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AN ANALYSIS OF THE DETERMINANTS OF CORPORATE SOCIAL RESPONSE STRATEGIES: THE CONSTRAINING AND ENABLING EFFECTS OF EXTERNAL MARKET-BASED CONDITIONS AND INTERNAL GOVERNANCE FACTORS

by

Linda M. Sama

A dissertation submitted to the Graduate Faculty in Business
in partial fulfillment of the requirements for the degree of Doctor of Philosophy,
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Abstract

AN ANALYSIS OF THE DETERMINANTS OF CORPORATE SOCIAL RESPONSE STRATEGIES: THE CONSTRAINING AND ENABLING EFFECTS OF EXTERNAL MARKET-BASED CONDITIONS AND INTERNAL GOVERNANCE FACTORS

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Linda M. Sama

Adviser: Professor S. Prakash Sethi

Previous studies in the social issues management field have treated differences in firms' social strategies from a predominantly internal-individual perspective, focusing on the impact of managerial values on corporate social performance. This research departs from the prevailing trend, seeking a broader explanation for differentiable social strategies. Specifically, social responsiveness is predicted to be a factor of a firm's *ability* to respond, determined by its competitive position in the external market and reflected in a measure of strategic slack; and, *predisposition* to respond, determined by level of internal oversight and reflected in a measure of the social orientation of its governance mechanisms.

Four social response strategies are defined: **Resistant** - a passive, insensitive response; **Defensive** - a proactive, insensitive response; **Accommodative** - a passive, sensitive response; and, **Progressive** - a proactive, sensitive response. Hypotheses

predicted a positive association between high and stable strategic slack -- firms' *ability* to respond -- and proactive responses; and, strong social orientation of the governance mechanisms -- firms' *predisposition* to respond -- and sensitive responses. Public visibility was expected to moderate these relationships.

Financial performance, governance and visibility data were collected for 244 large, publicly-traded U.S. firms. The final sample represented a variety of industries from both manufacturing and service sectors. Categorization of firms' social response was based on results of a survey instrument administered to industry analysts. Multiple discriminant analysis was used to analyze the data, with principal component analysis serving as a data reduction technique to arrive at a parsimonious, interpretable model.

Results supported the proposed model, demonstrating a positive association between strategic slack and proactive responses; and, governance social orientation and sensitive responses. As predicted, four response categories were carved out in multidimensional space by two discriminant functions relating to strategic slack and social governance, with strategic slack explaining most of the variance. Moderating effects received limited support.

This research contributes to an integrated explanation of corporate social response strategies. Managers, public policy specialists and theorists are informed as to factors internal and external to the firm that are associated with a response; and, the potential effectiveness of suggested methods for improving corporate social responsiveness. Avenues for future research are explored.

ACKNOWLEDGMENTS

"A work is never completed except by some accident such as weariness, satisfaction, the need to deliver, or death; for, in relation to who or what is making it, it can only be one stage in a series of inner transformations."

Paul Valery (1871-1945), French poet, essayist. From 'Recollection', published in Collected Works, vol. 1, 1972

This stage of my life's journey lasted longer than I had anticipated, and was not without its agonies; yet, as with all worthwhile endeavors, I arrive at this juncture with a greater appreciation of what has come before, and immense hope for what is to come.

I could not have realized my lifetime dream without the support and encouragement of colleagues, family and friends. It seems an impossible task to acknowledge them as would be their due in this restrained medium. Nonetheless, I would like to try.

First, I want to recognize the contributions of my committee members to this effort -- Sidney I. Lirtzman, Steven D. Papamarcos, H. Jack Shapiro, and my adviser since the first day of my doctoral career, S. Prakash Sethi. These esteemed scholars not only provided me with needed guidance, but also understood my need for some flexibility in the bounds of that guidance. They were collaborators at the start, coaches as I began to establish my own path, and, in the final stages, my greatest advocates. For Prakash's wellspring of knowledge and ideas, and to whom I owe an untold number of cappuccinos, Sid's impressive intellect, Jack's wise counsel, and Steve's unerring logic and mindful reading of countless dissertation drafts, I am eternally grateful.

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Finally -- I want to express appreciation to my parents who have long been gone from this earth, but have left their indelible mark on my character. All that makes me humble and all that makes me strong, I owe to them. And it is to their memory that I dedicate this dissertation. I know that wherever they are in this vast cosmos, they are proud of their "little one".

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1. INTRODUCTION

"Call a thing immoral or ugly, soul-destroying or a degradation of man, a peril to the peace of the world or to the well-being of future generations; as long as you have not shown it to be 'uneconomic' you have not really questioned its right to exist, grow, and prosper."
E. F. Shumacher (1911-77), German-born British economist.
Small is Beautiful, Part 1, Ch. 3 (1973).

For researchers in the social issues management field, the work has been both gratifying and, at times, alienating. Although research of social performance outcomes in management is given increasingly more weight and legitimacy in the academy, it remains a subject of lesser importance, subjugate to the more dominant concerns with economic performance and competitive advantage. The point is made eloquently by Hosmer (1994), who pointed to the unhappy divergence of strategic management analysis from corporate social responsibility analysis. In light of the demands made by an increasingly vocal and influential set of firm stakeholders, and the pressure they bring to bear on firms to perform excellently in both the economic *and* social realms, a dilemma emerges in both research and practice around an insistent preoccupation with economic goals at the expense of neglecting social goals. It is as if to say that these domains require separate and hierarchically-ordered treatment, and boast mutually exclusive goals. Alternatively, as prevalent efforts to link them in the literature bear witness, social goals are "justifiable" only to the extent they can be shown to contribute to economic goals. It is the contention of this researcher that social goals have inherent legitimacy; and further, that the level of corporate social responsiveness is less a means of *achieving* economic prominence than it is a *result* of such economic prominence. Research that illuminates this point and explains certain phenomena related

to social performance will contribute to alleviating the dilemma that an exclusive reliance on economic considerations has propagated.

Academic and popular business press devote a sizeable portion of their publications to firm performance. Preliminary searches were undertaken to demonstrate literature trends in the field of corporate *social* performance. Keyword searches over a recent five-year period (1992-1996) of three top-tier management journals on the word "performance" yielded 218 entries. When the qualifiers "economic" or "financial" were added, the number of entries drops to 54. When the qualifier "social" was substituted, the number of entries is relatively low, yielding a total of 26 hits[1]. However, the research in social performance is on the rise. For example, a comparison of the number of entries for the keywords "social performance" across all journals in the ABI Database during the five year periods of 1986-1990 and 1991-1995 results in a doubling of related articles, from 17 to 34.

