CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

In Chapter 2, a model of the just organization was normatively derived from Rawls' (1971) theory of justice and Weber's (1978/1910) concept of value-rationality. An ideal type of this model is tested using Van de Ven and Ferry's Organization Assessment (OA) model macroorganizational dimensions (1980). The ideal type may be empirically tested by assessing various organizations along these macroorganizational dimensions and their respective corporate social performance ratings using the systems approach (Van de Ven and Ferry, 1980; Drazin and Van de Ven, 1985; Van de Ven and Drazin, 1985; Gresov, Drazin and Van de Ven, 1989).

In the systems approach, an ideal-type profile is compared to the profile of a sample organization. Deviations of the sample organization from the ideal-type profile are determined by measuring the 'distance' of each organization from its location in multi-dimensional space to the location of the ideal-type profile in the same multi-dimensional space. This 'distance' is known as a Euclidean distance or a summary distance metric. The summary distance metric for each sample organization is then compared to the firm's performance measure, with a greater difference from the ideal-type profile more likely to be associated with poorer performance.

For this study, an ideal-type profile was developed from a theoretical, normative model for comparison with sample organizations. Those organizations closer to the ideal-type profile would be expected to have better CSP outcomes than those organizations farther from the ideal-type profile (Drazin and Van de Ven, 1985). The summary distance metric for each organization is based on the multi-dimensional distance of its profile to the

ideal-type profile. This independent variable is based on the presence or intensity of various design dimensions as described later in this section. The CSP rating for each sample organization is the dependent variable.[7]

The presence of the design dimensions is determined by a survey of the firms in the Kinder, Lydenberg, and Domini, and Co., Inc. (KLD) social performance database. These dimensions identified in the survey are then used to 'plot' the firm in multidimensional space, from which a Euclidean distance from the sample firm to the ideal-type firm may be calculated. With a distance from the ideal type profile to the firm calculated for each sample firm, these relative distances may then be compared to the CSP rating as measured by KLD.[8]

After the methodology of the systems approach is presented, an ideal type of just organization is described. Then the control and independent macroorganizational dimensions of context, design and outcome are described. The determination of the dependent variable, CSP as measured by the KLD ratings, database is illustrated, and an example is provided. Finally, the measures for these dimensions, the data collection, and the analysis are discussed.

3.1 Methodology: The Systems Approach

Drazin and Van de Ven (1985) described an analytical procedure to examine patterns of organizational structure and process that are internally consistent and can be compared to

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[7] Although this study utilizes a theoretically-derived ideal-type profile, past research has been done using an ideal-type profile empirically developed from a set percentage of high-performing organizations. In addition, future research may focus on specific stakeholder relationships of the firm, such as those with employees, consumers and suppliers, the community, or the environment. Analysis of stakeholder-specific design features, such as an employee representative on the board of directors or an environmental audit would be assessed and compared to CSP ratings for specific stakeholder relationships.

[8] Kinder, Lydenberg, and Domini, and Co., Inc., provided the database for April 1998 without charge for its use in academic reseach.

performance. This method, termed the systems approach, has been advocated and used to study contingency theory and organization context-design-performance issues (Miller, 1981; Drazin and Van de Ven, 1985; Van de Ven and Drazin, 1985; Gresov, Drazin and Van de Ven, 1989; Gresov, 1989, 1990). The systems approach involves multi-dimensional analysis of organization design and performance, allowing the researcher to "characteriz[e] the patterns of interdependencies present in organizations" (Drazin and Van de Ven, 1985: 519). These patterns are identified through multi-dimensional analysis of consistency among organizational context, design (often called structure), and performance variables (Miller, 1981; Drazin and Van de Ven, 1985). Using the same methodology, Gresov, Drazin, and Van de Ven started with several ideal types or predicted patterns for organizational units and compared performance measures (Drazin and Van de Ven, 1985; Van de Ven and Drazin, 1985; Gresov, Drazin, and Van de Ven, 1989; Gresov, 1989, 1990). The systems approach is the most appropriate form of analysis for a theory involving design principles. It can be used to assess the relationship between performance and the aggregate effect of deviation across all design dimensions simultaneously.

This approach starts with several ideal types or predicted patterns of organizational units and compares performance measures for sample units. Although Gresov (1990) used an empirically-derived ideal-type profile from 'high-performing' organizational units (those which had performance measures that were more than one-half of a standard deviation above the mean unit efficiency score), this study utilizes a

normatively-derived ideal type -- a normative description of the just organization. The underlying methodological conceptions remain the same.

The systems approach involves an ideal-type profile, a summary distance metric or deviation measure of the sample firm from the ideal-type profile, and a performance or outcome measure. The systems approach is similar to deviation-score analysis (Alexander and Randolph, 1985; Dewar and Werbel, 1979) because it creates a distance metric to measure the degree to which an organization fits the ideal type (or a prescribed pattern). However, the systems approach focuses on deviation from the whole pattern of the ideal type, not one dimension at a time. "In the systems approach, the more an organization deviates from the ideal type, the lower the expected performance [as determined by or compared to the ideal-type profile]" (Drazin and Van de Ven, 1985: 533).

Studies that examine bivariate interaction or multiple interactions tend to look at single structural characteristics and how they are related to performance. "This reductionism treats the anatomy of an organization as being decomposable into elements that can be examined independently. The knowledge gained from each element can then be aggregated to understand the whole organizational system" (Drazin and Van de Ven, 1985: 519). Using the systems approach, structure-performance relationships can be better understood. "Unlike the selection and interaction approaches to fit, the systems approach consists of several novel alternative methods characterizing the patterns of interdependencies present in organizations" (Drazin and Van de Ven, 1985: 519).

The systems approach may also incorporate the general systems theory concept of equifinality. This would imply that there are feasible sets of equally effective alternative designs, with each design internally consistent in its structural pattern. In this study, equifinality is addressed *a posteriori* as normative and contingency theories dictate.[9]

Drazin and Van de Ven (1985) discuss the positive relationship of consistency and performance. "Similarly Khandwalla (1973) showed that internal consistency among structural variables -- defined as the gestalt of the organization -- was positively related to organizational performance. The systems frameworks of various authors (Alexander, 1964; Gerwin, 1976; Galbraith, 1977; Nadler and Tushman, 1980; Van de Ven and Ferry, 1980) all hypothesized that consistency among organizational design characteristics led to performance" (Drazin and Van de Ven, 1985: 521). In this study, organizations are consistent if they are designed along the principles listed for the general model of the just organization given in Chapter 2 or exhibit structures consistent with the principles in the general model for a just organization.

The systems approach is shown in Figure 3.1. Only one ideal type and two underlying design dimensions are shown; however the concept easily may be extended to multiple dimensions (such as the five design dimensions in this study). Three hypothetical sample organizations are shown, with their location dependent on their respective scores for the two design dimensions shown. Organization A is shown closest to the ideal-type profile, while Organization C is furthest from the ideal-type profile. If

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[9] If an analysis of the data shows differences in ideal-type profiles based on the control variables of size or industry, this is consistent with contingency theory that a different design may be needed to address the various environments of organizations and with Donaldson's (1982) idea of stakeholder exposure varying for organizations.

this figure depicted the multi-dimensional space for the overall ideal type organization, the hypothesis would predict that Organization A would have a higher CSP rating than Organization B, and that Organization B would have a higher CSP rating than Organization C.
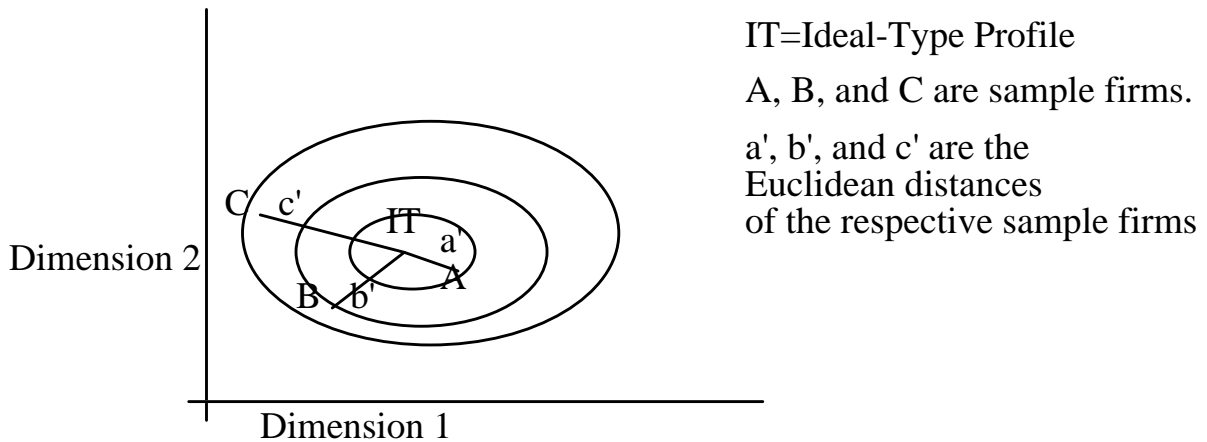

