A look at the financial-social performance nexus when quality of management is held constant

Authors: Samuel B. Graves, Sandra A. Waddock

RESEARCH NOTE

**A Look at the Financial-Social Performance Nexus
When Quality of Management is Held Constant**[1]

Samuel B. Graves
Carroll School of Management
Boston College
Chestnut Hill, MA 02167

617-552-0464
Fax: 617-552-0433
e-mail: graves@bc.edu

and

Sandra A. Waddock
Carroll School of Management
Boston College
Chestnut Hill, MA 02167

617-552-0477
Fax: 617-552-0433
e-mail: Waddock@hermes.bc.edu

RESEARCH NOTE
A Look at the Financial-Social Performance Nexus
When Quality of Management is Held Constant

In the social issues in management literature, there is a relatively long tradition of research aimed at demonstrating a relationship between corporate financial performance and corporate social performance (CSP). Results of these studies have been mixed to say the least. For example, Spicer (1978), Wokutch and Spencer (1987); McGuire, Sundgren, and Schneeweis (1988), Waddock and Graves (forthcoming) find a positive relationship between CSP and financial performance. Others find an ambiguous or negative relationship between financial and social performance (for example, Mahapatra 1984; Alexander and Buchholz, 1983; Cochran & Wood, 1984; Coffey & Fryxell, 1991; Aupperle, Carroll and Hatfield, 1985; Shane and Spicer, 1983).

The ambiguity of results concerning the nexus between financial and social performance has led one observer to characterize the whole field of study as "data in search of a theory" (Ullmann, 1985). Yet these studies have typically been flawed by methodological issues and data limitations, or stakeholder mismatching, as Wood & Jones (1995) pointed out in their extensive review of the CSP-financial performance literature. Additionally, other factors that may influence the relationship have sometimes been overlooked, as will be discussed below. The present research attempts to overcome some of these empirical issues first by using a comprehensive measure of CSP rather than the narrow or unidimensional measures used in much prior research. We also use both financial and market-based measures of performance as dependent variables. Finally, by controlling for at least one key factor that has been overlooked in prior research, quality of management, as well as more traditional factors such as size, risk, and industry, we believe we add a significant new dimension to this research stream.

Brief Background

In a recent study assessing the relationship between CSP and what they termed "good management," Waddock & Graves (forthcoming), the authors presented evidence that good management and good CSP are positively related. Corporate social performance on one level can be viewed as a multidimensional construct that assesses a company's general stance with respect to a complex array of different environments in the "social" arenas and beyond any company's predominant fiduciary interests associated with shareholders. These social environments include primary stakeholder categories and their attendant relationships (Freeman, 1984). In what they termed the "good management theory," Waddock & Graves argued that good relations between a company and its stakeholders may result in better long-term financial performance in a sort of virtuous circle that simultaneously and interactively mingles CSP and financial performance, with causality potentially running in both directions.

The present research follows the more traditional social issues in management research tradition in focusing directly on the relationship between financial and social performance. Here, however, we add a control variable for "quality of management" on the assumption that quality of management also may be impacting the financial-social performance relationship in ways that have not previously been addressed empirically. In effect, we are attempting to tease out the impact of quality of management on financial performance, and control for it so that we can see more directly the impact of CSP measures. Additionally, we add controls for other important variables that may represent influential factors that may be related to the financial performance of a firm: size, degree of risk associated with the firm, and industry. Previous studies of linkages between CSP and financial performance have demonstrated the importance of control for specific industry or company differences, such as size, risk or debt level, and industry, to ensure that similar companies were being evaluated (e.g., McGuire, Sundgren, & Schneeweis, 1988; Waddock & Graves, 1997).

Based on these data and methodological improvements, the present study presents a significant methodological and empirical advance over previous research on the CSP-financial performance linkage. Further, it provides a degree of empirical rigor and breadth formerly lacking to this important line of research. First, the study uses several measures of financial performance, including a market-based measure of total return to shareholders and three accounting measures. Second, the study controls for quality of management, which may be an intervening variable. Third, the study uses not only an index of overall CSP, but also differentiated stakeholder categories to explore the specific links between financial performance and a range of CSP and stakeholder relations.