There are a number of possible explanations for the results of this cursory analysis. First, business and management scholarship is still primarily concerned with financial performance of the firm. The data might also suggest that corporate social performance research is still viewed as a renegade field, accorded less legitimacy in the academic journals than studies dealing with economic and financial measures of performance. On the other hand, one might argue that the relative increase in studies of corporate social performance in recent years would indicate a shifting emphasis from one of exclusive concern with

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[1] An identical analysis was performed for 1996-1997, to update these numbers. An additional 35 articles appeared that used "financial performance" or "economic performance" over the two-year period for the same set of journals; and, only two additional articles appeared over the same period that incorporated "social performance" as a keyword.

stockholder wealth maximization to one of growing concern with optimal profits subject to social and political constraints imposed by a vast array of stakeholders.

If one accepts this last interpretation, one might also subscribe to the notion that the goals and objectives of the firm must be broad enough to encompass social goals as well as economic ones, and that managers are judged on their ability to deliver top-rated performance in the social arena as well as the economic market arena. This dissertation research rests on the premise that corporate social performance results from firm strategic choices made in the belief that social performance strategies contribute to the firm's sustainable competitive advantage (Wilson, 1985). This is borne out of the logic that under conditions of imperfect markets -- which is the dominant mode of economic activity, even under the most competitive of market-based socio-economic systems -- firms must attend to societal concerns since their economic performance is increasingly affected by non-market forces prevailing in society. Implicit in this argument is the notion that society expects corporations to integrate social and commercial interests in a manner that safeguards the public good, whether they opt to do so voluntarily or through regulatory mechanisms that restrict managerial discretion (Hardin, 1968; 1985). As such, strategy formulation that considers social objectives is more complete and effective in addressing stakeholder expectations for overall firm performance than that which does not; and, is more desirable from society's viewpoint as a means of preserving the commons and, ultimately, the legitimacy of the firm (Merton, 1968). It therefore follows that an understanding of the twin conditions framing a firm's social response, i.e., conditions both internal and external to the firm, be established.

If one accepts that firm-level strategies must incorporate social as well as economic criteria as part of a market mandate, then how does one explain the fact that firms in similar markets differ in both the nature and scope of their social response? This question of how firms differ has been explored in terms of commercial strategies, but has received relatively little attention in terms of social strategies. Given the turn in the tide of public sentiment vis a vis the duties and obligations of business in modern society, investigation of patterns of social strategies is needed to enhance our understanding and modeling of overall firm performance and its antecedents.

1.1 Problem Statement

Many attempts have been made to describe and evaluate different socially responsible activities. The data that have been produced are informative and contributory. What is missing is an analytic framework for explaining *why* different firms engage in different types of social response (Parket and Eilbirt, 1975). What accounts for these differences? Why are some firms more responsive than others? What constrains or enables the firm's adoption of a specific response mode?

Reconciling two perspectives. Research on corporate social responsibility and business ethics has focused primarily on micro factors internal to the firm, and more specifically its managers, in predicting and explaining corporate social performance -- factors such as corporate culture, management values and individual actions. This derives from the managerial choice perspective, whereby the environment is viewed both as a source of unmanageable constraints, and as a subject of managerial manipulation to fit

organizational objectives. This approach focuses on individual conduct in an institutional context, and environment is said to be "enacted" by the interpretations and meanings assigned to it by management (Weick, 1979). In this view, the decision-making process is a rational one of deciding among competing alternatives of the firm's choosing to locate the best prescription for competitive success (Ansoff, 1965; Andrews, 1971).

An alternative school of thought refers to a theory of the firm lodged in industrial organization (I/O) economics that informs us as to the importance of structural characteristics of the firm's external market environment in forging corporate strategy (Porter, 1980; 1981). In this view, management adapts to environmental contingencies to ensure survival, and following population ecologists, "surviving" or "selected" firms are those that best match their strategies with the demands of their environments (Betton and Dess, 1985; Hannan and Freeman, 1977). The I/O perspective is highly deterministic and seeks to elevate the significance of industry structure relative to firm-specific capabilities in explaining overall firm performance. Industry structure is defined as "the relatively stable economic and technical dimensions of an industry that provide the context within which competition occurs" (Astley and Van de Ven, 1983: 250). The structure of the industry sets the parameters for acceptable strategic behavior within the firm.

The debate over whether industry structure or firm-based capabilities matters more in explaining performance rages on, with studies on both sides coming up with supporting data. Work derived from the I/O economics school would lead one to suspect a fair amount of firm homogeneity within industries or strategic groups. Managerialists would argue that firms are "fundamentally heterogeneous" (Barney, 1994: 67), as a function of their internal

capabilities and core competencies (Prahalad and Hamel, 1990) -- an expression of the resource-based view of the firm (Wernerfelt, 1984).

This paper asserts that the two combine to affect strategy and performance -- and any research effort that favors one explanation to the neglect of the other results in only partial explanation of the phenomenon being studied. To cite Barney and Zajac (1994. 6):

> Clearly, both competition (the competitive context within which a firm operates) and competencies (the strategically relevant behavioral and social phenomena inside a firm) are important issues in competitive organizational behavior research.

Thus, external environment, as embodied in the threats and opportunities facing the firm, and internal environment, consisting of a firm's strengths and weaknesses, are both useful in formulating effective strategy (Christensen, Andrews, Bower, Hamermesh, and Porter, 1987). This argument proceeds from a view of the strategic decision-making process as one bounded or constrained by factors imposed through interaction of the firm with its external, market environment (Murray, 1978).

Research that combines economic, market-based factors with internal, behavioral factors to explain performance is a relatively recent phenomenon. Hansen and Wernerfelt (1989) combined behavioral and economic factors in their research. Astley and Van de Ven (1983: 266) characterized organizations as "neither purely objective nor purely subjective phenomena". Hrebeniak and Joyce (1985: 338), in reference to the earlier work of Emery and Trist (1965), stated that:

> ...choice and determinism must interact or coalesce to define a causal fabric or context either nurturant of any given organizational variation or hostile to it.

A test of the Hrebeniak and Joyce proposition was conducted by Lawless and Finch (1989) who used cluster analysis of various industry characteristics to classify firms in four choice situations. Results were not confirmatory, which may reflect the researchers' decision to distinguish strategic choice based *exclusively* on industry characteristics. As Marlin, Lamont and Hoffman (1994: 231) commented:

> An adequate operationalization of choice situations should include both organizational and environmental factors to capture the extent of choice and determinism.