IT=Ideal-Type Profile
A, B, and C are sample firms.
a', b', and c' are the Euclidean distances of the respective sample firms

Dimension 2

Dimension 1

Figure 3.1: The Systems Approach -- The Ideal-Type Profile

The first step is to determine the ideal-type profile either theoretically or empirically. Most uses of this methodology have determined the ideal-type profile from evaluation of the top-performing individual units in the sample population (Drazin and Van de Ven, 1985; Van de Ven and Drazin, 1985; Gresov, Drazin, and Van de Ven, 1989; Gresov, 1989, 1990; Doty, Glick, and Huber, 1993). In addition, those studies examining fit and contingency theory may utilize several ideal-type profiles or archetypes. However, this study has one ideal-type profile.[10] The resultant profile,

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[10] The possibility of several, equifinal ideal types based on size or industry is examined, although there may be limitations of small sample size within each size or industry category.

however determined, provides a good estimate or indication of the ideal-type profile scores along each or for each design dimension.

Second, data on the sample organizations are obtained for the design dimensions, and each organization is plotted in multi-dimensional space relative to the ideal-type profile. A summary distance metric is calculated by measuring the Euclidean distance between the sample organization's scores and the scores of the ideal-type profile. That distance variable, or deviation from the ideal-type profile, "represents a measure of the multivariate fit of each unit with the relevant ideal profile, and takes into account the overall effect of deviation on all design dimensions simultaneously." (Gresov, Drazin, and Van de Ven, 1989: 57).

In the final step, the relationship between the summary distance metric, or deviation measure, for each sample organization and its respective performance or outcome measure is assessed. A significant ($p<0.05$) and negative relationship between the distance and performance variables supports the hypothesis, as shown in Figure 3.2.
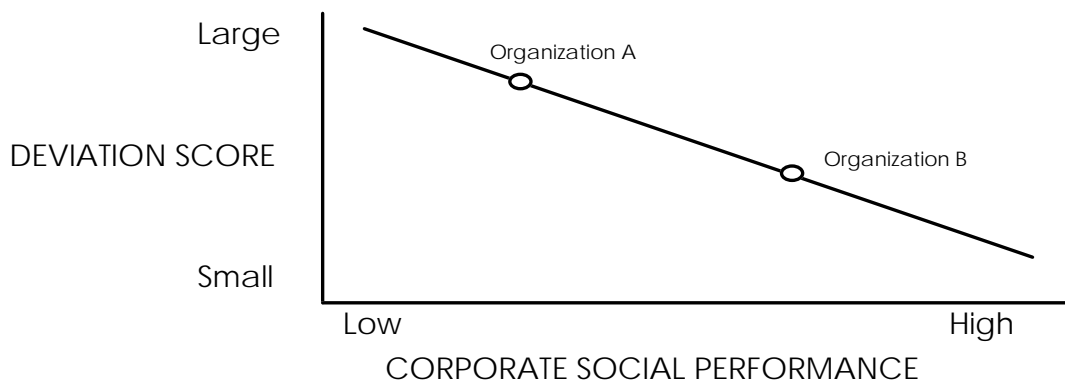

Figure 3.2: Expected Relationship Between Deviation Scores (Absolute Values) and Performance [From Drazin and Van de Ven (1985)]

An overview of the methodology specific to this study:

First: Determine the ideal-type profile for the design dimensions derived normatively from the general model for a just organization presented in Chapter 2.

Second: Gather data on the sample organizations via secondary sources to determine the macroorganizational context variables (i.e., number of employees and industry category). The number of employees is included in regression analyses to control for the effects of size in the CSP scores. After analyses are conducted on the respondent population as a whole, the firms are analyzed by industry category to determine if there are any particular relationships between design and performance seen in each industry.

Third: Gather data via surveys and qualitative analysis from the firms on the presence of various design features in each firm. These data are used to determine the macroorganizational design dimension scores as described in detail in the following Section 3.4.

Fourth: Based on the macroorganizational design dimension scores, determine the Euclidean distance from the ideal-type profile and each firm using the summary distance metric (see Figure 3.1). The result is a summary distance metric (or deviation score) for each firm.

Fifth: Gather data on CSP for each of the surveyed firms from a CSP database.

Sixth: Test the summary distance metric of each firm (distance of the firms from the ideal-type profile) and the performance measure, or CSP score. It is expected that the farther away (the greater the summary distance metric) each firm is from the ideal-type

profile, the lower its respective CSP score is (Figure 3.2). In other words, how is the distance measure correlated with the performance measures?

Using the systems approach to test the hypothesis, the summary distance metric (deviation distance) of the sample organizations is correlated with the respective CSP measures. If the summary distance metric is correlated with CSP in a positive direction with a significance equal to or less than 0.05 ($p \leq 0.05$), then the correlation is considered significant. If the summary distance metric is correlated with CSP in a positive direction with a significance between 0.05 and 0.1, then the correlation is considered moderately significant.[11] A regression analysis of the CSP scores is conducted using size and the distance metric to determine if there is a significant relationship as shown previously in Figure 3.2. If the coefficient of the distance metric is significant ($p < 0.05$) and indicates anegative slope, then the hypothesis is supported.

3.2   Sample

Sample selection is a critical element of the study. Although several national databases rate corporations on corporate social performance, I used the Kinder, Lydenberg, Domini, Inc., CSP database (hereafter referred to as the KLD database) because of its extensiveness and availability. The KLD firm is a CSP rating firm that provides a commercial database to the investment community. Approximately 650 corporations are rated on various social issues, or CSP dimensions, which are used in this study to determine the dependent variable. Using the KLD database provides a snap-shot analysis

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[11] In Gresov (1990), the correlations between unit efficiency [performance] and fit variables [design] were -0.19 (p<0.034) and -0.17 (p<0.058) for task fit and horizontal fit, respectively. These results were considered to be moderately significant and in the predicted direction.

of the context-design-performance relationship of some of the world's largest, publicly-traded corporations.[12]

The sample population of corporations are the firms listed in the KLD database as of April 1998. These corporations are selected by KLD for inclusion in the database if the corporation is listed in the Standard & Poor's 500 Index, listed in the Domini 400 Index, or considered by KLD to be worth watching for possible inclusion on the Domini 400 Index. Representing a variety of industries, these corporations also represent the majority of large, influential, global publicly-traded corporations. Surveys were sent to all 655 corporations in the KLD database, because those were firms for which a dependent variable was available. Based on results from the pilot study (discussed later in Section 3.3.2), surveys sent to a Chief Executive Officer (CEO) were returned less frequently than those sent directly to a corporate counsel or a Vice President (VP). Several surveys sent to a CEO were returned through and answered by the General Counsel or a VP (for instance, a VP for Investor Relations). Therefore, surveys were sent to a member of top management, such as the General Counsel or a Vice President.

3.3   Survey Techniques

The data used in this study are measured with a survey instrument developed specifically for this study. Three considerations influenced the development of this survey. First, the Organizational Assessment Instrument (OAI) is widely recognized as the best survey tool

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[12] Future research may include corporations rated in the CEP SCREEN database and/or the *Fortune* corporate reputation survey. As the field of CSP measurement and rating improves, other CSP measures may be used. The population of organizations to sample may then be expanded to include privately-held firms, non-profit organizations, and government agencies.

for macroorganizational context and design dimensions. Moreover, Van de Ven and Ferry (1980) called for an analysis of context and design on the specific outcome or performance dimension of "Impact on Society," although they did not specifically adapt the OAI to this need (Van de Ven and Ferry, 1980). Second, I could not find other survey instruments designed to measure a wide array of 'ethical' design features; most surveys analyzed one design feature in detail. The survey developed for this dissertation is the first that encompasses an extensive inventory of design features to advance CSP.

