Research Note

A Look at the Financial-Social Performance Nexus when Quality of Management is Held Constant *

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Abstract. This research note advances understanding of the possible link between social and financial performance by using a financial-halo-removed measure of quality of management as control variable, along with more traditional controls of size, risk, and industry. The control, quality of management, is found to be highly associated with financial performance. Corporate social performance, measured both as a single indexed variable and as treatment of separate primary stakeholders (product/customer, employees, environment, and community), produces negligible or insignificant relationships with financial performance.

Key words: corporate social performance, management quality

In the social issues in management literature, there is a long record of research which examines the relationship between corporate financial performance and corporate social performance (CSP). Results of these studies have been mixed. For example, Spicer (1978), Wokutch and Spencer (1987), McGuire, Sundgren, and Schneeweis (1988), Waddock and Graves (1997) 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, 1982; Cochran and Wood, 1984; Coffey and 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 studies as 'data in search of a theory' (Ullmann, 1985). In fact, these studies have been marked by methodological problems, data limitations, and in some cases have suffered from what Wood and Jones (1995) have called stakeholder mismatching (i.e., inappropriate matching of stakeholder variables to performance measures). Further, as we will note below, other factors that may influence the relationship have sometimes been overlooked.

The key contribution of this research is that it controls for an important factor, quality of management, which has been neglected in prior research.

Using a financial halo-adjusted measure (Brown and Perry, 1994, 1995), which may dramatically influence financial performance, we believe, adds a significant new, primarily methodological, factor to the research stream. Thus, the contribution of this paper is intended to be methodological, and adding rigor to understanding the relationship between social and financial performance.

Background

In recent studies assessing the relationship between CSP and what they termed 'good management,' Waddock and Graves (1997a, b), presented evidence that quality of management and quality of CSP are positively related. CSP can be viewed as a multidimensional construct that assesses a company's general stance with respect to a complex array of different concerns in the social arenas. These concerns go beyond the company's predominant fiduciary interests, which are normally associated with returns to shareholders. Such social concerns include additional primary stakeholder categories and their attendant relationships (Freeman, 1984), including relationships to customers, employees, communities, suppliers, and, some have argued, environment (Starik, 1995).

In what they termed the 'good management theory,' Waddock and Graves (1997a, b) have recently argued that better relations between a company and its stakeholders may result in better long-term financial performance in a sort of virtuous circle that simultaneously improves CSP and financial performance, with causality potentially running in both directions. One conclusion of this prior research may be that quality of management and quality of stakeholder relationships are measuring the same facets of company performance. Well managed companies, that is, will by definition treat all their stakeholders well.

If this hypothesis is true, then the respective quality of management and stakeholder relations are measuring essentially the same thing. This study tests the traditional hypothesis about CSP that is related to financial performance. Simultaneously it controls for quality of management in an effort to determine the influence of quality of management on financial performance and its relationship to stakeholder relations in more detail. Thus, the present research follows the more traditional social issues in management research tradition, focusing directly on the relationship between financial and social performance. In effect, the study attempts to control for quality of management so that we can see more clearly the relationship between CSP and financial performance. Controls for other important variables that may represent influential factors related to the financial performance of a firm are also added as they have been in past research to assure consistency of method:

size, degree of risk associated with the firm, and industry. Previous studies of linkages between CSP and financial performance have demonstrated the importance of controlling for these variables (e.g., McGuire, Sundgren, and Schneeweis, 1988; Waddock and Graves, 1997b).

Based on now-available comprehensive CSP data and the reframed hypothesis noted above, this study presents a significant methodological and empirical advance over previous research on the CSP-financial performance linkages. The study explores the possibility that quality of management may be related to financial performance and suggests that to the extent the quality of management and stakeholder relationships are correlated, they may be addressing similar activities within the firm. Further, it provides a degree of empirical rigor and breadth formerly lacking in this important line of research, while not necessarily attempting to add to theory about the relationship between social and financial performance. Specifically, the study uses several measures of financial performance, including a market-based measure of ten-year total return to shareholders and two accounting measures to assess financial performance. The study controls for quality of management, which may be an intervening variable. Finally, the study uses not only an index of overall CSP, but also differentiated stakeholder categories to explore specific links between financial performance and a range of CSP and stakeholder relations.

Hypotheses

Consistent with the above, two hypotheses will be tested. First we will test to determine whether higher levels of CSP lead to improved financial performance when we control for the quality of management. Second, we will test to determine whether improvements in any of the individual components of CSP (individual stakeholders) are positively associated with financial performance when we control for quality of management. The financial performance measures include typical accounting metrics (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 is a function of corporate social performance (measured by the CSP index) when quality of management (and risk, size, and industry) are controlled.