This is precisely what is proposed in this dissertation. Following Porter's lead (1980), this paper builds on the perspective that derives from the I/O school to suggest that competitive forces in the industry delimit the choice of strategies **available** to firms in pursuing their objectives. Within this constrained choice band, firms will differentiate themselves as a factor of their internal resource capabilities, including managerial competencies and learned organizational routines (Nelson, 1994).

Corporate social performance: A constrained **strategic** choice. The preceding discussion asserts that: (1) strategic analysis incorporates both micro and macro considerations; and, (2) effectiveness of a chosen strategy is influenced by factors internal and external to the firm. Now it is important to respond to the question of whether or not the elements of corporate social performance, i.e., social responsibility, responsiveness, and social issues management (Carroll, 1979), are strategic in nature.

Strategy, understood as the **broad contours** of firm objectives and intentions, incorporates decisions affecting **long-term** direction of the firm and **requiring a substantial allocation of resources**. These decisions clearly manifest commercial objectives. Equally

important, they incorporate social objectives that the external environment imposes on the corporation, and that the corporation seeks to satisfy through carefully crafted strategies.

Incorporating the notion of social performance in a strategic analysis of the firm reflects the view that if strategy contemplates *only* near-term economic performance outcomes, it is incomplete -- since social performance is not always immediately reflected in economic performance of the firm; and, that strategy which addresses social outcomes only in times of crisis is largely ineffective, since the crisis could conceivably have been avoided or mitigated by the earlier attention to social issues (e.g., Dow Corning's eventual declaration of bankruptcy in the wake of the silicone breast implants litigation). Part of management's job is to manage the gap between the firm's social performance and stakeholder expectations of that performance, so as to keep the gap as narrow as possible given the context of the firm, the legitimacy of the expectations, and the firm's internal capabilities. This gap has been referred to as the Performance-Expectations Gap (Post, Frederick, Lawrence, and Weber, 1996); and, in its earlier incarnation, the Legitimacy Gap (Sethi, 1977). The narrower the gap, the greater the social legitimacy of the firm; and social legitimacy, it has been suggested, can be profitable.

Hosmer (1994) argued convincingly for incorporating ethical-social concerns in the strategic planning process. His reasoning is that the stakeholders upon which the firm is dependent for inputs will also be the ones to confer upon the firm its social and economic legitimacy, which increases with trust, cooperation and integrity. Competitive advantage that is truly sustainable is often born of these very qualities in combination, creating the firm's reputation on which future market transactions are based.

The concept of strategic slack is posed as a potent link between the economic and social performance of the firm. That is, given firm-level slack resources that are high relative to industry rivals, the relative **ability** of that firm to actively respond to emerging social issues is enhanced. Further, given such ability, a firm's strategic decision of how to allocate slack resources -- which is defined for this research as above-normal rents -- among economic and social objectives is determined in part by the social orientation of the firm, and specifically, its governing bodies. This last aspect of the strategic decision pyramid denotes the **predisposition** of the firm to adopt a demonstrably sensitive social posture.

1.2 Purpose and Scope of the Research

This research explores the nature of relationships among external market-based conditions, internal governance factors, and strategies of social response for firms. While many factors have been acknowledged to contribute to the degree of social responsiveness displayed by firms, the importance of a firm's market position in this calculation has been relatively overlooked in favor of a more narrow focus on top management predilections. To the extent studies have estimated a link between competitive, economic performance and social performance, it has been primarily to establish an economic justification for engaging in socially responsible activities, i.e., social performance leads to higher market-based measures of economic performance (Ullmann, 1985). This study, on the other hand, establishes a theoretical basis for arguing that market conditions constrain the band of strategic choices management has available to it; and, that the choice band is further constricted by the degree of social monitoring provided by the firm's governing mechanisms.

The directional flow suggested by the research model in this study proceeds from firm financial performance and governance orientation to social response mode. Several scholars concur on the point that excess profit is a precondition for vigorous involvement in socially responsive activities (Bowman and Haire, 1975; Elkins, 1977; Parket and Eilbirt, 1975). Empirical support of this implied directionality is also available (Dooley and Lerner, 1994; Holmes, 1976; Louis, 1969; McGuire, Schneeweis and Branch, 1990; McGuire, Sundgren, and Schneeweis, 1988; Waddock and Graves, 1997). McGuire et al. (1990), for example, found that perception of firm quality, which included social responsibility, was more closely related to prior financial performance measures than to subsequent financial performance measures. More recently, Waddock and Graves (1997) described the relationship between corporate social performance and firm financial performance as a "virtuous circle" by which both elements of performance are interdependent. Their research suggests a bidirectional relationship.

Empirical support for directionality of the governance-social responsibility relationship has been inconclusive, although researchers in the field converge around a normative conclusion that better corporate governance should result in improved corporate social responsibility. Agency theory has traditionally emphasized the ability of governance mechanisms to limit the discretionary power of management in a manner that better aligns the interests of managers with those of shareholders (Berle and Means, 1932; Fama, 1980; Fama and Jensen, 1983; Williamson, 1975). Tests of the theory have focused either on managerial excesses (e.g., Singh and Harianto, 1989) or on market measures of firm performance (e.g., Hill and Snell, 1988, 1989) as the outcome variables of interest. This

dissertation shifts the focus of inquiry to an examination of governance mechanisms that succeed in aligning management interests with those of a diverse group of stakeholders with the outcome of interest being that of improved social responsiveness.

The outcome variable in this research, social responsiveness, is one element of the corporate social performance model conceptualized by Carroll (1979). Carroll partitioned corporate social performance into three tiers: social responsibility, social issues management and social responsiveness.

Frederick (1978) defined the corporate social responsibility (CSR_1) construct as one that addresses the obligations corporations have toward society. They include economic, legal, ethical and discretionary responsibilities.

Social issues management is a promising area of research, and has been developed primarily via a stakeholder approach (Clarkson 1988, 1991, 1995). However, reliance of this construct on identification of specific issues and stakeholders makes operationalizing this construct problematic for empirical research. This is largely due to the fact that social issues change in importance over time; and, that industry membership and other mitigating factors render specification of issues for a diverse sample of firms, and subsequent performance comparisons, difficult. Clarkson's unique work has consisted of in-depth case studies of some 60-70 Canadian firms over a period of 10 years.

The responsiveness construct, which Frederick (1978) called CSR_2, addresses the "capacity of a corporation to respond to social pressures...the act of responding, or of achieving a generally responsive posture, to society" (p. 6). In this research, the capacity of a corporation to respond is jointly composed of a firm's *ability* to respond and its

predisposition to respond. This focus on the responsiveness construct is an attempt to veer away from a philosophical discussion of ethical norms about what corporations *should* be doing, and toward a discussion of the corporate social posture that the firm attains, i.e., what is the corporation *perceived as actually* doing. The crux of this dissertation's inquiry relates to how the firm, relative to others in its industry, positions its social response, and in hypothesizing what contributes to classification of a firm into one response mode over another.