Hypotheses

In line with the foregoing, several hypotheses will be tested. First we will test the general relationship between financial and social performance, controlling for traditional factors such as debt, size, and industry, as has been done in numerous previous studies. Then we will test the relationship between financial performance and each of the four non-fiduciary stakeholders with the same controls. Having undertaken these initial tests, we will then add the control for quality of management to both of the previous hypotheses, based on the analysis above, to test the robustness of the financial performance-CSP relationship. Financial performance includes typical accounting measures (return on equity, return on assets, and return on sales/net profit), as well as a market-based measure ten-year total return to shareholders, which provides a long-term assessment of wealth production for each firm yet avoids the somewhat random fluctuation of an annual measure. Specifically,

H1: Financial performance, measured by total return to shareholders, return on assets, and return on equity is a function of corporate social performance measured by an unweighted average CSP index of four stakeholders: employees, community, customers, and environment (with controls for risk, size, and industry).

H2:   Financial performance is a function of specific stakeholder relations with employees, community, customers, and environment (with controls for risk, size, and industry).

H3:   Financial performance is a function of corporate social performance (measured by the index) with a control for quality of management (and risk, size, and industry).

H4:   Financial performance is a function of specific stakeholder relations with employees, community, customers, and environment with a control for quality of management (and risk, size, and industry).

Methods

This research assesses the firm financial performance--social performance link using stakeholder-based measures of CSP for primary stakeholder categories of employee relations, customer (product), community relations, and environment, as well as an average measure of CSP that combines all variables, derived from the social performance rating firm of Kinder, Lydenberg, Domini (KLD). We control for quality of management using *Fortune's* reputational data as will be discussed below.

Data

The stakeholder-related ratings of Kinder, Lydenberg, Domini (KLD) over a four year period are used to measure CSP. KLD rates all 500 of the Standard & Poors index firms annual. Data span from 1991-1995. KLD rates firms on a scale of "major concern" to "major strength," which we convert to a -2 to +2 scale, along a variety of important dimensions.   Four of these dimensions can be considered direct evaluations of stakeholder relations: employees (a combination of treatment of employees plus diversity management), customers (product category, which includes issues of product quality and safety), communities (including philanthropy and other community relations activities), and environmental management.   The measure of employee stakeholder variable is constructed as an average of two original KLD measures: the employee relations and diversity assessments. The measure of the customer stakeholder is given as the "product" category in the original KLD nomenclature.

For Hypotheses 1 and 3, all four of these primary stakeholder variables are averaged into a single unweighted CSP index. In previous research, other KLD data have been used to develop a similar (but weighted) CSP index (e.g., Ruf et al., 1993; Waddock & Graves, 1995, forthcoming).   The present measure, however, includes only primary stakeholders available in the data and excludes KLD's so-called negative screens. All independent variables are lagged by one year. Assessing CSP by focusing on a set of stakeholder relations requires a multidimensional measure or set of measures that attends to *all* or many of the key stakeholders, not just two of them. Further, as McGuire, Schneeweis, and Branch (1990) and Waddock & Graves (1996) have demonstrated, <u>all</u> of *Fortune's* categories are highly intercorrelated, leading one to surmise that they are all measuring much the same thing, i.e., external perceptions of overall management of the enterprise, i.e., the perceived quality of management of firms from an external perspective.

The dependent variable, financial performance, is measured by ten-year total return to shareholders taken from the *Fortune* data, as well as by traditional accounting measures of return on assets (ROA), return on sales (ROS), and return on equity (ROE). Data for all financial performance variables were taken from the *Fortune* "America's Most Admired Corporations" data set. Ten year total return to shareholders as defined by *Fortune*,[2] includes both price appreciation and dividend yield to the investor, adjusted for stock splits, stock dividends, and any other adjustments to returns. Ten year total return is defined as the ten-year average compounded rate of return assuming that dividends are reinvested in the company's stock when paid and brokerage costs are negligible.

