executives. We reviewed the proxy statements for all the companies in the S&P Mid-Cap and Small-Cap groups for the 1998 fiscal year, using the SEC EDGAR website. We identified women executives by name or pronoun. In those cases when the sex of the executive could not be determined in the proxy statement, we contacted the company. We collected compensation data for the five top-paid executives in all companies which had women among the five top-paid. We then made a random selection from the remaining companies in the S&P Mid-Cap and Small-Cap and collected the compensation data for their five top-paid executives.

We use CEO pay as an independent variable to represent the company's pay-scale philosophy. Mahoney (1979) found that compensation across two hierarchical levels was proportional. This suggests that there is a relation among pay levels or a company pay-scale strategy. For executive annual pay, we include the CEO's annual pay as a control; we include the CEO's total pay as a control for total pay. If an executive works at a company with a highly paid CEO, then we expect that other executives in that company will be more highly paid. The mean value of CEO annual pay is $981,000 while the total CEO compensation averages $2.66 million. Since we use CEO pay as a control for the company pay-scale philosophy, our statistical tests include the four executives ranking immediately below the CEO in pay. The final data set includes 1759 executives (174 women, 1585 men) representing 463 companies. These executives' annual pay averages $450,000, while the mean value of total pay is $983,000.

We use operating income as our measure of company performance, while the dollar value of sales and book value of total assets are used to represent company size. Data for the company performance and company size variables were obtained from Compustat PC Plus. We expect that executives working for larger or higher performing companies will earn more than executives at smaller or poorer performing companies. The average value of sales for the 463 companies is $1 billion, the average value of assets is $1.4 billion, and the average value of operating income is $88 million.

In order to account for the industry in which executives are employed, we identify each firm as being in the manufacturing sector or not, based on the primary Standard Industrial Classification (SIC). Executives in this study are distributed almost equally between manufacturing and non-manufacturing firms. This distribution is independent of gender according to a Chi-square test.

Whether an executive is in a line or staff position is determined by reviewing job titles and descriptions contained in proxy statements. Staff positions are corporate secretary, controller or chief financial officer, or vice-president of human

resources or information systems. We expect that executives in line positions have more responsibility and, therefore, receive higher compensation than executives in staff positions. Approximately 67 percent of the executives are in line positions.

Blau, Ferber and Winkler (1998) suggested that pay differences between men and women could be partially explained by differences in age and experience. Experience is available for only a few of the executives in this sample, and age is available for about 40 percent of executives in our sample. Thus, we include age and age squared in some of our models. Since age is a proxy for general human capital, we expect that older executives receive higher compensation. Information on age is found in company proxy statements. The 723 executives for whom age is reported have attained an average age of 51.0 years. The women executives tend to be younger than the men. Their average age is 47.0, versus 51.3 for the 672 men in this sub-sample. This difference in age of women and men is statistically significant. It should be noted that age is more likely to be reported for the top-paid one or two executives, rather than all five executives. The final variable is the gender of the executive. Given similar company characteristics and executive attributes for two individuals, we expected to see no difference in compensation between men and women.

In t-tests, the annual compensation for female executives is less than that for the male executives in our sample; mean annual salary for women is $386,000 versus $457,000 for men. However, for long-term compensation the women earn an average of $597,000 and the men an average of $527,000. This difference is not statistically significant, nor is total compensation different between female and male executives ($982,500 and $983,500 respectively). However, women do receive a higher percentage of their total pay as long-term compensation (43 percent) than men do (39 percent).

In our sample, women tend to work for firms in which the CEO earns more compensation. The average compensation for the female executives' CEO is $3.2 million versus $2.4 million for the male executives' CEOs. From t-tests, this difference is shown not to be statistically significant, perhaps because of the large variances in the sample.

Executives in line positions tend to receive compensation that is closer to that of the CEOs than executives in staff positions (executives in line positions receive, on average, 72 percent of the CEO compensation, versus 52 percent for those in staff positions). In our sample women are less likely to be in line positions than men (based on a Chi-square test). In addition, executives in non-manufacturing firms tend to earn a total pay package that is closer to the CEOs compensation than do executives in manufacturing firms (60 percent versus 74 percent). In our sample, Chi-square tests indicated that women are as likely to be in a manufacturing firm as in a non-manufacturing firm.