For purposes of this research, the response mode is defined generally, i.e., not with reference to any specific stakeholder issues or groups. An attempt is made to define a posture of response that best characterizes the firm. This has been done effectively in the case of commercial strategy research, wherein researchers have used strategic typologies to categorize generic firm behavior (Hambrick, 1983b; Miles and Snow, 1978). Just as with commercial strategies, a particular event in the socio-political environment of business may give rise to an anomaly in the firm's general social strategic direction, yet firms often return to a familiar pattern of response once the blip disappears. It is far more rare to see a swift, dramatic and sustained alteration in strategic posture as a response to a unique or cataclysmic event than it is to see a flurry of activity around the event which then subsides once the event has played itself out on the corporate stage. Cataclysmic change is easy to detect, even for the firm with limited scanning capabilities. More subtle change, however, which occurs irregularly and unexpectedly, requires a certain sensitivity on the part of the organization. This trait is learned over time, and that leads to a response implementation that is well-coordinated and proceeds from intimate knowledge of the firm's environment

(c.f. Mintzberg, 1987). A company, by dint of its market-based strategic slack and internal governance social orientation, will manifest a *pattern* of response to social issues that is evident to analysts closely monitoring firm performance.

Supporting this view, Bauer (1990) suggested that generality of social responsiveness, along with specificity, is an important area for investigation. Moreover, he pointed out that the relevance of social issues to business varies across firms and industries, making it difficult to expect that any one firm would be socially responsible on all issues. However, he asserted that the general posture of response is strategic in nature and reflects the general skills and resources learned by the firm over time. A relatively stable, generalized response should therefore be detectable for the sample firms described in this research.

Proceeding from this discussion, the purpose of this research is to extend the current model of corporate social responsiveness, that has relied predominantly on an internal-individual perspective, by:

(1) Describing the range of strategic opportunities recommended to the firm by its industry environment;

(2) Assessing the ability of the firm to capitalize on those opportunities, which is reflected in a measure of firm-level *strategic slack*, a concept that relates to the firm's competitive position in the industry; and,

(3) Evaluating the predisposition of the firm to engage in positive social response strategies (i.e., strategies that demonstrate sensitivity to stakeholder claims), as reflected in the social orientation of its internal governance structure.

(4) Deriving discriminant functions composed of strategic slack variables and governance variables that most accurately sort sample firms into four response mode categories, and that then can be used to assign new observations to the categories.

The research goes on to develop a construct of public visibility, which is believed to have a moderating effect on the firm's combined ability and predisposition to respond to social issues. The precedent for this in the literature was a study by Aupperle (1984) which explored visibility's relationship with corporate social orientation.

1.3 Research Questions

The preceding discussion brings us to the focus of this inquiry which is summarized in the following four research questions:

1. What are the identifiable clusters of social response patterns evidenced by firms?
1. How does the creation of market-based strategic slack relate to identified patterns of social response?
2. How does the social orientation of the governance structure contribute to the explanation of the type of social response strategy adopted by the firm?
3. What is the moderating effect of the "public visibility" construct on the predicted relationships?

1.4 Significance of the Research

Firms formulate and implement competitive market strategies to achieve and maintain dominant positions in their respective industries. Remaining competitive in today's market requires the timely and accurate analysis of the many environments of business, including the economic, technological, political and social sectors. Competitiveness also depends on the effective and efficient use of internal resources of the firm in adapting to these environments. Traditional strategy research focuses on the economic and technological aspects of strategic decision-making, both internal and external to the firm. Recent mandates emanating from the social and political realms of business reflect a need for research in those aspects of strategic management that refer to the socio-legal expectations for corporate performance.

Public opinion polls, such as the Harris polls and the General Social Surveys, began reflecting a waning in public confidence in American business since the early 1970s (Davis, 1977; Lipset and Schneider, 1983). Declining confidence has been accompanied by increased awareness on the part of affected stakeholder groups as to the importance of emphasizing the social obligations of business. As visibility of corporate actions heightens and is more widely disseminated, due in part to advances in communications technology, corporate misdeeds become public knowledge almost immediately. The cost to firms in terms of restoring a tarnished public image and rebuilding trust of key stakeholders can be prohibitive. As Brooks (1989) pointed out, what started as a concern with the principal-agent conflict (cf. Berle and Means, 1933, 1968) has expanded in recent years to embrace a concern with principal-agent-society conflicts. It is no longer sufficient for corporations

to satisfy the expectations of stockholders. Rather, it has become incumbent on them to respond effectively to a broad range of stakeholders and stakeholder issues in order to attain social legitimacy. Holmes (1976) found that many executives view social responsibility as desirable **and** necessary, even at the expense of profits. This research addresses these growing practitioner concerns by modeling social response postures of the firm in the context of the performance-expectations gap. This gap emerges when performance of the firm as viewed by its stakeholders -- either due to specific firm misconduct (actual performance), or to general industry reputation that has yielded a negative halo effect for member firms (perceived performance) -- falls below the level of stakeholder expectations for firm performance. In order to fashion an effective response, firms must first accurately identify the nature and scope of the gap facing them, and their relevant stakeholders. However, the weight of analysis and subsequent response implementation impose hefty resource requirements on the firm. Firms are not equally equipped to properly manage the gap (ability to respond), even given the inclination to do so. Other firms may have the necessary resources, but lack the internal motivation to allocate these resources toward meeting certain stakeholder expectations (predisposition to respond). This dissertation research explores these factors that bear on a firm's choice of social response strategy.

From the viewpoint of research, social performance of the firm is a research domain that lacks a unified research framework. Earlier calls for research in the area of social responses (Strand, 1983) reverberate today (Clarkson, 1995). This call has been well-served through institutionalization of the field by academe (AACSB accreditation requirements now stipulate inclusion of Business Ethics in the curriculum), management practitioners (Codes

of Ethics), the market (social investing), and government (U.S. Sentencing Guidelines, changes in SEC rulings, and changes in corporate law). These policies have increased the legitimacy of the field, and have resulted in additional support and resources to conduct related research. They have also helped deflect, at least temporarily, the criticisms aimed at the pursuit of social objectives by business. Yet, the establishment of a coherent body of research remains a goal, not an accomplishment, of devotees in the field. What is needed is a building of theory and common understanding of terms and processes that permit a unification of ideas and findings to serve as a springboard for future research. This dissertation aims to provide a link between previous elaboration of constructs and their inter-relationships in the literature with future efforts to test these relationships and replicate findings.