Control variables that have been used in prior studies are also used in the present research and come from the *Fortune* data set. The debt-to-asset ratio using the formula: (assets-equity)/assets serves as a proxy for firm risk. Employee count is a proxy for firm

---

[2]*Fortune's* data were acquired through Occam research Corporation, 25 Winter St., Waltham, MA. KLD data are from Kinder, Lydenberg, Domini, 129 Mt. Auburn St., Cambridge, MA 02138.

size. The original *Fortune* data base contained eleven years of data (1984-1994) on 653 firms, a total of 7147 observations. After the KLD and *Fortune* databases were merged and independent variables lagged, the data set included a minimum of 503 and a maximum of 536 observations, depending on the particular model.

Simultaneously, we control for the quality of management using the specific variable entitled quality of management. The overall reputational index, as noted above, averages the following eight attributes of company management: 1) overall quality of management, 2) quality of product or services, 3) financial soundness, 4) value as a long-term investment, 5) use of corporate assets, 6) innovativeness, 7) ability to attract, develop, and keep talented people, and 8) community or environmental responsibility. There is evidence that significant multicollinearity exists among *Fortune's* categories, one of which, responsibility to the community and environment, has frequently been used as a measure for CSP (McGuire, Schneeweis, & Branch, 1990; Waddock & Graves, 1996), suggesting a possible financial halo effect.

Brown & Perry (1994a; **Sam, what's the other citation?**) have recently provided a means of removing the financial halo from the *Fortune* data, a process important because of the high degree of multicollinearity (most correlations are at .9 and higher). To deal with this multicollinearlity problem, we followed Brown & Perry's **(19???)** methodology for extracting the financial halo from just the quality of management variable. The object of the Brown & Perry technique is to extract the financial performance halo and determine the "residual" or what is left when financial performance effects are removed from the data.

First, the 11-year *fortune* databse were cleaned of missing data. Then regression analysis was undertaken with *Fortune's* quality of management score as the dependent variable and financial variables as the independent variables.[3] The regression indicated

---

[3]Y=*Fortune* quality of management score
x1=ROE

that roughly 30% of the management score was explained by financial performance and, after many different versions of the regression analysis were run, that return on equity was not significantly related to the overall management score. The final regression included quality of management score as the dependent variable and return on assets, return on sales, ten-year total return to shareholders (to smooth out problematic year-to-year fluctuations found in earlier regressions), and debt to assets. R^2 increased to 33%, with the other 67% remaining as unexplained variables that we assumed represented quality of management with the halo effect removed.

We should note that regressions including industry dummy variables were also run, with the outcome that industry does not have a significant impact on this regression model. Since such a large portion of the quality of management variable remained unexplained by financial performance, we assume that it represents quality of management, largely free of financial effects. and use the residuals in the rest of our analyses as the measure of quality of management.

Analysis

The one-year lag used to test each of the hypotheses is necessary because actions taken with respect to CSP in the present time may not show results for a period of time following their implementation. One year has been used in prior research and seems to represent a reasonable length of time that does not permit too many extraneous intervening variables to interfere with the hypothesized relationships. Correlational analysis is used to establish basic relationships among the variables. Stepwise regression analysis is used to investigate each of the specific hypotheses, however independent variables and the first two control variables (size and debt-to-asset ration used as a surrogate for risk) were forced into each model. Only industry dummy variables were

---

x2=ROA
x3=ROS
x4=total return to shareholders
x5=ten-year total return to shareholders
x6=debt/equity ration

selected by the stepwise methodology. This technique allowed only industry dummies statistically significant at p<.01 or better to enter the model.

Results

Table 1 presents the correlations of key variables in this study. Table 1a presents the correlations between the *Fortune* variables used as a surrogate for quality of management with both the financial and the CSP variables. As can be seen, all relations are positive and significant; most are significant at $p \leq .0001$. Using the overall *Fortune* index, for example, we see highly significant positive relationships with all four measures of financial performance. The *Fortune* index is also significantly and positively related ($p \leq .0001$) to all of the CSP variables, including the CSP index created by averaging the other four variables. As can be seen quality of management is strongly positively associated with employee relations ($p \leq .0001$), community relations ($p \leq .0001$), product/customer treatment ($p \leq .0001$), and the environment ($p \leq .05$). Notably and consistent with previous findings, the relationship of quality of management to treatment of the environment is weakest. Also notable is that the relationship between the financial variables and *Fortune* index are generally stronger than those with the CSP variables.