REGRESSION RESULTS

Tables 1 through 4 present the results of regressions run separately for *annual* executive compensation and then for *total* executive compensation. Only one measure of size or performance can be used in a regression equation because of multicollinearity among size and performance variables. In each regression analysis, the natural log of compensation is the dependent variable. Continuous independent variables include the natural logs of assets, operating income, sales and CEO pay. Categorical or dummy variables are included to represent whether an individual is employed by a manufacturing firm (1 = employed in manufacturing, 0 = employed in non-manufacturing firm), whether the executive is in a line position (1 = line, 0 = staff), and whether the executive is a woman (1= female, 0 = male). Tables 1 and 3 include the age and age-squared variables. The sample size on these tests is smaller than the full sample size because, as noted above, age was provided for only 40 percent of the executives.

Annual Compensation

Table 1, which reports regression results, includes the statistical significance of the coefficients of all variables tested as determinants of annual compensation. Adjusted R-squared statistics indicate that approximately 47 percent of the variation in annual compensation is explained by variations in the set of independent variables. Company size, measured as sales or as dollar value of assets, is positive and significantly related to executive pay. Being in a larger company increases annual pay, *ceteris paribus*. Being in a company with higher CEO pay is associated with higher pay among other top-paid executives.

The variable representing a manufacturing firm is negative, but significant in only one equation. Individuals identified as being in a line position are paid more than those in a staff position, *ceteris paribus*. Age provides limited explanation of the variation in annual pay, with older executives being paid more.

Finally, and most importantly, being a woman is *not* associated with lower annual compensation, once company performance, company size, and other control factors are taken into account. We cannot reject the hypothesis that, *ceteris paribus*, top-paid executive women receive the same annual pay as top-paid executive men.

Table 2 includes the test results for the full sample of 1757. Approximately 41 percent of the variation in annual pay is explained by the independent variables. The results for manufacturing firm and line position are similar to those reported in Table 1. In the full sample, however, female executives receive significantly less annual pay than male executives. One possible explanation for the gender difference reported in Tables 1 and 2 is that age is less likely to be reported for women than men. Women tend not to be the very top-paid executives in each company, when we include only those executives for whom age was reported. In the full sample results (Table 2), gender may be serving as a proxy for age. It may be age that is explaining the lower annual pay of executive women.

Total Compensation

The results of regression equations in which total compensation (annual plus long-term) is used as the dependent variable appear in Table 3 and 4. The independent variables in the equations are identical to those shown in Table 1 and 2 for annual pay, with the exception of the pay-scale control which is CEO total pay. The variables in each equation explain between 26 and 29 percent of the variation in total compensation. Company size variables are positively related to total compensation. CEO pay is also an important determinant of the total pay of other top-paid executives in the company. Being in a line position suggests higher total pay, while being in a manufacturing firm is associated with lower pay in four of the six tests.

The gender of the executives is not a statistically significant determinant of pay for any of the models. Thus, we cannot reject the hypothesis that top-paid executive women receive the same total pay as top-paid executive men.

CONCLUSIONS

This research extends the work on the effect of gender on executive compensation. In this study of the S&P Mid-Cap and Small-Cap companies, we find that variations in annual and total-term pay are not associated with gender, but rather with the size of the company, CEO pay, and whether the executive is in a line position. Women appear to be making less in annual compensation, but when long-term compensation, including the current value of stock option awards, is examined, female executives earn equivalent amounts to male executives. While women appear to be earning equal amounts of total remuneration in these smaller companies, it should be noted that, although women represent a significant portion of managers, 12.8 percent in 1995 (Blau, Ferber, and Winkler, 1998), they are still underrepresented in the executive ranks. Only 6 of 1000 CEOs are female, and we find only 3.6 percent of the S&P Mid and Small-cap five top-paid executives were female.

There are some limitations of this study. After selecting all the companies with top-paid women executives, we selected additional companies randomly, rather than including the entire set of S&P Mid-Cap and Small-Cap. We also focused on 1998 and cannot conclude that results extend to other years. Finally, though the S&P Mid-Cap and Small-Cap companies are smaller than the S&P 500, they are still fairly large, and we cannot generalize to smaller companies.

A 2004 Catalyst study demonstrated a positive link between financial performance and the percentage of women among top management teams for the Fortune 500 companies for the years 1996-2000. As firms respond to current economic conditions, pay equity will continue to be an important issue to ensure the recruitment and retention of women in management and executive ranks.

RECOMMENDATIONS FOR FURTHER RESEARCH

Since pay-scale strategy seems to have a strong influence in determining executive pay, pay-scale should be included as a variable in studying pay equity. In addition, further study of women's distribution across companies with varying pay-scales is warranted.