H2: Financial performance is a function of specific stakeholder relations with employees, community, customers, and environment when quality of management (and risk, size, and industry) are controlled.

Methods

This research assesses the firm financial performance-social performance link using stakeholder-based measures of CSP. Included in CSP are four primary stakeholder categories: community relations, environment, customers (product), and employee relations. As a note, while it would be appropriate to include other stakeholder categories, consistent company data on, e.g., supplier or government relations are not currently available, hence we focus on the four named primary stakeholders. Also included is an index of CSP that is an average of these four categories. All social performance data are acquired from the social performance rating firm of Kinder, Lydenberg, Domini (KLD). Quality of management is controlled using *Fortune's* reputational data as discussed below.

Data

Specific stakeholder-related ratings from Kinder, Lydenberg, Domini's (KLD) rating system are used to measure CSP from 1990–1994. KLD rates all of the Standard and Poor's 500 companies annually. KLD rates firms on a scale of 'major concern' to 'major strength,' with a middle neutral rating. As has been done in prior research, these ratings are converted to a –2 to +2 Likert-type scale (see, e.g., Waddock and Graves, 1997a, b). Four arenas evaluated annually by KLD can be considered to be direct evaluations of stakeholder relations (others, omitted from the present study, are more issues-oriented). The KLD community rating includes philanthropy and other community relations activities. The KLD environmental management rating assesses treatment of environment. The KLD product rating is used as a surrogate for customers, because it includes issues of product quality and safety. The KLD measure of the customer stakeholder is thus given as the 'product' category in the original KLD nomenclature. Finally, the employee stakeholder variable is constructed as an average of two original KLD measures: the employee relations and diversity assessments.

For Hypothesis 1 all four of these primary stakeholder variables are averaged into a single unweighted CSP index. All independent variables are lagged by one year. 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) and return on sales (ROS). 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*,[1] 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. Total assets is a measure of firm 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 658 observations over the period for which KLD data are available.

Quality of management is controlled for using the specific *Fortune* variable entitled quality of management (adjusted as described below). The overall *Fortune* reputational index averages the following eight attributes of company performance: (1) overall quality of management, (2) quality of products 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 of significant multicollinearity among *Fortune's* eight categories, (McGuire, Schneeweis, and Branch, 1990; Waddock and Graves, 1996), suggesting a possible financial halo effect. This halo effect requires that we develop a 'pure' management quality variable purged of the financial halo.

Brown and Perry (1994, 1995) have recently provided a means of removing the financial halo from the *Fortune* data. This study followed Brown and Perry's (1994, 1995) methodology for extracting the financial halo from the *Fortune* quality of management variable. The object of the Brown and Perry technique is to extract the financial performance influence and determine the 'residual' or what is left when financial performance effects are removed from the other *Fortune* variables. This residual is then used as a more 'pure' assessment of quality of management because financial effects have largely been removed.

Following Brown and Perry (1994, 1995), we began with the *Fortune* data from 1984–1994. Regression analysis was undertaken with *Fortune's* quality of management score as the dependent variable and financial variables as the independent variables.[2] The regression indicated that roughly 30% of

the management score was explained by financial performance. After many different versions of the regression analysis were run, return on equity was not significantly related to the overall management score (and was dropped from later analyses). The final regression included *Fortune* quality of management score as the dependent variable and return on assets, return on sales, ten-year total return to shareholders, and debt to assets as independent variables. The unexplained variability in management score (the regression residuals) is taken as the measure of the 'pure' management quality, net of the financial halo. It is this variable, adjusted *Fortune* management score that is used as an explanatory variable in the work described below.

We should note that regressions including industry dummy variables were also run, with the outcome that industry does not have a significant impact on the regression model that produces these residuals. Since 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. These residuals are therefore used in the rest of the 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 selected by the stepwise methodology. This technique allowed only industry dummies statistically significant at p<.01 or better to remain in the model.

Results

Table 1 presents the correlational analysis of key variables in this study. Looking first at the financial variables, it can be seen that they are all intercorrelated at $p \leq 0.001$, with ROA and ROS correlated at $r = 0.85$, $p < 0.001$. Ten-year total return to shareholders is also highly correlated with the other two financial measures ($p < 0.001$; $r = 0.48$ for ROA and $r = 0.41$ for ROS).