Finally, on the basis of this analysis, certain limits to social performance are detected. In so doing, realistic expectations for firm performance in the social arena are formulated, and viable areas for improvement are identified. Explanatory efforts that limit themselves to consideration of internal individual factors exclusively explain only "part of the elephant" (Nelson, 1994: 251). Explanation is improved by incorporating market-based analysis, as is proposed by this research.

1.5 Organization of the Dissertation

This dissertation consists of seven chapters. Chapter One introduced the scope, nature and significance of the proposed research. Chapter Two follows with a review of the relevant literature, citing studies with theoretical and empirical import for the research at

hand. Constructs are defined, assumptions are identified, and theoretical frameworks are delineated. A foundation is thereby laid for presentation of the analytical framework that follows in Chapter Three. The research model being tested derives from this framework, and hypotheses are developed to represent the predicted relationships among research model variables. The fourth chapter presents the research design and methodology for testing the model and evaluating the hypotheses. Variables and their operationalizations are elaborated and statistical methods are introduced. Chapter Five presents the results of the study, with reference to the specific hypotheses being tested . A discussion and analysis of results follows in Chapter Six. Chapter Seven suggests potential contributions of this study and its findings for theory, research and practice, cites limitations of the study, and presents avenues for future research that emanate from this study.

CHAPTER 2. THEORY DEVELOPMENT AND LITERATURE REVIEW

2.1 Why Do Firms Differ? The I/O Economics Theory of the Firm

In neo-classical economic theory, firms differ because they face different market conditions and have unique attributes, e.g., a choice location or proprietary technology, that are conferred on them by virtue of those conditions. Firms' behavior would change with a change in market conditions or these attributes. This view allows for no real autonomy or discretion on the part of the firm or its management.

Neo-classical economists also are bound by a notion that choice sets are obvious to the firm and that best choices, i.e., maximizing choices, are readily apparent. Therefore, differences among firms, even organizational structural differences, are traced back to the initial environmental conditions that make the choice sets different. Ultimately, this argues for all firms, given the same conditions, conducting themselves similarly (Nelson, 1994).

The importance of industry in specifying differentiated opportunity sets from which firm-level slack is derived has been argued in the literature. Firms are said to examine their task environment, identify expectations that confront them, and fashion an appropriate response to those expectations within the limits of bounded rationality (Thompson, 1967). Mahon (1990) highlighted the social issues component of Thompson's research, particularly with reference to a doctoral dissertation Thompson supervised (Page, 1971). Page's empirical study explored organizational responses to social issues in two different industries, and found that these responses are conditioned by the operating environment in which they occur.

Further support for an industry effect abounds. Spencer and Taylor (1987) made the argument for industry effect in their study where they controlled for industry in order to determine whether relationships between social and financial performance are more consistent within industry than across industries. Other exploratory studies of a correlation between social and financial corporate performance have contributed to evidence that industry effects are significant (Cochran and Wood, 1984; Ingram, 1978). Earlier work by Holmes (1977) accounted for differences in social performance strategies attributable to industry differences. Her contention, in the wake of a study of 192 Fortune firms, was that industry patterns of involvement get institutionalized. Managers, in their desire to capitalize on industry's special skills in the social arena as well as in the economic arena, specialize their response accordingly. Mathews (1987) found that industry membership had a much greater impact on incidence of corporate crime than the existence or content of a firm's code of conduct. Arlow and Gannon (1982) found for varied social response among firms based on organizational size and the nature of the industry. Cottrill's (1991) study detected a relationship between industry membership and levels of corporate social responsibility as measured by a reputational index. This dissertation acknowledges those findings which suggest that industry has an impact on the derived ability of firms to form a strategic response, and consequently, firm financial performance data is normalized against average industry performance data in an attempt to control for this industry effect.

2.2 Why Do Firms Differ? The Resource-Based View of the Firm

An alternative view of why firms differ is steeped in the resource-based tradition. Earlier expressions of the resource-based view of the firm date back to the concept of resource constraints on firm growth articulated by Penrose (1959); the dominant coalition concept attributed to Cyert and March (1963); and, Chandler's (1962) historical analysis of the evolution of firm hierarchical structure, specifically the M-form, as a response to changes in strategic orientation of the firm. This internally focused perspective gives managers a great deal of discretion in determining organizational conduct. Child (1972) followed Chandler in arguing for managerial strategic choice.

It was with Wernerfelt (1984), however, that the resource-based view of the firm took hold. From this, further elaborations on the value of a firm's internal capabilities and unique resources in conferring a sustainable competitive advantage have generated theoretical interest (Grant, 1991; Hamel and Prahalad, 1989; Prahalad and Hamel, 1990).

As with the deterministic view, the main task of the resource-based approach as a source of competitive advantage has been described as that of maximizing rents over time (Williams, 1994). Resource-based theory is wedded to the notion that the firm, often through visionary, entrepreneurial leadership, is able to identify and obtain unique, inimitable inputs that confer upon it sustainable generation of rents (Grant, 1991). This notion alone, however, is not a *sufficient* condition for the generation of rents, since strategy literature has recognized the role that constraints, both internal and external to the firm, play on the ability of inputs to generate rents (Conner, 1991; Porter, 1980, 1985).

More recently, the resource-based view has been re-examined (Wernerfelt, 1995) with an eye to incorporating the competitive environment in resource-based analysis of strategy and strategic consequences. Barney and Zajac (1994), for example, cautioned against a singular reliance on the resource capabilities of firms in explaining strategic performance. They suggested that separating this work from the competitive context of the firm is inappropriate, and used the term "competitive organizational behavior" to describe their approach. This leads us to a discussion of the conjoint approach adopted for this research.

2.3 Integration: A Constrained Choice Perspective on the Theory of the Firm

The relative importance of choice versus structural determinism in influencing strategy formulation is a subject of continuing debate. This debate has inspired theorists to attempt an explanation of organizational strategies along either of the two dimensions: (1) a predominantly structural determinist dimension, as in the work of the population ecologists (Aldrich, 1979; Hannan and Freeman, 1977; Porter, 1980); or, (2) a strategic choice dimension that is largely defined by top management team characteristics (Bourgeois, 1980; Hambrick and Mason, 1984; Schwenk, 1984). A third possibility however, is to depict the strategy- formulation process along both dimensions, treating them as interacting variables rather than orthogonal, independent variables (Hrebeniak and Joyce, 1985). The research model presented in this dissertation embraces this third approach and seeks a reconciliation of the two prevailing views of choice and structural determinism. This notion of "constrained choice" follows the view of organizations proposed by Hambrick and

Finkelstein (1987) who suggested that managerial discretion is limited by both internal and external constraints on the firm.