Future studies should investigate pay differences between large and small companies. Data on the pay at companies smaller than those investigated here would have to be obtained by other means, such as company surveys. If surveys were used, more complete information could also be obtained about age and years of working experience. Years of experience is an important control for compensation because women are more likely than men to have interrupted careers.

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S&P MID-CAP & SMALL-CAP FIRMS

Table 1: Regression Results for Annual Compensation
(Coefficient (Standard Error))

	Equation 1	**Equation 2**	**Equation 3**
Intercept	4.395*** (.539)	4.369*** (.575)	4.399*** (.535)
Ln Assets	.047*** (.016)		
Ln Operating Income		-.021 (.029)	
Ln Sales			.071*** (.019)
CEO Annual Pay	.547*** (.025)	.572*** (.023)	.529*** (.025)
Manufacturing Firm	-.046 (.039)	-.069* (.038)	-.053 (.038)
Line	.222*** (.042)	.231*** (.042)	.217*** (.042)
Age	.024 (.016)	.029* (.016)	.028* (.016)
Age-squared	.000 (.000)	.000 (.000)	.000 (.000)
Female	-.051 (.073)	-.061 (.073)	-.025 (.073)
Adjusted R^2	.471	.466	.476
F	92.849***	90.889***	94.618***
N	723	723	723

*** significant at the .0l level
** significant at the .05 level
* significant at the .10 level
463 Companies
6 Female CEOs
1759 Non-CEO Executives
174 Non-CEO Female Executives
Age is available on 723 non-CEO officers
S&P MID-CAP & SMALL-CAP FIRMS

Table 2: Regression Results for Annual Compensation
(Coefficient (Standard Error))

	Equation 1	**Equation 2**	**Equation 3**
Intercept	5.971[***] (.203)	6.005[***] (.259)	6.013[***] (.205)
Ln Assets	.061[***] (.011)		
Ln Operating Income		-.010 (.022)	
Ln Sales			.064[***] (.011)
CEO Annual Pay	.469[***] (.016)	.503[***] (.015)	.466[***] (.016)
Manufacturing Firm	-.054[**] (.024)	-.090[***] (.022)	-.067[***] (.022)
Line	.193[***] (.023)	.199[***] (.023)	.191[***] (.023)
Female	-.086[**] (.037)	-.096[***] (.037)	-.081[**] (.037)
Adjusted R^2	.419	.407	.418
F	254.036[***]	241.962[***]	252.702[***]
N	1757	1757	1756

[***]significant at the .0l level
[**]significant at the .05 level
[*]significant at the .10 level

Table 3: Regression Results for Total Compensation
(Coefficient (Standard Error))

	Equation 1	**Equation 2**	**Equation 3**
Intercept	7.340[***] (.730)	6.971[***] (.790)	7.109[***] (.728)
Ln Assets	.075[***] (.024)		
Ln Operating Income		.033 (. 042)	
Ln Sales			.090[***] (.026)
CEO Total Pay	.402[***] (.028)	.428[***] (.027)	.401[***] (.028)
Manufacturing Firm	-.065 (.057)	-.108[**] (.056)	-.082 (.056)
Line	.217[***] (.061)	.229[***] (.062)	.215[***] (.061)
Age	.004 (.024)	.012 (.024)	.010 (.024)
Age-squared	.000 (.000)	.000 (.000)	.000 (.000)
Female	-.128 (.107)	-.147 (.107)	-.097 (.107)
Adjusted R^2	.282	.264	.285
F	41.485[***]	38.032[***]	42.064[***]
N	723	723	723

[***]significant at the .0l level
[**]significant at the .05 level
[*]significant at the .10 level

Table 4: Regression Results for Total Compensation
(Coefficient (Standard Error))

	Equation 1	**Equation 2**	**Equation 3**
Intercept	6.982*** (.245)	6.897*** (.337)	6.958*** (.246)
Ln Assets	.054*** (.015)		
Ln Operating Income		.027 (.032)	
Ln Sales			.051*** (.015)
CEO Total Pay	.422*** (.018)	.439*** (.017)	.426*** (.017)
Manufacturing Firm	-.065** (.033)	-.098*** (.032)	-.079** (.033)
Line	.169*** (.034)	.172*** (.034)	.169*** (.034)
Female	-.055 (.054)	-.068 (.054)	-.053 (.054)
Adjusted R^2	.293	.288	.293
F	146.521***	142.955***	146.416***
N	1759	1759	1758

*** significant at the .0l level
** significant at the .05 level
* significant at the .10 level

NOTES