Table 1. Correlations

	10-yr Ret.	ROA	ROS	Qual. mgt. (reg.)	Qual. mgt. (adj.)	CSP index	Er	CR	PR	EN	Size
10-yr Ret.	1.0										
ROA	0.48^c	1.0									
ROS	0.41^c	0.85^c	1.0								
Qual. mgt.	0.47^c	0.36^c	0.36^c	1.0							
Adj. qual. mgt.	0.05^a	0.09^c	0.11^c	0.82^c	1.0						
CSP index	0.12^c	0.11^c	0.10^b	0.27^c	0.22^c	1.0					
ER	0.15^c	0.98^b	0.12^c	0.23^c	0.17^c	0.56^c	1.0				
CR	0.03	0.06^a	0.10^b	0.10^b	0.08^a	0.51^c	0.23^c	1.0			
PR	0.07^a	0.06^a	0.01	0.23^c	0.22^c	0.64^c	0.19^c	−0.01	1.0		
EN	0.08^a	0.08^a	0.04	0.13^c	0.09^a	0.70^c	0.21^c	0.08^c	0.28^c	1.0	
Size	0.00	−0.12^c	−0.02	0.04^a	'0.12^c	−0.04	0.02	−0.23^c	−0.16^c	−0.13^c	1.0
D/A	−0.021^c	−0.33^c	−0.28^c	0.31^c	−0.02	−0.17^c	−0.15^c	0.04	−0.24^c	−0.08^a	0.29^c

Key:
Ret: 10-year total return to shareholders; ROA: return on assets; ROS: return on sales; Qual. mgt. (reg.): unadjusted quality of management *Fortune* score; Qual. mgt. (adj.): adjusted quality of management *Fortune* score; CSP index: lagged corporate social performance index; ER: lagged employee relations stakeholder variable; CR: lagged community relations stakeholder variable; PR: lagged product/customer stakeholder variable; EN: lagged environment stakeholder variable; Size: lagged total assets; D/A: lagged deb/tassets.
[a] $p \leq 0.10$.
[b] $p \leq 0.01$.
[c] $p \leq 0.001$.

The CSP index, which is the simple average of the stakeholder ratings, is also highly and significantly positively correlated with all of the individual stakeholder variables at $p < 0.001$. The individual stakeholder variables mostly show strong intercorrelations as well, though r values are somewhat less than the intercorrelations among the financial variables, with the exception of community relations and the product/customer which is insignificant and slightly negative ($r = -0.01$).

Supporting the relationship between financial and social performance, the CSP index shows strong positive correlations with all three of the financial performance variables, with 10-year total return at $r = 0.12$, $p < 0.001$; ROA at $r = 0.11$, $p < 0.001$, and ROS at $r = 0.10$, $p < 0.01$. Individual stakeholder ratings are, however, not as supportive of the hypothesis. All are positively correlated with respect to the financial variables, though not all are significant. Employee relations shows strong positive association with all three variables (10 year return, $p < 0.001$; ROA, $p < 0.01$; and ROS, $p < 0.001$). Community relations shows weaker, but still positive association. On this dimension, 10-year total return is not significant, the ROA variable is only marginally significant ($p < 0.10$), while the ROS relationship is positive and significant at $p < 0.01$. The product/customer and environmental ratings show the weakest overall (and only marginally significant) relationships to financial performance, with 10-year return and ROA significant at only $p < 0.10$ and ROS not significant at all (though still in the positive direction).

Interestingly, the unadjusted quality of management indicator, which is still highly correlated (at $p < 0.001$) with the adjusted quality of management indicator despite the use of residuals and removal of the financial halo, is significantly and positively related to all three financial variables ($p < 0.001$) and is also strongly and positively correlated with the CSP index and all of the individual stakeholder ratings ($p < 0.001$ except for community relations, which is at the 0.01 significance level). The adjusted quality of management score follows essentially the same pattern, except that ROS falls to $p < 0.01$ and ROA rises to $p < 0.001$. Correlations with stakeholder ratings are also positive and significant at $p < 0.001$ for employee relations and product/customer, though correlations with community relations and environment are only marginally significant at $p < 0.10$.

Moving to the regression analyses, nine models were run. The first four models, reported in Table 2, show the results of the regressions with controls for the *Fortune* quality of management score and the one-year lagged averaged CSP index. The first model reports the results using 10-year total return as the financial variable and the unadjusted *Fortune* quality of management variable, while models 2–4 report the results of three runs using the three different financial performance variables and the adjusted *Fortune* score to control

Table 2. Results of regressions for financial performance relationships to corporate social performance index with controls for *Fortune* quality of management, size, and risk. H1: Financial performance as a function of corporate social performance (measured by the index) when quality of management (and risk, size, and industry) are controlled

Model #	Financial performance variable			
	10-yr return 1	10-yr return 2	ROA 3	ROS 4
Independent variable:				
Lagged CSP index	−0.004	0.017[a]	0.013[a]	9.93E-3
Control variables:				
Lagged *Fortune* score	0.037[c]			
Lagged adj. *Fortune* score		0.013[c]	0.012[c]	0.012[c]
Lagged size (assets)	1.7E-7[a]	3.7E-7[c]	1.9E-7[a]	2.0E-8
Lagged risk (debt/assets)	−0.021	−0.098[c]	−0.085[c]	−0.074[c]
n	658	658	658	658
R^2	0.490	0.369	0.319	0.350
F	23.33	15.19	14.92	16.33