Finally, the questions in the survey were constructed and phrased in such a way as to be as objective and nonthreatening as possible. For example, the question, "Does your firm have an ethics officer?" entails only a yes-no response not requiring the judgment of the responder. Since, the questions posed were not addressing ethical conduct or potential ethical problems -- merely design features -- they are unlikely to impinge upon sensitive areas, and thus respondents may be more willing to reply and less prone to engage in social-desirability response bias (SDR) that often plagues ethics research (Babbie, 1992). Because there are no cognitive or affective dependent constructs, the order of items on the survey is not expected to influence the responder (i.e., context effects are not expected).

The format of the questions fell into two categories: binary responses and 'open-ended' questions. Although the majority of the questions were asked in a yes-no format, four 'open-ended' questions asked for: (1) a copy or description of the corporate credo (or mission or vision statement); (2) the code of ethics; (3) the title of the person to whom the chief ethics officer, if applicable, reported; and, (4) how various stakeholders

were included, if at all, in the strategic planning process. Two questions asked the respondent to describe the corporate credo/mission statement and code of ethics, but the respondent also has the option of enclosing such material in the return envelope. These items are merely communication of the credo or code, and the firms in the pilot test usually enclosed their annual report or a brochure with the credo or code included. The credo or code is analyzed (as described later) to determine how the organization claims to treat stakeholders. The fourth item requires independent judgment on the part of the responder and asks for interpretation by the respondent for how stakeholders are included, if at all, in the strategic planning process: "Are (and how are) the following stakeholders integrated into your firm's strategic planning?" A shortcoming of the binary response is that each item can have only minimal variability (DeVellis, 1991).

The statistical tests of the systems approach (the methodology) require a large number of observations with comparable measures. Gresov (1990) used approximately 120 organization units; Doty, Glick, and Huber (1993) used from 85 to 128 organization units for various studies. I estimated that the approximate number of respondents needed in this study was approximately 120. Further discussion of the required number of respondents is presented in Section 3.3.3. With a CSP database of 655 corporations, a response rate of about 18% should yield the minimum number of respondents necessary. The CSP ratings of the respondents are compared to those of the entire database to see if there is a significant difference in the response population.

3.3.1 Survey Instruments

In the pilot study, two separate survey forms were used. These surveys are included as Appendix 1. Based on the results from the pilot study, a third survey form was developed for the main study. This third survey form is included as Appendix 2 and consists of 48 questions.

3.3.2 Pilot Study

I conducted a pilot study to pretest the survey instrument. For the pilot study, there were two survey instruments, Survey A and Survey B (both attached). Survey A was an initial request to the firm intended to give a sample of the questions and to ask if the respondent would be willing to complete a longer questionnaire (Survey B). Survey A was one page long and consists of nine questions about organization design of the firm, a question about willingness to complete a longer survey, and a question about whether the respondent would like an executive report of the results. Survey B was a longer survey consisting of 27 questions (6 pages) about organization design.

Twenty-two firms were chosen from the KLD database at random by choosing every 30th firm. Two rounds of mailings were conducted with a sample population of 22 firms.

The first round of mailings occurred in November 1997 with a cover letter to the CEOs and a copy of Survey A, consisting of nine questions and a place to indicate if the respondent would be willing to participate in a longer survey. The initial round resulted in 18 nonrespondents, one form letter stating the firm did not participate in surveys, two

completed and returned sheets indicating the firm would not participate in a further survey, and one completed and returned sheet indicating the firm would be willing to complete a longer survey. The respondent of the last firm was the general counsel of the firm.

A second round was conducted on December 9, 1997. The firm which indicated that it would participate was mailed Survey B. Of the remaining 21 firms, 12 were sent another initial contact letter asking for their participation in the survey and a copy of Survey A. Of these 12, 11 were sent to the general counsel or vice president of the firm, while one was sent to the CEO again. Of these 12 Survey A contacts, only 1 responded. Nine firms were sent Survey B in hopes they would complete it if not given the chance to say no to participation. These longer surveys, Survey B, were sent to the general counsels or vice presidents in hopes they would not be lost with all the mail sent to the CEOs or COOs of the firms. Of these 9 direct mailings of Survey B, 4 were returned completed.

Based on the apparent lack of success with an initial request letter (Survey A), the decision was made to send only the second survey. In addition the number of questions on Survey B were reduced to encourage a greater return rate. See Survey C (4 pages) attached.

3.3.3   Sample Size

The number of responses needed for a study depends on the degree of accuracy desired (i.e., level of precision, required standard error) and the desired confidence level. The required sample size was determined by using two well-known formulas for experimental

methodology and by examining precedent of other researchers using the systems approach and ideal-type profiles. From thi information, it was determined that the sample size should be at least 100 firms. The two methods are explained in detail below.

Without knowing a priori the residual standard deviation of the population, determining adequate sample size prior to the study is difficult. However, two formulas did provide some guidance. Christensen (1980) provides the NEA Research Division's formula to determine the sample size (n) needed to be representative of a given population.

$$n = \chi^2 NP(1-P) \div d^2(N-1) + \chi^2 P(1-P)$$

where

n = the required sample size

χ^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)

N = the population size (655)

P = the population proportion that is desired to estimate (assumed to be 0.50 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (0.10)

(From Christensen, 1980: 298. Values in parantheses are for this study.)

From this equation the sample size needed (n) is 84, where n is rounded up to the nearest integer. One drawback of this formula is that it assumes random sampling, which is not a reliable *a priori* assumption for the respondent population.

Freund (1981) provides the following formula for sample size:

$$n = p(1-p)\left[\frac{Z_{\frac{\alpha}{2}}}{E}\right]^2$$

where

n = sample size

p = population proportion desired to estimate (assume p = 0.5 to provide largest n)

$Z_{\alpha/2}$ = standard normal distribution for a confidence interval of (1-α)% (for this study, use 95% confidence interval, $Z_{0.025}$ = 1.96)

E = maximum error of estimate (0.10)

(From Freund, 1981: 304. Values in parantheses are for this study.)

The required sample size using this formula is 97, where the value of n is rounded up to the nearest integer. The formula also assumes random sampling, but it does provide a guideline for the minimum number of surveys or respondent firms needed.

Previous uses of the systems approach have utilized the deviation distance - performance measurements. The number of dimensions used to calculate the deviation distance has varied, depending on the study and the particular measurement of fit. Drazin and Van de Ven (1985) used 11 design dimensions or variables of unit structures and processes. Using two different performance measures, unit efficiency and job satisfaction, they had a total sample size of 185 units and 438 units, respectively. They further subdivided the units based on task uncertainty and found significant correlations of distance measures with performance measures with sample sizes ranging from 54 to 173 units. From this study, it appears the range of units per variable is from 5 to 40.

Applied to this study with five design dimensions to determine the deviation distance, a minimum sample size is 25.

Van de Ven and Ferry (1980) did not use the systems approach as used in this study, but their guidelines for sample size indicated 15 units per variable or design dimension. With five variables or design dimensions used to determine deviation distance, this study would then require approximately 75 respondent firms. In his study on work-unit design and multiple-contingencies theory, Gresov (1989) used seven design dimensions and had a test group, or sample size, of 69 units. Based on an average of 10 units per design dimension, this study should have a sample size of at least 50 firms. Using the same seven design dimensions, Gresov (1990) conducted another systems approach study on work-unit design. The sample size of the test group was 122 units. Based on an average of 17 units per dimension, this study should have at least 85 firms. Gresov, Drazin, and Van de Ven (1989) used six design dimensions and had 152 units in the test group. Based on this average of 25 units per dimension, this study with five dimensions should have at least 125 units.

The recommended sample sizes from the above sources, formulas and precedent, range from 50 to 125. To choose a conservative sample size, at least 120 firms are required to yield significant results. This is based on a confidence level of 95% and a maximum error of estimate or degree of accuracy (as a proportion) of 0.10.

The majority of responses from each mailing were received within six weeks of the posted date. Six weeks after the second mailing, the number of total responses was 120, and those were the respondents for this study. With 120 firms and a confidence

level of 95%, the maximum error of estimate decreases to 0.09. This sample size also surpasses the estimated sample sizes from both formulas and the many of the previous systems approach studies.