Mahoney and Pandian (1992) argued convincingly that the resource-based and I/O theories of the firm are not antithetical, but rather, complementary:

> While the industrial organization literature focuses externally on the industry...and the resource-based view focuses internally on the firm and its resources, there is nonetheless a duality between the economist's constrained maximization problem of maximizing production given resource constraints and the constrained minimization problem of minimizing resource costs given a desired production level (p. 371).

This study adopts the view of Chandler (1990) and Porter (1990) who both gave environmental influence its due, without insisting on a deterministic view. Within these environments, firms "have considerable range of freedom regarding whether, or just how, they will take advantage of the opportunities the environment affords" (Nelson, 1994: 252). In fact, they can and do mold their environments in turn.

The argument posed herein is that the firm's external market environment delimits the strategic choice set available to firms. The logic of this argument follows the Structure-Conduct-Performance (S-C-P) paradigm as reflected in the Harvard school framework (Bain, 1956; Mason, 1939; Porter, 1980), with analysis at the firm level, and is in agreement with the conclusions stated in Mahoney and Pandian (1992) that the resource-based view is closer to the Harvard school framework than it is to the Chicago school (Demsetz, 1982; Kitch, 1983; Stigler, 1968). They explained that the Chicago school was less eager to accept the notion that isolating mechanisms at the firm level (Rumelt, 1984) are a source of sustainable competitive advantage. Porter, in contrast, maintained that the imperfect market context provides the parameters for firm strategic choice, and that the firm's *relative* position in that

context is determined by its ability to create a sustainable competitive advantage. In other words, given environmentally-prescribed choice sets, firms manifest a variety of behaviors that differentiate them, and this variety is explained by unique firm characteristics, or isolating mechanisms. These mechanisms are analogous to entry barriers at the firm level. Examination of these firm characteristics emphasizes the continuing importance of a resource-based view of the firm (Wernerfelt, 1984), but frames this view within the parameters of a firm's environmental context. This describes the constrained choice approach to strategy formulation. The resource-based view and the I/O view are integrated by treating firm behavior as "a function of industry analysis, organizational governance and firm...resource advantages" (Mahoney and Pandian, 1992: 374). An emphasis is placed on the relative capabilities of firms vis a vis market competitors (Grant, 1991; Porter, 1980, 1985). It is noteworthy to cite what is probably the earliest empirical study in corporate illegality which found that a firm's "position in the economic structure" was ranked as the single most important variable in accounting for the number of unfavorable court decisions against sample firms (Sutherland, 1949: 259), followed by firm size. Personal traits of the top management team were barely perceptible in their impact on the variations in court decisions. The findings of this study were replicated some thirty years later (Clinard and Yeager, 1980).

The constrained choice perspective of strategic decision-making finds support in the empirical research with respect to **commercial** strategies (Mintzberg, Raisinghani, and Theoret, 1976; Murray, 1978). The proposed research seeks to build on these findings by

examining the combined influence of industry structure and firm-level characteristics on social strategies of the firm.

2.4 Open Systems Theory

Proceeding from the discussion above, this analysis incorporates the assumption that firms are open systems. In open systems theory, interdependencies within the environment itself are said to define the "causal texture" of the environment (i.e., turbulence or randomness), which in turn has implications for organizational coping mechanisms (Emery and Trist, 1965). Open systems theory is far from new. Von Bertalanffy (1956) was the first to represent a system as open or closed to its environment, but it was only with the work of Emery and Trist that differences in the dynamics of the environment were categorized. Katz and Kahn (1978) built on this concept and developed a theoretical framework to incorporate the environment in organizational analysis. Their essential argument is that ignorance of environmental forces leads to an over-emphasis on internal organizational factors as explanatory of differentiable organizational conduct.

Open systems theory is so obvious in its logic that one wonders why any organizational analysis continues to proceed without examining the environment in which that organization lives and breathes and on which it is at least partially dependent for its very survival. Notwithstanding this rationale, literature prevails on the subject of organizational conduct without a nod to the context in which it is formulated, executed and judged. This neglect of environmental influences may be attributable to: (1) managers' bias to attribute cause to individual actions; (2) internal processes being more easily detectable than external

processes, and thus less difficult to research; (3) the fact that analysis of organizations as self-contained entities divorced from their environmental moorings permits facile solutions to the dilemmas they face, which has broad managerial appeal (Pfeffer and Salancik, 1978). [2]

2.5 The Choice Triangle: Opportunity, Ability, Predisposition

A consequence of open systems theory for management, then, is how to strategically manage the diverse and sometimes opposing demands of one's external environment. Bowman and Haire (1975: 552) informed us that "managers are confronted with a problem when deciding on how to allocate company resources optimally between various effectiveness dimensions for successfully coping with the task environment". With respect to social issues management, conflicting stakeholder interests create dilemmas for choosing a strategy of response to social issues, or even in identifying which issues should receive attention. This notion derives from the work of Thompson (1967) and Pfeffer and Salancik (1978) who emphasized that organizations make such choices in consideration of the degree of dependence by the firm on environmental components for scarce and needed resources, and the amount of mutual visibility between the firm and its stakeholders. Again, the problem is one of specifying a set of relationships that incorporates the concepts of environmental influence, relative firm capabilities, firm predisposition, public visibility and strategic choice as interconnected variables in a model of social performance.

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[2] E.g., fix productivity problems by redesigning jobs (Hackman and Oldham, 1976) without consideration of criteria such as availability of alternative work, quality of life outside the job, political power to realize economic independence, i.e., unionization, and historical context -- the same task that creates worker dissatisfaction in peacetime may be, in time of war, a source of meaningfulness for the worker, without having changed the design of the job at all.

Analysis of corporate social strategy considers firm conduct as occurring against a background of constrained choice such that:

(1) The external industry structure conditions, including economic, social, political and technological factors (Learned, Christensen, Andrews, and Guth, 1965), set parameters for the firm's **opportunity** to act in a responsible and responsive manner vis-a-vis social issues. Literature has addressed the impact of industry structure on financial performance. This analysis is now extended to include the explanation of social performance. It is pointedly argued in an earlier paper (Sethi and Sama, 1998) that perfect markets preclude the **opportunity** for firms to act voluntarily, i.e., with discretion and intention, in socially desirable ways (cf. Baumol, 1991). This thesis asserts that certain aspects of imperfect markets give elasticity to the band of opportunity for socially responsible firm behavior, i.e., level of competitive intensity in the industry, scope of regulation (extensiveness and stringency), and the stage of the industry life cycle -- all of which contribute to the determination of industry profitability levels.