Note: Industry dummy variables are omitted from table in the interest of space.
[a] $p \leq 0.10$.
[b] $p \leq 0.01$.
[c] $p \leq 0.001$.

for quality of management. Results overall are disappointing and generally can not be said to strongly support the hypothesis that financial and social performance are related, though models 2 and 3 can be seen to be marginally significant overall ($p < 0.10$). It is notable that in all four equations, the lagged *Fortune* quality of management score is strongly and positively related to financial performance ($p < 0.001$). This finding is interesting because to the extent that the quality of management indicator actually measures the residual effects of management quality when the financial halo has been removed, it can be said that better financial and managerial performance are linked, thus supporting the commonsense view that good management leads to better financial outcomes. It is also notable, and consistent with prior research (e.g., Waddock and Graves, 1997a, b) that debt level is significantly ($p < 0.001$) negatively related to financial performance. The positive association with size is weaker than that with debt level.

Similar discouraging results are obtained for the individual stakeholder ratings in models 5–8 and for a run that included all four stakeholders (model 9). Using the lagged adjusted *Fortune* score, only model 5, which assesses

Table 3. Results of regressions for financial performance relationships to primary stakeholder ratings with controls for *Fortune* quality of management score, size, and risk. H2: Financial performance is a function of specific stakeholder relations with employees, community, customers, and environment when quality of management (and risk, size, and industry) are controlled

Model #	Financial performance variable				
	10-yr return 5	10-yr return 6	ROA 7	ROS 8	10-yr 9
Independent variable:					
Community relations	-0.007^a				-0.008^a
Environment		0.002			0.001
Product (customer)			0.003		0.001
Employee relations				0.0076	-0.0063
Control variables:					
Lagged *Fortune* score	0.037^c	0.036^c	0.035^c	0.037^c	0.038^c
Lagged size (assets)	$2.0E\text{-}7^a$	$1.8E\text{-}7^a$	$2.1E\text{-}7^a$	$2.1E\text{-}7^a$	$2.3E\text{-}7^a$
Lagged risk (D/A)	-0.018	-0.021	-0.030	-0.033^a	-0.013
n	658	658	658	658	658
R^2	0.493	0.490	0.492	0.493	0.487
F	23.62	23.33	22.63	22.72	23.07

Note: Industry dummy variables omitted in the interest of space.
[a] $p \leq 0.10$.
[b] $p \leq 0.01$.
[c] $p \leq 0.001$.

the community relations stakeholder independently of the others is marginally significant ($p < 0.10$), however the relationship is negative. This finding is consistent with model 9, which runs all four stakeholders simultaneously. None of the other models show overall significance or any support for hypothesis 2, which suggested that financial performance would be a function of specific stakeholder relations. Similar to the other four models, the lagged adjusted *Fortune* score is strongly positively associated with financial performance in all five of these models ($p < 0.001$). Size also shows a modest positive relationship to performance, but in general while the negative association with performance and debt is retained in these models, the result is no longer significant.

Discussion, implications, conclusions

The findings reported above are disappointing, given prior research using similar measures (e.g., Waddock and 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) even with the methodological advance of removing the financial halo, 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.

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 and Graves, 1997b). Indeed, the correlations reported in Tables 1 and 2 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 (yet) count with respect to financial performance.

The interesting findings in this study have to do with the linkages that apparently exist between quality of management and financial performance. Whether financial performance is measured by a market measure (10-year total return to shareholders) or an accounting measure (ROA and ROS), the relationship is consistent and strong: better managed companies perform better financially. This finding, of course, is entirely consistent with common wisdom and has a great deal of face validity. By removing the financial halo from the *Fortune* data, one is left with an indicator of quality of management considerably less 'contaminated' by financial performance than it would otherwise have been. 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, assessing the same thing despite the halo removal process followed.

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. Perhaps the best we can say about the findings of the present study is, echoing Jones (1995) and Waddock and Graves (1997b), 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 concept of the firm (Freeman, 1984; Brenner and Cochran, 1991) rather than a shareholder or neoclassical concept of the firm.

Notes

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1. *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.
2. Model: $Y = F(x1, x2, x3, x4)$; $Y = Fortune$ quality of management score; $x1 = ROA$; $x2 = ROS$; $x3 = \text{ten} - \text{year total return to shareholders}$; $x4 = \text{debt/equity ratio}$.

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