3.4 Independent Variables

The independent variables in this study are the design dimensions and the summary distance metric calculated as the Euclidean distance of the sample organization in multi-dimensional space to the ideal-type profile representing the just organization. This section describes the five individual design dimensions measured for each organization and the resultant summary distance metric. The latter is compared to the performance measure for a correlation between organization design and CSP. For the individual design dimensions, the measures used in this study are structural configuration, human resource policies and incentives, control systems, strategic planning, and organizational ethos, as adapted from Lewin and Stephens (1994). The variables are measured as ordinal values and are described in detail below.

3.4.1 Design Dimensions

The organization design dimensions are determined through a variety of survey data. The five design dimensions are: structural configuration, human resource policies and incentives (HRPI), control systems, strategic planning, and organizational ethos. For 5% of the firms that respond, some of the information is double-checked through analysis of

the annual report, other secondary sources, or telephone interview with a management representative of the firm.

The OAI was not originally developed to measure design features intended for a just organization or to determine if an organization was 'just' or 'ethical' or 'socially responsible'; however, the basic structure of the OAI was maintained as described in Chapter 2. In the OAI, design dimensions consist of several standard categories. These categories are measured by standard OAI survey items and are then aggregated to give a total 'score' on the design dimension. These standard items are weighed equally when aggregated; however, they were developed to measure economic performance and efficiency. In this study, the design dimensions were adapted from Lewin and Stephens (1994) and are measured by the presence and intensity of certain design features identified by Stephens (1993). Therefore, each design dimension in this study is broken down into ordinal, not interval, categories, for which each category is a rating. Instead of aggregating the scores of related items on the survey, giving each equal weight, the related items on the survey are used to place the firm in a particular category for each design dimension. While this is not content analysis in the traditional sense, the construction of ordinal categories and the assessment of each firm along the five design dimensions is similar in execution.

Each firm must be rated for each of the five design dimensions. Since not all firms have the same conception of justice (See Chapter 2 for explanation), not all firms have the same design features; therefore, merely counting the presence of design features is not sufficient. A firm need not have all of the identified design features to be designed

to achieve the terminal value of justice. For example, a firm may choose to manifest its structural configuration differently than another firm, although both still may meet the normative design principles in the general model of the just organization (Table 2.2 in Chapter 2).

Holsti identified five general principles or requirements of category construction: "categories should *reflect the purposes of the research*, be *exhaustive*, be *mutually exclusive*, *independent*, and be derived from a *single classification principle*" (1969: 95, italics original). For each design dimension, the categories are determined in order to rate each firm against the ideal-type profile. Since the categories are rated, the requirement for independence is overlooked (Holsti, 1969). Rating is appropriate in this study to compare the degree to which firms are designed around the terminal value of justice -- to compare the presence of design features similar to those theorized for the just organization and found in previous research.[13] Each design dimension (as explained below) is broken down into three to five categories for comparison of the sample firms to the ideal-type profile. An example of this is illustrated for two dimensions in Figure 3.3, where only two dimensions are shown for ease of presentation, but the analysis would entail consideration of five dimensions.

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[13] Rating is a useful way to treat data, but subsequent analyses including statistical analysis are limited (Holsti, 1969).
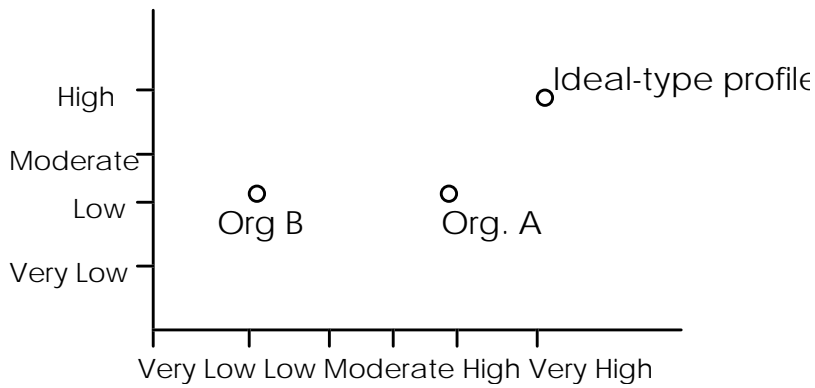
Figure 3.3: 2-dimensional depiction of design dimension categories

The items on the survey are based on the design features identified by Stephens (1993). Several items from the survey are used to evaluate each design dimension. In the subsections that follow, each design dimension is described. The design features for each design dimension are provided, and a breakdown of the design dimension into various categories is addressed. Overall, the design dimensions are rated from Very Low to Very High, with a corresponding numerical values. The rating is based on the presence and/or intensity of each design feature based on the survey items. The numerical values of the ratings are ordinal in nature.

To reflect the research question, the design dimensions are clearly defined and the indicators (the design features) are distinctly defined. The indicators (the design features) are used to determine in which category a firm is placed for each design dimension. For example, the control-systems design dimension has two associated indicators, or design features: an ethics audit and a compensation, evaluation, and incentive plan based on extraeconomic as well as economic goals. Both are control systems that allow for

evaluation and feedback on the attainment of extraeconomic goals, but having both of these design features is more indicative of a just organization considering all the stakeholders than the presence of just one of these design features. Three categories emerge:

Firms with neither design feature	Firms with either one of the two design features	Firm with both design features

The second requirement identified by Holsti (1969) is that the categories be exhaustive so that each firm is able to be placed into a category. The requirement is continuously monitored, but is not expected to be a problem since each design dimension has a category for those firms that have none of the design features identified for a just organization.

Mutual exclusiveness, Holsti's third requirement, "stipulates that no content datum can be placed in more than a single cell" (1969: 99). For this study, that requires each firm to be rated in one category and one category only for each design dimension. Based on the criteria I stipulated for each category, a firm should be able to be rated or placed in only one category per design dimension.

The final requirement states that "each category must be derived from a single classification principle" (Holsti, 1969: 100). Because there were no standard categories for this research, the categories were derived from the design features related to each design dimension. For example, in a general overview, the organization ethos has four

categories based on the inclusion, if any, of stakeholders in the corporate credo/mission statement or code of ethics/conduct.

Although these category ratings are subjective, no other measurement of design dimensions for a just organization or even a "socially responsible" organization has been developed to date. Without an existing survey and existing classification or rating scheme for design dimensions, the following rating scheme was used.[14]

3.4.1.1 Structural Configuration

The structural-configuration design dimension entails an assessment of the degree to which the firm has formal structures in place to promote ethical behavior. Organizational structure usually consists of the formal aspects of an organization that appear on an organization chart. The construct of this dimension is designed to what formal board structures and management structures exist to meet the design principles presented in Table 2.2 (Chapter 2). Of the design features identified by Stephens (1993), the following are related to the structural -onfiguration design dimension:

- Board committee for stakeholder concerns
- Public-interest members of the board
- Position responsible for scanning corporate social environment
- Ethics/social responsibility department
- Management committee for ethics/social responsibility
- Officer for ethics/social responsibility

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[14] As more research is conducted and the measurement of design dimensions for a just organization is refined, more in-depth and detailed analyses may be conducted. I see this as a first step in this neglected area.

From these design features emerged two subcategories with which to assess the structural-configuration design dimension of the firm: Board configuration and management configuration (consisting of scanning position, ethics officer/department, and ethics management committee). Each subcategory is described below, and then the determination of the measure of the structural-configuration design dimension is discussed. Finally, some limitations and confounding aspects are discussed.

The firm's board configuration is examined to show representation or consideration of the firm's stakeholder groups other than the stockholders. The second subcategory, management configuration, consists of design features for management to promote consideration of stakeholders, ethics, and social responsibility. A scanning position at the board or top management levels allows firms to identify social issues or trends that may impact the firm. The ethics officer or department subcategory addresses designated responsibilities for ethics or social responsibility. According to Weaver and Trevino (1998), 19 firms (of the 258 firms that responded to the survey) had a full-time ethics officer, while over 70 firms reported having an officer responsible for ethics, but the person spent "not more than 10 percent of their time in ethics-related activities" (1998: 7). The ethics committee represents a congress of members of the organization to determine various policies, decisions, and actions. As such, it allows for voice and moral agency at the manager level and employee level if non-management employees are involved. Together, these two subcategories are examined to determine an overall value for the structural-configuration design dimension.