When the quality of management variable from the *Fortune* database is used alone to measure quality of management, a similar pattern emerges. The only difference is that the relationship to community relations is somewhat weaker ($p < .05$) than was that of the overall index and the correlation between quality of management and environmental treatment is somewhat higher ($p < .001$).

Table 1b shows the lagged (one-year) correlations between financial measures and the CSP measures directly. Note that while all of these relationships are positive except for the ROE to product/customer relationships, there are few significant relationships. For the CSP index, there is a positive relationship to ten-year total return ($p < .05$) and ROE ($p < .05$), while relationships to ROA and ROS are insignificant. Looking at the specific stakeholder categories, it can be seen that ten-year total return is

significantly and positively correlated with employee relations (p<.001) and environmental treatment (p<.05), while ROE is significantly and positively related to community relations (p<.05) and to environment (.<.001). ROA has a significant positive relationship only with environment and it is relatively weak (p<.05), while none of the relationships for ROS are significant.

The significantly higher associations between the financial and quality of management variables hold in the regression analyses as well. In general, the powerful associations shown in Table 1a swamp those shown in Table 1b. In some instances, the regressions turn the CSP variables negative.

The first hypothesis tests the relationship between financial performance and CSP measured by unweighted average of stakeholder relations with controls for risk, size, and industry, but omitting the control for quality of management, i.e., a similar test to what has been undertaken in prior CSP-financial performance research. Table 2, Hypothesis 1, shows the results for the four financial variables. As can be seen in the table, all four models overall are significant at p<.0001 (indeed, all 16 models in this study are significant at the same level overall). The relationship between financial performance and the unweighted CSP index is significant and positive for 10 year total return at p<.05, while it is significant and positive at p>.01 for return on equity (ROE). The relationships for return on assets (ROA) and return on sales (ROS) are not significant, while in those two equations the control variable debt/total assets, a proxy for the degree of risk associated with each firm, is significantly and negatively related to financial performance at p<.0001. Certainly, the support for the hypothesis is weak at best.

Hypothesis 2, which explores specific stakeholder relations, exhibits a similar pattern. When ten-year total return is used as the dependent variable (model 5), only the product/customer relations variable achieves significance (p<.001); employee relations, community relations, and environment are not significantly related to financial performance. For financial performance measured as ROE, treatment the environment is

significantly and positively related to ROE, while none of the stakeholder variables are significant. When ROA is the dependent variable (model 7), only environment shows up as significant and that is a marginal significance (p<.05), while ROS is not significantly related to any of the stakeholder variables. Notably, for both ROA and ROS, the degree of risk measured by debt/total assets is highly significantly and negatively associated with these measures of financial performance.

Hypothesis 3 tests the relationship between financial and social performance with the control for perceived quality of management (*Fortune* management score) added. As can be seen in Table 3a, which tests the relationship for the unweighted CSP index and all four financial performance variables, all models are significant overall (p<.0001), however the only significant relationship between financial performance and CSP is for ten-year total return to shareholders and that is a negative relationship and only moderately significant (p<.05) compared to other relationships in this study. In each case the *Fortune* management index completely overpowers the CSP ratings, providing no support for the hypothesis, although there is strong evidence that financial performance and quality of management, as measured by the *Fortune* index, are related (for each financial variable, p<.0001). Additionally, when ROA is the dependent variables, there are significant negative relationships with the control variables for risk (p<.05) and size (p<.0001), while for ROS, the relationships are positive and significant for size (p<.01) and risk (p<.05).