(2) The firm's capabilities determine its competitive position in the industry market environment. These capabilities are a function of a firm's: (a) relative market share, an economic-based factor that is garnered by creation of a competitive advantage through either relatively low cost, or a differentiable product/service that is able to command a relatively high price; (b) relative market power, a socio-political factor referred to in the resource dependence perspective, whereby firms

possessing critical resources, or in a position to effectively negotiate with those who do, have high market power; and, © goodness of fit with environmental demands, or the contingency perspective. Capabilities translate environmental opportunities into strategic slack for the firm. Strategic slack at the firm level, defined as above-normal rents, describes the **ability** of the firm to exploit market-generated opportunities. A firm with a greater amount of strategic slack will, ceteris paribus, have greater discretion in capitalizing on opportunities. This notion of slack as a basis for permitting wider options in the allocation of funds to socially responsible activities was recently referred to as the "slack resources theory" (Waddock and Graves, 1997) and is supported by past research (McGuire, Sundgren, and Schneeweis, 1988; McGuire, Schneeweis and Branch, 1990), as well as common sense. It stands to reason that high performing firms have more resources to devote to more activities than low performing firms. The definition of slack applied in this study adds precision to a test of this "theory" in that firm-level strategic slack is defined with respect to other relevant, rival firms in the industry.

(3) Allocative discretion provided by strategic slack is conditional on other firm characteristics. The research model proposes that influences on strategic choice of a social response posture are also derived from the internal governance structure of the firm and the extent to which it is socially oriented -- that is, the **predisposition** of the firm to adopt a positive social response. Governance is the "structure within which a firm can leverage its resources" (Wernerfelt, 1995: 172), and therefore

expresses the propensity of the firm to allocate resources to the attainment of social objectives. Managerial discretion narrows in proportion to the accountability top management has to its stakeholders (O'Toole, 1985). As the number, variety and assertiveness of stakeholder groups increases -- for example, from one group of owner-stockholders to multiple groups that include government, boards of directors, employees, customers and the media -- the allocative discretion of management becomes more finely delineated. To the extent these stakeholder groups are socially oriented, any propensity on the part of management to shirk its social responsibilities is diminished. On the other hand, if these stakeholder groups are limited in number and weak in their social agenda, managerial discretion in the allocation of slack resources remains broad, and degree of attention to social issues depends on the predilections of individual managers.

(4) The combination of opportunity, ability and predisposition lead the firm to choose a social response posture which is communicated to stakeholders via published documents, press releases and the use of other market signals. These postures are defined with reliance on the corporate social responsibility and social performance literature, and stakeholder theory. A discussion of these concepts follows in a subsequent section. Resulting firm clusters by strategic social response type should evidence a pattern of responses that reflects market-based strategic slack variants and internal firm-based governance variants. That is, firms with similar resource capabilities and social orientations should cluster around similar social

strategies, just as they are predicted in the economic literature to cluster around similar commercial strategies.

(5) Perceptions of affected stakeholders with regard to how they evaluate the choice set adopted by firms result in effectiveness measures of social performance. These are typically operationalized by the rankings of firms in published reputational indexes.

A depiction of how opportunity, ability and predisposition funnel into the choice of a social response strategy by the firm that, in turn, affects assessment of firm effectiveness is pictured in Figure 1 at the end of the dissertation.

2.6 Corporate Social Responsibility (CSR) and Social Performance (CSP): Review and Discussion

Background. The study of corporate social responsibility (CSR) can probably be traced back to the work of Kapp (1950), an economist whose discourse on the externalities of business and their attendant costs to society paved the way for others to challenge the assumptions underlying the neoclassical economic model of corporate behavior. These assumptions exclude out-of hand the real market failures created by external transaction costs, uneven distribution of market power and information, and non-excludability of market transactions that invites free riders (Harris and Carman, 1983).

Bowen (1953) advanced the concept of CSR, focusing on the obligations of business toward the expectations of the very society that permits its existence and confers on it legitimacy. This work serves as a springboard for the business-society research that follows, as noted by Wartick and Cochran (1985), and has extended to embrace the concept of social contract as articulated by Donaldson (1983). Social contract provides for the pursuit of private interests only within the parameters set by societal norms, values, and expectations, i.e., "the rules of the game". Critics of this view of the firm, most notably Friedman (1970), adhere to a classical perspective of a firm's mission which is that of maximizing shareholder wealth within limits that are merely and solely prescribed by law. Modern corporations, however, are political and social institutions that respond to a diverse group of stakeholders, and long-term sustained competitiveness is generally thought to be attainable only with consideration of a wider set of objectives than mere profit maximization.

New economic theories of the firm have flourished in light of this perspective. The stakeholder theory of the firm (Clarkson, 1995; Donaldson and Preston, 1995; Freeman, 1984), for example, provides an analytic framework for assessing corporate objectives and performance in the context of a broad set of stakeholder expectations. The Schumpetarian view is emphasized in what is known as the new evolutionary theory of the firm (Nelson and Winter, 1982). In this vein, innovation in CSR is increasingly important in light of the demands being placed on firms and global competitiveness. There is an urgent need to respond to stakeholder claims in order to remain competitive.

Advantages to the Firm Proceeding from a Socially Responsible Posture. The literature has addressed some of the advantages accruing to firms engaging in socially responsible activity (Carroll, 1979; Davis, 1973). These advantages include:

1. Reputational effect, which can have profit consequences. Although the empirical literature disagrees over the strength of the relationship between reputation and financial performance, continually improved methodologies have boosted positive correlations. Cochran and Wood (1984) found only weak support for a relationship between a good reputation for social responsibility and positive financial performance, but they concluded that even given no relationship, it then should not pose concerns for investors that a firm is socially involved. Fortune reported that "financial performance, including measures like total return and earnings growth, correlates strongly with reputation" (Fisher, 1996: 91).

2. Established trust among customers, employees, and rivals offering long-term payoffs in the form of customer loyalty, employee productivity and the potential for strategic alliances with competitors. This advantage also has profit consequences.

3. Forcing a focus on future-oriented, long-term strategic thinking rather than short-term profit maximization, thus rendering firms more competitive globally.

4. Pre-empting governmental interference in managerial decision-making in the form of regulations or legislation, thus preserving increased managerial discretion.

General consensus on the importance of positive social performance, whether that performance is real or perceived, has been reflected within the business community in the form of public disclosure of social performance strategies through annual reports, and business's self-ratings in social performance as input to the annual Fortune index of "Most

Admired Firms". If the business community really believed that social disclosure would discourage investment, it would not make such an effort to relay that information to shareholders in the annual report. In fact, Cottrill (1991) concluded that firms often engage in CSR as a competitive marketing device. Disclosure also suggests that the stock market is favorably inclined toward firms that are perceived in a socially munificent light.