3.4.1.1.1   Survey Questions

The following questions (in italics) are asked for each subcategory:

BOARD CONFIGURATION

Is there a <u>board committee</u>, or an <u>appointed board member</u>, to represent the concerns of the following (check all that apply):
a.	*Product quality or customer issues or concerns?*	☐ *YES* ☐ *NO*
b.	*Supplier concerns or issues?*	☐ *YES* ☐ *NO*
c.	*Employee concerns or issues?*	☐ *YES* ☐ *NO*
d.	*The natural environment or environmental issues?*	☐ *YES* ☐ *NO*
e.	*Public interest or public responsibility?*	☐ *YES* ☐ *NO*
f.	*The community or communities in which your firm operates?*	☐ *YES* ☐ *NO*
g.	*Minority issues or concerns?*	☐ *YES* ☐ *NO*
h.	*Issues or concerns involving women?*	☐ *YES* ☐ *NO*

Is there an <u>outside member of the board</u> from any of the following groups (check all that apply):
a.	*A trade group or trade association?*	☐ *YES* ☐ *NO*
b.	*A consumer group?*	☐ *YES* ☐ *NO*
c.	*An employee public interest group or labor union?*	☐ *YES* ☐ *NO*
d.	*An environmental group?*	☐ *YES* ☐ *NO*
e.	*A public-interest group?*	☐ *YES* ☐ *NO*
f.	*The community or communities in which your firm operates?*	☐ *YES* ☐ *NO*
g.	*A non-profit, minority-issues group?*	☐ *YES* ☐ *NO*
h.	*A non-profit, women's-issues group?*	☐ *YES* ☐ *NO*

Is there a <u>committee or a member of the Board of Directors</u> responsible for scanning the environment for social trends or social issues?   ☐ *YES* ☐ *NO*

If there is a yes for one these questions, it indicates there is consideration of at least one other stakeholder group other than stockholders at the board of directors level. In that case, the firm is considered to have representation of one stakeholder group in this subcategory. If the answers indicate that the board has representatives, maintains committees, or incorporates consideration of various stakeholder groups, the firm is

considered to encompass those stakeholder groups. The number of stakeholder groups

the firm may encompass ranges from zero to nine.

MANAGEMENT CONFIGURATION

In this subcategory there are several design features possible.

SCANNING POSITION

Is there a position or department (e.g. strategic planning) within your firm responsible
for scanning the corporate social environment for social trends or social issues?
☐ YES ☐ NO

ETHICS OFFICER/DEPARTMENT

Is there a department or functional area specifically responsible for promoting ethics or
social responsibility within your firm?   *☐ YES ☐ NO*

Is there a member of top management specifically responsible for ethics or social
responsibility?   *☐ YES ☐ NO*
        A. If YES, who is this person and what is his/her title?
_____
        B. And, to whom does this person report?
_____

The information on the title of the ethics officer and to whom that person reports

is collected for additional information for follow-up or future analysis of the level of

management of the ethics officers in various firms.

ETHICS MANAGEMENT COMMITTEE

Is there a management committee for ethics and/or social responsibility? ☐ YES ☐ NO
A.   If YES, are non-management employees on the committee?   ☐ YES ☐ NO
B.   And, are people from outside your firm on the committee?   ☐ YES ☐ NO

If there is a management committee for ethics and/or social responsibility, the firm is considered to have one design feature in this subcategory. If non-management employees or people external to the organization are included on the committee, the firm is considered to have two design features in this subcategory. The question on involvement of non-management employees in the ethics committee is referred to again in the following discussion of the HRPI design dimension.

3.4.1.1.2   Structural Configuration Rating Scheme

The structural-configuration design dimension is rated from very low to very high (or 1 to 5 as an ordinal value). The firm receives the highest rating based on the number of stakeholder groups represented on the board and the number of design features in the management configuration subcategory. To calculate this rating, the number of stakeholder groups is divided by the maximum (nine), and this result is a fraction between 0 and 1. The number of design features in the management configuration subcategory is totaled and divided by the maximum possible (five). This also results in a fraction between 0 and 1. The two fractions are added together and the scores for all the respondents is standardized from 1 to 5.

The ideal-type structural-configuration design dimension may be contingent on the degree to which a firm is bureaucratized. The structural-configuration design dimension need not be high for the firm to fall within the ideal-type parameters. For instance, organizations (e.g. Corning) that minimize hierarchy may score low on this dimension, but still meet the demands of a just-organization design by relying upon

processual dimensions rather than formal structure (MacKenzie, 1991). Equifinal ideal types allow for different conceptions of justice, or different functional features, to achieve the same concept of justice, such as the principles in Table 2.2 of the general model of a just organization.

3.4.1.2 Human Resource Policies and Incentives (HRPI)

The HRPI design dimension entails an assessment of the degree to which the firm has policies and incentives in place for employees to promote ethical behavior, provide voice and moral agency for employees, and include employees in strategic planning. Of the design features identified by Stephens (1993), the following are related to the HRPI design dimension:

- Organization-wide open-door policies
- An ethics hotline
- Stakeholder impact (employees) integrated into strategic planning
- Employees on the management committee for ethics and/or social responsibility
- An outside member of the board from an employee interest group or labor union

Stephens describes an organization-wide open-door policy as characteristic of a firm with "low centralization, with decision-making authority distributed on the basis of expertise, and all employee given the opportunity to develop expertise" (1993: 126). The ethics hotline provides an avenue for communication between the employees and management and opportunity for employee voice and moral agency. Strategic planning in this application examines the integration of employees in the process, the presence of employees on a management committee for ethics and/or social responsibility, and the

presence of an outside member of the Board of Directors from an employee interest group or labor union, which should allow for employee voice and consideration of employees as a stakeholder group in corporate decision making. Together, these five design features are examined to determine an overall value for the HRPI design dimension.

3.4.1.2.1 Survey Questions

The following questions (in italics) are asked:

Does your firm have an organization-wide, <u>formal</u> (not informal) open-door policy for employees to speak with managers? □ *YES* □ *NO*

Is there an ethics hotline within your firm for employees to ask questions or to report possible ethics violations? □ *YES* □ *NO*

If YES [there is a management committee for ethics and/or social responsibility], are non-management employees on the committee? □ *YES* □ *NO*

How are employees included in the strategic planning process?
□ *Not at all*
□ *Considered implicitly*
□ *Mentioned explicitly and discussed*
□ *Consulted with prior to and/or during process*
□ *Other (specify)* _____

Is there an outside member of the board from an employee public interest group or labor union? □ *YES* □ *NO*

3.4.1.2.2 Human Resource Policies and Incentives (HRPI) Rating Scheme

The HRPI design dimension is rated from very low to very high (or 1 to 5 as an ordinal value). The firm is rated on the following guidelines:

Very Low -- (numerical value of 1) -- The firm reports no design features present.

Low -- (numerical value of 2) -- One design feature is present.

Moderate -- (numerical value of 3) -- Two design features are represented.

High -- (numerical value of 4) -- Three design features are represented.

Very High -- (numerical value of 5) -- At least four of the design features are represented.

3.4.1.3 Control Systems

The control-systems design dimension entails an assessment of the degree to which the firm has formal structures in place to monitor and report social performance. Stephens (1993) identified two design features which may be used to assess the control-systems design dimension: (1) an ethics-compliance audit, and (2) compensation, evaluation, and incentives based upon extra-economic as well as economic goals, the implementation of which inherently requires some type of control system by management to evaluate employee or unit performance. These two design features were utilized to rate each firm on the control-systems design dimension. The survey questions are provided, and then the determination of the rating, or measure, of the control-systems design dimension is discussed.

The social audit was the first attempt to assess a firm's CSR or social performance. As mentioned in Chapter 1, the social audit came to be focused on processes and used to monitor performance of specific programs. Although popular in the 1970s, social auditing has developed slowly since then, and there are few known control systems for monitoring socially responsible behavior or ethical conduct except

the ethics audit or an internal monitoring system that examines performance on extra-economic goals. This measure has room for improvement in the future. One recent change in U.S. federal government legislation, the Federal Corporate Sentencing Guidelines, promotes the installation of such features by providing a reduction in fines or sentences for civil or criminal wrongdoing if the corporation can show the presence of such features in its design.