Similar results hold when the stakeholder categories are broken out separately, as shown in Table 3b. In these models, the only significant stakeholder relationships are that environment is positively associated with ROE at p<.01 and employee relations are significantly negatively related to both ROA and ROS at p<.05. Consistent with Hypothesis 3, the significance of the control variable quality of management, measured by the *fortune* management index, overwhelms the stakeholder variables (p<.0001 in all cases).

Discussion, Implications, Conclusions

The findings reported above are disappointing at best, given prior research using similar measures (e.g., Waddock & Graves, 1996) and given the positive framing of the hypothesis. The highly significant and positive relationships between financial performance and the control variable used as a surrogate for quality of management, the overall *Fortune* reputational index, provide strong evidence for a hypothesis linking financial and managerial performance, while providing little support for an inclusion of stakeholder relationships as part of the quality of management nexus.

On the other hand, further research and analysis of the current data may be necessary to fully determine what is actually happening with this data and these relationships. Previous research has shown strong positive associations between the stakeholder variables and the *Fortune* data when these data are used to assess a linkage between stakeholders and quality of management (Waddock & Graves, 1996). Indeed, the correlations reported in Table 1a are consistent with these prior findings, which used financial performance as a measure of treatment of shareholders, thereby changing the nature of the research question by including key primary stakeholders on one side of the equation rather than including treatment of owners, as measured by financial performance, as the dependent variable as was done in the present research.

The findings reported in this study may suggest the dominance of the shareholder as the benefactor of both financial performance and managerial performance, indicating that these elements of corporate life are in fact highly linked. If consistently supported in future research, this finding may mean that other stakeholder considerations do not really count with respect to financial performance. Even the one-year lagged correlations between the financial variables and the stakeholder variables and CSP index are, however, mixed, showing only minimal positive associations for some of the

relationships. In face, even these relationships are not consistent across the various categories of financial performance.

Alternatively, the findings could mean that the *Fortune* data are themselves predominantly measuring financial performance and thus that multicollinearity in the data is problematic. The strong correlations between the *Fortune* index and individual quality of management variable and the financial variables of ten-year total return, return on equity, return on assets, and return on sales indicate that such may be the case. Three of the items making up the *Fortune* index used as a surrogate for quality of management in this research are financially-related: financial soundness, value as a long-term investment, and use of corporate assets. The fact that *Fortune* single-item variables are intercorrelated at .9 and better indicates that the same factor, either quality of management or financial performance perhaps, is actually being measured by that data.

One way to find out whether or not this is happening and, as well, to determine the actual impact of quality of management, would be to follow Brown & Perry's (1995) methodology with respect to the entire *Fortune* database (as opposed to the single-item measure community and environment, with which these authors dealt) and remove the "financial halo" from the data. By removing the financial halo from the *Fortune* data, one would be left with an indicator of quality of management considerably less "contaminated" by financial performance. On the other hand, given the dominance of the shareholder in current economic ideology, it may be that financial performance and quality of management are, in fact, the same thing.

At this point in the research process, the most we can say is that more work remains to be done to determine what is actually happening to companies with respect to the relationships among financial and social performance and quality of management. We have certainly not contributed, as we had hoped, to a dismantling of Ullmann's (1985) notion that the hypotheses of the present research represent "data in search of a theory." Indeed, if anything, we have added fuel to his concerns.

Perhaps the best we can say about these findings is, echoing Jones (1995) and Waddock & Graves (1996), the research question needs to be reframed so that the shareholder is considered as one of a number of important or primary stakeholders rather than as the sole constituent of business performance. Perhaps the basis for this reframing is ideological, in that it is reoriented toward a stakeholder conception of the firm (Freeman, 1984; Brenner & Cochran, 1991) rather than a shareholder or neoclassical conception of the firm. But to the extent that the present framing of the research question asks a question that provides little useful information, as the present results suggest, then social issues in management scholars may need to reconsider what are the important questions needing to be addressed in looking at corporate performance.

References

Alexander, G., & Buchholz, R. 1982. Corporate Social Responsibility and Stock Market Performance. *Academy of Management Journal* 21:479--486.