3.4.1.3.1   Survey Questions

The following questions (in italics) are asked:

Does your firm conduct an ethics-compliance audit or social audit?   ☐ *YES* ☐ *NO*

Are managers' compensation, evaluation, and incentives based upon extra-economic goals (such as customer satisfaction, employee evaluations, or public relations) as well as economic goals?   ☐ *YES* ☐ *NO*

3.4.1.3.2   Control Systems Rating Scheme

The control-systems design dimension is rated either Very Low, Moderate, or Very High (1, 3, or 5 respectively, as an ordinal value). The firm receives the highest rating based on the following guidelines:

Very Low -- (numerical value of 1) -- The firm does not have an ethics audit nor any compensation, evaluation, or incentive plans based on, or including, extraeconomic performance goals.

Moderate -- (numerical value of 3) -- The firm either conducts an ethics audit or maintains a compensation, evaluation, or incentive plans based on, or including, extraeconomic performance goals.

Very High -- (numerical value of 5) -- The firm conducts an ethics audit and maintains compensation, evaluation, or incentive plans based on, or including, extraeconomic performance goals.

3.4.1.4 Strategic Planning

The strategic-planning design dimension entails an assessment of the degree to which the firm has formal linkages, or connections, with stakeholder organizations representing employees, suppliers, consumers, the government, or the natural environment. Of the design features identified by Stephens (1993), two are indicative of strategic planning or linkages of the firm with stakeholder groups: (1) Public-interest members of the board or outside members of the board from the various constituencies, and (2) stakeholder impact integrated into strategic planning. The latter design feature was examined in the HRPI design dimension only insofar as employees were included in the strategic planning process. The board configuration represents ties with other organizations or representation of that group's interests in the determination of organizational actions and policies. The integration of stakeholders into strategic planning indicates an awareness of the interdependency of the stakeholders and the organization. The survey questions are provided, and then the determination of the measure of the control-systems design dimension is discussed.

3.4.1.4.1   Survey Questions

The following questions (in italics) are asked for this design dimension:

Is there an <u>outside member of the board</u> from any of the following groups (Check all that apply):

a.	*A trade group or trade association?*	□ *YES* □ *NO*
b.	*A consumer group?*	□ *YES* □ *NO*
c.	*An employee public interest group or labor union?*	□ *YES* □ *NO*
d.	*An environmental group?*	□ *YES* □ *NO*
e.	*A public-interest group?*	□ *YES* □ *NO*
f.	*The community or communities in which your firm operates?*	□ *YES* □ *NO*
g.	*A non-profit, minority-issues group?*	□ *YES* □ *NO*
h.	*A non-profit, women's-issues group?*	□ *YES* □ *NO*

How are the following constituencies included in the strategic planning process? (check all that apply)

Constituency	*Not at all*	*Considered implicitly*	*Mentioned explicitly and discussed*	*Consulted with prior to and/or during process*	*Other (Specify)*
a. Customers?	□	□	□	□	□_____
b. Suppliers?	□	□	□	□	□_____
c. Employees?	□	□	□	□	□_____
d. The Community?	□	□	□	□	□_____
e. The Environment?	□	□	□	□	□_____
f. The Government?	□	□	□	□	□_____

3.4.1.4.2   Strategic Planning Rating Scheme

The strategic-planning design dimension is rated from very low to very high (or 1 to 5 as an ordinal value). The firm receives the highest rating based on the following guidelines:

Very Low -- (numerical value of 1) -- There are no members from stakeholder groups other than stockholders on the board of directors, and stakeholder impact is not integrated into strategic planning.

Low -- (numerical value of 2) -- There is a member from a stakeholder group other than stockholders on the board of directors, or one stakeholder group is involved in strategic planning.

Moderate -- (numerical value of 3) -- There are at least two stakeholder groups represented by outside members on the board or by inclusion in the strategic planning process.

High -- (numerical value of 4) -- There are at least three stakeholder groups represented by outside members on the board or by inclusion in the strategic planning process.

Very High -- (numerical value of 5) -- There are at least four stakeholder groups represented by outside members on the board or by inclusion in the strategic planning process.

3.4.1.5 Organizational Ethos

The organizational-ethos design dimension entails an assessment of the degree to which the firm promotes ethical values through the development and promulgation of a mission statement and/or code of ethics. Of the design features identified by Stephens (1993), three were indicative of organizational ethos and were used to develop the survey questions and rating scheme:

- Corporate credo that emphasizes avoidance of harm by the organization to multiple stakeholders, not avoidance of harm to the organization
- Promulgation of credo via corporate communications
  a. informal CEO statements
  b. general stakeholder publications, e.g., company magazine, annual report
  c. specialized publications, e.g., values booklets, posters
- Ethical code that emphasizes avoidance of harm by the organization to multiple stakeholders, not avoidance of harm to the organization

From these three design features emerged a two-prong approach to the organizational-ethos design dimension rating scheme: (1) the presence of a corporate credo or code of ethics that emphasized avoidance of harm to multiple stakeholders, and (2) promulgation of such via corporate communications. Expanding the design features from Stephens (1993), I added two additional means of communication of the credo and/or code -- through ethics training programs or reliance on informal mechanisms. In the survey questions, I offered the responder the opportunity to enclose a copy of the credo and/or code instead of having him or her rewrite it on the survey form. For the code of ethics question, I also provided examples of formal codes developed by external groups that the firm could have adopted. Each of the survey items are presented below, and then the determination of the measure of the organization ethos design dimension is discussed.

3.4.1.5.1   Survey Questions and Analysis

The following questions (in italics) are asked in the survey:

CORPORATE CREDO, MISSION STATEMENT, OR VISION STATEMENT

Please describe or, if possible, attach or enclose a copy of your firm's corporate credo, mission, or vision statement.

The corporate credo, mission statement, and/or vision statement is analyzed for reference to stakeholders and values. A distinction is made among those credos or codes that (1) emphasize avoidance of harm to the stakeholders by the organization, (2) emphasize

minimization of harm to the stakeholder as opposed to avoidance of harm to the stakeholders by the organization, (3) emphasize the inclusion of stakeholders in the strategic planning and operations of the firm, (4) mention or include stakeholders, and (5) those that do not mention or include stakeholders (other than stockholders). Form A, in Figure 3.4, is completed for each firm for the analysis.

CODE OF ETHICS OR CODE OF CONDUCT

Please describe or, if possible, attach or enclose a copy of your firm's code of ethics or code of conduct. If your firm has adopted a recognized code of ethics or set of principles such as the Caux Roundtable Principles for Business, the Organization for Economic Cooperation and Development (OECD) Principles for Multinational Enterprises, or the International Chamber of Commerce (ICC) Business Charter for Sustainable Development, please indicate so in the space below.

The code of ethics or code of conduct is analyzed for reference to stakeholders and values. Form A, Figure 3.4, is used for this as well.

Figure 3.4: Worksheet for Organizational-Ethos Design Dimension

Initials: _____

FIRM: _____

1. Does the credo, mission or vision statement encompass stakeholders? Include information from code of conduct or code of ethics, or other communication for the firm. Circle those stakeholders that are mentioned.

Shareholders	Customers	Suppliers
Employees	Natural Environment	Communities
Government	Society or public in general	Future generations
Minorities/Women/Diversity	Other: _____	

2. Does the credo, mission or vision statement mention avoidance of harm to the following stakeholders? Include information from codes or other statements. Circle those stakeholders that are mentioned.

Shareholders	Customers	Suppliers
Employees	Natural Environment	Communities
Government	Society or public in general	Future generations
Minorities/Women/Diversity	Other:	

_____

3. Determination of scoring (Circle appropriate one):

1 = No mention of stakeholders other than customers, employees, and shareholders. (This is the default value.)

2 = Mentions at least one stakeholder group other than shareholders, customers, and employees.

3 = Mentions at least three stakeholder groups other than shareholders, customers, and employees.

4 = Mentions avoidance of harm to, or protection of, at least one stakeholder group. (For example, a firm adhering to the Responsible Care program would be here.) Avoidance of harm for the sake of the organization does not count.

5 = Mentions avoidance of harm to, or protection of, at least two stakeholder groups. (Few organizations are this group.)

PROMULGATION OF BOTH
How is the corporate credo, mission statement or vision [and code of ethics or code of conduct] communicated to the members of your firm?
a.   Informal CEO communications such as speeches, conversations, interviews, or videos?   ☐ YES ☐ NO
b.   General firm publications such as company magazines, newsletters, or annual reports?   ☐ YES ☐ NO
c. Specialized publications such as values booklets or posters?   ☐ YES ☐ NO
d. Training programs such as new employee orientation, professional development classes, annual meetings, or other programs?   ☐ YES ☐ NO
e. Reliance on informal mechanisms?   ☐ YES ☐ NO If Yes, please list.

[The answer to e. is kept as a separate variable and correlated to the structural-configuration design dimension. It is expected that a firm with a low score on structural configuration would rely more on informal mechanisms than those that score high on structural configuration.]

3.4.1.5.2   Organizational Ethos Rating Scheme

The organizational-ethos design dimension is rated from very low to very high (or 1 to 5 as an ordinal value). In the following rating scheme the mention of stakeholders does not include stockholders or customers. The firm receives the highest rating based on the following guidelines:

Very Low -- (Numerical value of 1) -- The firm does not have a credo or code that encompasses stakeholders by mentioning them or that addresses harm to the stakeholder(s) by the organization. There is no mention of stakeholders other than customers, employees, and shareholders. In this rating, the means of promulgation, or communication, are irrelevant.

Low -- (numerical value of 2) -- The firm has a credo or code that mentions, or encompasses, at least one stakeholder group other than shareholders, customers, and employees. The credo or code must be communicated in at least one way.

Moderate-- (numerical value of 3) -- (a) The firm has a credo or code that mentions or encompasses at least three stakeholder groups other than shareholders, customers, and employees but does not address avoidance of harm to the stakeholders. It is also communicated to the organization members through at least two forms of communication.

High -- (numerical value of 4) -- The firm has a credo or code that emphasizes the avoidance of harm to (or the minimization of harm or the protection of) at least one stakeholder group and is communicated to the organization members through at least one form of communication. (For example, a firm adhering to the Responsible Care program would be here.) Avoidance of harm for the sake of the organization does not count.

Very High -- (numerical value of 5) -- The firm has a credo or code that emphasizes avoidance of harm to (or minimization of harm or protection of) at least two stakeholder groups and is communicated through at least two forms of communication.

3.4.2 Summary Distance Metrics

The summary distance metrics are the distances of the firms from the ideal-type profile. The summary distance metric is determined by 'plotting' each firm in multidimensional space along the various design dimensions. The one summary distance metric calculated for each firm is the measure of the distance of the sample firm from the ideal-type profile

for the organization regarding multi-constituent design features. The summary distance metric is abbreviated as DISTANCE.

DISTANCE measures the Euclidean distance of the sample organization (the specific firm) from the ideal-type profile for a firm addressing multi-constituent stakeholders. This distance is calculated as:

$$D = \sqrt{\sum_{i=1}^{d} \left(X_{Ii} - X_{ji}\right)^2}$$

Equation 1

where d = the number of design dimensions [for this study there are 5 design dimensions],

I = Ideal-type profile,

'i' = i^{th} design dimension, and

j = j^{th} sample organization or firm.

The expected relationship between the design dimensions and the performance measure are shown in Table 3.1. The deviation distance, or summary distance metric, is expected to be negatively associated with the performance measure, since the deviation distance is the distance from the ideal-type profile, and the greater the distance the lower relative performance is expected.

Table 3.1: Predicted Relationships Between Design and Performance

DESIGN	PERFORMANCE
Structural Configuration	+
Human Resource Policies and Incentives (HRPI)	+
Control Systems	+
Strategic Planning	+
Organizational Ethos	+
Summary Distance Metric *	-

* Based on aggregate of design dimensions subtracted from ideal-type profile ratings

An example of these calculations is given in Figure 3.5. The information is based on the case study of Corning by Stephens (1993).

Figure 3.5: Example Calculation of Summary Distance Metric for Corning

With the rating scheme discussed above, I briefly analyzed the case of Corning, as described by Stephens (1993).

Corning would score as follows:

Design Dimension	Rating for the Measure	Score
Structural Configuration	High	4
Human Resource Policies and Incentives (HRPI)	High	4
Control Systems	Very High	5
Strategic Planning	Very High	5
Organizational Ethos	Very High	5

Summary Distance Metric =

$$\sqrt{((5-4)^2 + (5-4)^2 + (5-5)^2 + (5-5)^2 + (5-5)^2)}$$
$$= \sqrt{2}$$

Based on the calculations for summary distance metric, which are explained later, Corning would receive a distance metric of $\sqrt{2}$, where the scale is 0 (ideal-type) to $\sqrt{80}$. This is approximately where I would expect it -- very close to the ideal-type profile. The structural configuration score is lower than 5 because the firm is deliberately moving away from bureaucratization. Firms that are highly bureaucratic would score higher on this than those that are less bureaucratic.

3.5   Dependent Variable

The dependent variables are the CSP ratings from the KLD database. The KLD database is developed and updated quarterly by external observers. Its ratings are based on information provided by the firms or found in news releases or news articles. An attempt is made to base the criteria as much as possible on quantifiable and specific measures such as fines, regulatory actions, and charitable donations. These are based on the equally-weighted sum total of the CSP scores or ratings from the KLD database.[15]

The KLD database has several general sub-dimensions on which it rates each firm: Community, Employee Relations, Environment, Product, Diversity, Non-US Operations, and Other.[16] The first four sub-dimensions are typically used in CSP research focusing on stakeholders and the stakeholder-firm relationship. Additional categories rated by KLD include the involvement of the firm in enterprises associated with alcohol, tobacco, gambling, nuclear energy/development, and military contracting. These other sub-dimensions are not included in the total CSP score for this study because they do not represent primary stakeholders (Freeman, 1984; Starik, 1994), nor are they comparable to the stakeholders of concern in the general model of a just organization as described in Chapter 2.

An example of the CSP ratings for each sub-dimension is given below. The February 1996 KLD database scored General Electric Company as shown in Table 3.2:

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[15] I am using the KLD database as the primary database, because it is the most well-known, the most extensive, and the most current CSP database. I have been fortunate to have access to the data by KLD and expect to have access to the most recent 1998 data. The Council for Economic Priorities (CEP) SCREEN database is another CSP database. However, I do not have access to it. Future research may involve this database and/or the KLD database as well. A third possibility is the *Fortune* database on community and environmental reputation.

[16] The 'Other' sub-dimension typically address CEO compensation, ownership of other firms and issues consistent with the strategic-planning design dimension.

Table 3.2: KLD Ratings of General Electric Company (GE)

Strengths	Issue Areas	Concerns
♦	Community	
♦♦	Diversity	
	Employees	
♦	Environment	♦♦
	Non-US Operations	
	Product	♦♦
	Other	♦♦

For each sub-dimension, the KLD database rates each firm as having a 'strong strength' or 'major strength,' having a 'strength,' being 'neutral,' showing a 'concern,' or showing a 'strong concern' or 'major concern' by displaying one or two diamonds in each of the two column of Strengths and Concerns. The strengths and concerns are usually translated by researchers into a numerical, ordinal, value. The KLD rating categories of "major concern" to "major strength" were converted to a 1-5 Likert-type scale with one representing the more problematic end of the ratings. For this study, the strengths and weakness of the firm are translated as shown in Table 3.3:

Table 3.3: Translation of KLD ratings to CSP Score (Firm: GE)

Sub-Dimension	Ratings	Score for Study
Community	One Strength	4
Diversity	Two Strengths	5
Employees	No Strengths, No Concerns	3
Environment	One Strength, Two Concerns	2
Non-US Operations[17]	No Strengths, No Concerns	3
Product	Two Concerns	1
Other	Two Concerns	1

For 1996, the CSP score for General Electric Company is 19.

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[17] The Council on Economic Priorities (CEP) also does overseas auditing, primarily of labor issues.