Aupperle, K. E., Carroll, A. B., & Hatfield, J. D. 1985. An Empirical Examination of the Relationship Between Corporate Social Responsibility and Profitability. *Academy of Management Journal*, 28 (2): 446-463.

Brenner, S. & Cochran, P. 1991. A Stakeholder Theory of the Firm. *Proceedings of the International Association of Business and Society,* Sundance, UT, March.

Brown, B. & S. Perry (1995). Focal Paper: Halo-Removed Residuals of *Fortune's* "Responsibility to the Community and Environment"--A Decade of Data. *Business & Society*, 34 (2): August, 199-215.

Cochran, P.L. & R.A. Wood (1984). Corporate Social Responsibility and Financial Performance. *Academy of Management Journal.* 27:42-- 56.

Freeman, R. Edward (1984). *Strategic Management: A Stakeholder Approach*. New York: Basic Books.

Graves, S.B., & S.A. Waddock (1994). Institutional Owners and Corporate Social Performance. *Academy of Management Journal*, 37: 4: 1034-1046.

Jones, Thomas. (1995). Instrumental Stakeholder Theory and Paradigm Consensus in Business and Society: Advances on the Methodological Front. *Proceedings of the Annual Meeting of the International Association for Business and Society*. Vienna, Austria.

McGuire, J. B., Sundgren, A., & Schneeweis, T. 1988. Corporate Social Responsibility and Firm Financial Performance. *Academy of Management Journal*, 31 (4): 854-872.

McGuire, Jean B., Thomas Schneeweis, and Ben Branch (1990). Perceptions of Firm Quality: A Cause or Result of Firm Performance? *Journal of Management*, 16: 1, 167-180.

Shane, P. B., & Spicer, B. H. 1983. Market Response to Environmental Information Produced Outside the Firm. LVIII (3), July: 521-536.

Ullmann, A. (1985), Data in Search of a Theory: A Critical Examination of the Relationships among Social Performance, Social Disclosure, and Economic Performance of U.S. Firms. *Academy of Management Review,* Vol.10, No.3.

Waddock, S.A. & S.B. Graves (1994). Industry Performance and Investment in R&D
        and Capital Goods. *The Journal of High Technology Management Research*, 6:
        1, 1-17.

Waddock, S.A. & S.B. Graves (forthcoming). The Social Performance-Financial
        Performance Link. *Strategic Management Journal*.

Waddock, S.A. & S.B. Graves (1996). Good Management and Good Stakeholder
        Relations: Are They Synonymous? In *Proceedings of the International
        Association of Business and Society*, Santa Fe, NM.

Wokutch , R.E. & B.A. Spencer (1987). Corporate Saints and Sinners: the Effects of
        Philanthropic and Illegal activity on Organizational Performance. *California
        Management Review*. 29: 77--88.

Wood, Donna J., and Raymond E. Jones (1995). Stakeholder Mismatching: A
        Theoretical Problem in Empirical Research on Corporate Social Performance.
        The International Journal of Organizational Analysis, 3 (3), July, 229-267.

Table 1. Correlations

Table 1a.
Lagged Correlations: Quality of Management with CSP and Financial Variables

	Financial Variable				Corporate Social Performance				
Fortune Data	10-year Tot ret	ROE	ROA	ROS	CSP Index	Empl Relns	Comm Relns	Prod/ Cust	Env't
Overall index	.49 ***	.32 ***	.39 ***	.40 ***	.35 ***	.31 ***	.20 ***	.27 ***	.11 +
Qual Mgt Variable	.52 ***	.28 ***	.33 ***	.33 ***	.29 ***	.23 ***	.10 +	.28 ***	.12 **

Table 1b. Lagged Correlations: Financial and Corporate Social Performance Variables

	Corporate Social Performance				
Financial Performance	CSP Index	Empl Relns	Comm Relns	Prod/ Cust	Env't
10-year total return to shareholders	.09 +	.11 **	.03	.05	.09 +
Return on equity (ROE)	.10 +	.08	.10 +	-.01	.14 **
Return on assets (ROA)	.08	.06	.03	.01	.11 +
Return on sale (ROS)	.06	.07	.10	-.03	.07