The ratings on these sub-dimensions are summed for an overall CSP rating.[18] In this study, the CSP scores for each sub-dimension are added together for an aggregate CSP score. Other ways of establishing an overall CSP score include weighting each sub-dimension differently based on various criteria (Jensen, 1977; Arrington, et al., 1982; Wokutch, 1982; Wokutch and Fahey, 1986). The CSP score is calculated by summing together the scores of the seven sub-dimensions of Community, Diversity, Employees, Environment, Non-US operations, Product, and Other.[19] This dependent variable, the CSP score, is represented by CSP1. The criteria of the KLD database were examined to determine if any criteria were identical to the independent variables and the design features. One criterion, being a signatory of the CERES principles, was found to be redundant. In the independent variable of organizational ethos, being a signatory of the CERES principles would mean the firm's ethos included a statement of avoidance of harm to the natural environment, resulting in a High or Very High rating. In the KLD database, being a signatory increases the Environment subdimension score. Therefore, if a respondent firm is found to be a signatory of the CERES principles, a CSP score is calculated with and without the modification in the Environment subdimension score, because of potential concept redundancy.

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[18] The KLD CSP ratings currently are <u>not</u> based on the presence of the design features studied in this dissertation. However, for future research, each database and its CSP criteria should have to be examined in detail. If the study does test individual stakeholder relationship, then a few ratings would have to be revised.

[19] In future studies that assess specific stakeholder relationships (such as the firm-employee or the firm-natural environment relationship), the particular CSP dimension for the specific stakeholder dimension (such as the Employee or Environment sub-dimension) could be used as a performance measurement.

3.6   Control Variables

The control variables are industry and size. The industry variable is determined from the

industry group listed for each firm in the KLD database. If other databases are used, the

industry group is incorporated as closely as possible into one of those groups. Each firm

is listed in only one industry group.

INDUSTRY Variable:

01 = Business and Professional Services (such as commercial services, pollution
abatement, and other professional services)
02 = Computers and Technology (such as computer manufacturer, semiconductors, and
software and services)
03 = Consumer (such as beverages, clothing and textiles, and leisure)
04 = Drugs and Medical Services (such as pharmaceuticals, health facility management,
and medical equipment and supplies)
05 = Financial Services (such as banks, insurance, and savings and loan)
06 = Industrial, Construction, and Housing (such as manufacturing, aerospace, and
conglomerates)
07 = Natural Resources (such as forest and paper products, oil, mining, and metals)
08 = Printing, Publishing, and Telecommunications (such as broadcasting, newspapers,
and publishers)
09 = Transportation (such as air, rail, and truck transport)
10 = Utilities (such as electric companies and natural gas utilities)

The Size variable (SIZE) is measured by the number of employees. The number

of employees for 1997 is determined by an average of the number reported in the KLD

database and the number of employees given in the Standard & Poor's database. If only

one of these sources reports the number of employees, that is the number used.

These control variables are the contextual dimensions of the organizations.

Drazin and Van de Ven note that "as Child (1977) has pointed out, multiple contextual

factors can have conflicting implications on design." Size and industry group were

determined by Waddock and Graves (1994) to be important contextual variables. Consistent with Donaldson's (1982) concept of stakeholder exposure, controlling for industry is especially important in CSP research where differences in the "stakes" involved vary widely among industries (Graves and Waddock, 1994). For example, mining companies bear a heavier environmental burden than do service industries such as banks.

3.7   Summary of Variables

CONSTRUCT	VARIABLES	SOURCE	Type of Variable	Example of Range
Organizational Context (Control Variables)				
Organization Size	SIZE	Standard & Poor, KLD	interval	Numerical
Organizational Domain	INDUSTRY	KLD	nominal	01 - 10
Organizational Design (Independent Variables)				
Structural Configuration	STCOMULT	Survey Info	ordinal	1 - 5
Human Resource Policies and Incentives (HRPI)	HRPIMULT	Survey Info	ordinal	1 - 5
Control Systems	COSYMULT	Survey Info	ordinal	1 - 5
Strategic Planning	STPLMULT	Survey Info	ordinal	1 - 5
Organizational Ethos	ORETMULT	Survey Info	ordinal	1 - 5
** Summary Distance Metric	DISTANCE	Calculation		$0-\sqrt{80}$
Organizational Outcome (Dependent Variables)				
Corporate Social Performance (CSP)	CSP1	KLD (CSP Database)	ordinal	7 - 35

3.8   *A Posteriori* Analysis

3.8.1   Equifinality

An *a posteriori* analysis of the data may indicate that patterns of organizational design vary according to context. This indication of different ideal types would be consistent with contingency theory. Consistent with contingency theory (T. Donaldson, 1982; L.

Donaldson, 1996), a different design or pattern may be needed to address the various environments of organizations. Therefore, it is important that the emergence of such archetypes be considered in the data analysis. There may be different ideal types based on the context variables of size or industry. While the data collected within each industry category (or range of sizes) may not be significant enough to establish distinct ideal types, such a possibility may be indicated. Another explanation is that equifinality based on industry may indicate the presence of some other force (external or internal) affecting that industry, probably isomorphism, either mimetic or coercive (DiMaggio and Powell, 1983).

To this end, a cluster analysis is performed to examine whether various organizational design patterns may exist in the sampled organizations (i.e. uncover patterns *a posteriori*, not just design patterns). For example, it may be found that industrial, manufacturing, and construction firms have similar design profiles that are significantly different from the design profiles of banking or professional services firms. This may be due to the variations in stakeholder exposure (T. Donaldson, 1982) among industries or differences in isomorphic pressures (DiMaggio and Powell, 1983). To explore this possibility (from contingency theory in Organization Theory), a cluster analysis of the design dimensions is conducted.

3.8.2   Bureaucratization

Size may influence degree of bureaucratization (Hall, Haas, and Johnson, 1967; Pugh et al., 1969; Blau, 1970, 1973; Blau and Schoenherr, 1971; Meyer, 1972, 1979) and may

influence ideal-type profile. Previous research indicates that industry also may affect the degree of bureaucratization (Burt, 1983, 1988). Industry may also influence stakeholder exposure (Donaldson, 1982) and the organizational field may affect mimetic isomorphism (DiMaggio and Powell, 1983), which may lead to different ideal types for various industries.

Low bureaucratization may lead to a low structural configuration score. For example, the larger (in size) a corporation is, the higher the degree of bureaucratization one may expect. However, in a value-rational firm, the bureaucratization may be relatively low, and a low structural configuration score may lead to an unwarranted conclusion. To minimize this possibility, the structural configuration score is compared to the other four design dimensions, and organizations with low structural configuration scores but medium or high scores on the other four design dimensions are more closely examined for this possibility.

3.8.3   Interactions

The systems approach accounts for the interactions of the design dimensions in this test of design and performance. Descriptive statistics and correlation coefficients of the variables are provided. The control variables of size and industry are analyzed for effects on the dependent variable of CSP1, the independent variable of summary distance metric (DSITANCE), and the individual design dimensions.

3.8.4   Non-Respondents

For non-respondents to the survey, an analysis is made to see if those firms for which responses were not received differed significantly in CSP scores from responding firms. The CSP scores for those two groups are compared to see if there is a significant difference in mean CSP and variance.

3.8.5   Psychometric Properties

According to Cook and Campbell (1979), any effective rating scale must possess the psychometric properties of validity and reliability. Validity is broken down into three categories: content, construct, and criterion. The validity of the design dimension rating scheme I developed previously in this chapter is assessed by the extent to which it uncovers different patterns of design regarding the organization and CSP. Criterion, or category validity, is an issue because the categories for rating firms along the five design dimensions were developed for this study -- no standard categories or ratings exist. Adequate sampling and reliability are necessary, but not sufficient conditions for validity (Holsti, 1969).

Content validity. Content validity denotes the sampling adequacy of the items. Each item was selected for its identification by Stephens (1993) as a possible design feature of a just organization. The five design dimensions that comprise the overall organization design of each organization were constructed to show variance in presence and intensity of these items in a firm. Descriptive statistics for each questionnaire item and each design dimension should show the consistency and variance of each respective item and design dimension.

Construct validity. Construct validity stems from the reasonableness of the construct's relationship to other variables. These other variables are expected to have theoretical relevance to the construct (Pedhazer and Schmelkin, 1991). To the extent that this requirement is met, the analyst can assert that the set of indicators are reflecting the same construct and can be combined into a scale. In this study, factor analysis and cross-structure analysis may be used to evaluate the validity of the construct (or the design dimensions).

Criterion or category validity. Category reliability is dependent on the clarity of the categories and the boundaries of each. The categories have to be formulated such that coders agree on which items belong in a category (Holsti, 1969). The categories need to be clearly defined and appropriate to the data.