Key:
  $*** = p \leq .0001$
  $** = p \leq .001$
  $* = p \leq .01$
  $+ = P < .05$

CSP Index: unweighted average of stakeholder variables

Emp Relns: employee relations (combined measure of employee relations and diversity)
Comm Relns: community relations
Prod/Cust: product (surrogate for customer relations)
Env't: environment

Table 2: Results of Stepwise Regressions for Financial Performance Relationships to Corporate Social Performance

Table 2a: HYPOTHESIS 1: Financial performance, measured by total return to shareholders, return on assets, and return on equity is a function of corporate social performance measured by an unweighted average CSP index of four stakeholders: employees, community, customers, and environment (with controls for risk, size, and industry).

Dependent Variables: Financial performance

N=536	10-year total return Model 1	ROE Model 2	ROA Model 3	ROS Model 4
Independent Variable:				
Unweighted CSP index	4.87+ 6.14**	1.79	0.64	
Control Variables				
Size (# employees)	1.32	-1.01	-1.21	-4.43+
Debt/total assets (risk) - 2.11	0.00	-46.95***	-17.06***	
R^2	.333	.210	.320	.330
F	12.29***	9.25***	15.25***	16.01***

Table 2b: HYPOTHESIS 2: Financial performance is a function of specific stakeholder relations with employees, community, customers, and environment (with controls for risk, size, and industry).

Dependent Variables: Financial Performance

	10-year total return Model 5	ROE Model 6	ROA Model 7	ROS Model 8
Independent Variables				
Employee relations	0.62	-0.62	-2.09	-1.78
Community relations	- 0.02	0.56	0.42	0.95
Product/customer	9.59**	1.55	3.32	2.07
Environment	0.18	7.08*	4.60+	0.23
Control Variables				
Size (# employees)	0.59	-0.24	-0.14	-2.93
Debt/total assets (risk)-1.44	-0.00	-40.42***	-16.60***	
R^2	.346	.219	-.321	-.335
F	10.80***	8.09***	-14.39***	-13.56***

Key:

+= p<.05
*=p<.01
**=p<.001
***=P<.0001

Industry controls are omitted because of space constraints

Table 3: Results of Stepwise Regressions for Financial Performance Relationships to Corporate Social Performance <u>with</u> Control for Quality of Management (Fortune Management Index)

Table 3a: HYPOTHESIS 3: Financial performance is a function of corporate social performance (measured by the index) with a control for quality of management (and risk, size, and industry).

Financial Performance	10-year total return Model 9	ROE Model 10	ROA Model 11	ROS Model 12
Independent Variable				
Unweighted CSP index	-7.38*	-0.07	-1.88	-1.65
Control Variables				
Fortune management index	177.41***	34.74***	34.18***	44.50***
Size (# employees)	-0.46	4.12+	-5.63+	-11.84**
Debt/total assets (risk)	4.78+	1.74	-19.53***	-4.14+
R^2	.484	-.255	.365	.390
F	25.56***	10.45***	15.61***	17.24***

Table 3b: HYPOTHESIS 4: Financial performance is a function of specific stakeholder relations with employees, community, customers, and environment with a control for quality of management (and risk, size, and industry).

Dependent Variables: Financial Performance	10-year total return Model 13	ROE Model 14	ROA Model 15	ROS Model 16
Independent Variables				
Employee relations	-0.72	-3.51	-6.33+	-4.93+
Community relations	-2.92	0.17	0. 02	0.38
Product/customer	-0.86	-0.80	-0.00	-0.45
Environment	0.05	9.34*	3.39	1.43
Control Variables				
Fortune management index	170.24***	40.60***	34.66***	49.54***
Size (# employees)	-0.06	-0.76	-2.10	-4.76+
Debt/total assets (risk)	5.55+	4.56+	-11.70**	-2.46
R^2	.485	.260	.368	.395
F	21.97***	10.09***	14.27***	15.00***

Key:

    += $p < .05$
    *= $p < .01$
    **= $p < .001$
    ***= $P < .0001$

Industry controls are omitted because of space constraints