Measurement Issues. The problem remains of how to measure corporate social performance (CSP). CSP was modeled by Carroll (1979), and further developed by Strand (1983), as a three-tiered construct incorporating social responsibility, social responsiveness, and social issues management.

The first component of CSP, social responsibility, describes the guiding principles of society that are relevant to the firm's strategic process. Do they include economic responsibilities only within the limits of the law, or do they extend to include ethical, and voluntary responsibilities?

The component termed social issues management relates to the need for firms to identify key stakeholders, the issues they generate for firms to address, the nature of their interest in the firm's decisions, and the nature and level of power that they have relative to the firm to affect the firm's success in achieving its goals.

Because this study looks at firms representing a wide spectrum of industries, the interests of stakeholders (social issues), and even the relevant stakeholder groups will vary greatly, making comparisons in the area of social issues management difficult. This component of CSP is the least generic of the three, and it would be difficult to apply similar standards of measurement to firms across industries. The focus of this study, then, lies

more in describing the manner in which firms reach out to a *variety* of stakeholder groups and stakeholder issues.

The component referred to as social responsiveness is most relevant to the dilemma addressed by this dissertation research. Social responsiveness describes the firm's strategic posture vis a vis a broad range of stakeholder concerns, and was defined by Frederick (1978: 6) as "the capacity of a corporation to respond to social pressures". This definition of social response, the "capacity" to respond, is embodied in the research model as a factor of: (1) the firm's **ability** to respond, a market-derived construct; and, (2) the firm's **predisposition** to respond, an internally-derived construct. As Nasi, Nasi, Phillips, and Zyglidopoulos (1997: 319) explained, social responsiveness is "not synonymous with corporate social performance, but is prior to it. A corporation must be responsive to an issue before it can respond in a meaningful way."

This study focuses on the social responsiveness component of CSP, which is categorized as a strategic social posture -- how the firm articulates its social strategy and represents itself to its constituents. Institutionalized policies for implementation of the response are critical in explaining how firms' performance is perceived and judged, but is beyond the scope of this research.

The responsiveness concept has been described as reactive, defensive, accommodative, or proactive (Carroll, 1979; Wartick and Cochran, 1985; Wilson, 1974). These terms were translated into the RDAP scale described by Clarkson (1988, 1991, 1995). An element of responsiveness is the development and implementation of policies that serve to institutionalize the firm's response posture, so that responses are executed in an efficient

and timely manner. Identification of issues and patterns of response have been addressed in the work of Post (1978) Sethi (1975), and Clarkson (1988, 1991, 1995), among others.

Both Carroll (1979) and Strand (1983) included economic responsibility as an element of social responsibility, rather than dichotomizing the two concepts, a view with which this author agrees. However, for purposes of this study, no measurement of economic performance is included as an *element* of social responsiveness; rather, it is treated as a *driver* of strategic social response. The focus of this analysis is on the other aspects of social performance that fall outside the economic realm, i.e., extra-legal and ethical.

CHAPTER 3. ANALYTIC FRAMEWORK and HYPOTHESES DEVELOPMENT

Prior to an elaboration of the analytic framework that guides this research, it is useful to devote some attention to the Performance-Expectations Gap as a central theme in *defining* the social response modes in the model.[3]

3.1 Performance-Expectations Gap

A New York Times article (Blumenthal, 1977) appearing during the incipient stage of a preoccupation with corporate social responsibility captured the notion of the performance-expectations gap quite nicely. It stated that the business executive is not all of a sudden becoming immoral; rather, "there has been a change in the context in which business decisions are made, the demands that are being made on business, and the nature of what is considered proper corporate conduct". Sociologists attributed these changes to a growing concern with communalism and with the unintended consequences of business policy that extend far into the future. Where public interest and private (corporate) self-interest were once coincident, they have now diverged with an increasing awareness on the part of society that "corporate performance has made the society uglier, dirtier, trashier, more polluted, and noxious" (Bell, 1973: 270).

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[3] The Performance-Expectations Gap is used in this study solely as a means of defining the response categories that serve as the outcome variable in the research model. The intent is not to measure this gap for each sample firm; rather, this study suggests that every firm, at one time or another, faces a problem of legitimacy with its stakeholders, and it is useful to know how a firm tends to structure its response to problems of social legitimacy when they occur.

One of the first published references to what is herein referred to as the Performance-Expectations gap is found in Sethi (1977: 58). He used the concept of a "legitimacy gap" to describe the breach of public trust incurred by business actions that fail to meet societal expectations. Legitimacy of the corporation is a perceptual concept and refers to the acceptability of the firm's conduct from society's point of view (Dowling and Pfeffer, 1975; Stillman, 1974). Sethi further described strategies for narrowing the legitimacy gap, which roughly approximate the categorization scheme of social responses used in this study. A year after Sethi's definition of the legitimacy gap appeared, the Commission on Auditors' Responsibilities, also known as the Cohen Commission, issued a report which referred to societal demands on business for an appropriate level of socially responsible conduct and the widening gap between these demands and corporate social performance (Cressey and Moore, 1983). An illustration of this gap appears as Figure 2. The vigilant manager, to best manage this gap, is constantly monitoring the environments of business -- social, economic, political and technological -- to identify changes in expectations that may impact on public perception of firm performance. In a response to a widening gap, managers seek to narrow it through one of four postures: (1) actively defending their performance (trying to lower stakeholders' expectations or upgrade their perceptions of company performance), (2) actively engaging in a dialogue with stakeholders to initiate changes that would improve corporate performance, often in anticipation of a change in stakeholders' expectations, (3) adjusting performance to meet expectations once mandated, in a reactive fashion, or (4) resisting any change at all, which allows the gap to keep widening until either the

stakeholders or the company withdraws from the arena. These strategic responses are captured in Figure 3 in the corresponding section of this dissertation.

An error in managing the gap can be decisive for firm success. Many firms will use a combination of responses, but the constraints on the firm, both externally- and internally-derived as described in this study, serve to proscribe certain responses from being utilized and recommend others. Firms are expected to articulate a patterned response to social issues in accordance with their opportunity, ability and predisposition to direct resources to social ends. It is also expected that public visibility of the firm will moderate this linkage.

3.2 Specifying a Research Model

Model Justification. How can corporate social involvement be justified from the point of view of participants in a capitalist economy, particularly in the face of criticism that such thinking is "fundamentally subversive" (Friedman, 1962: 133)? Simply this: Yes, good conduct entails a cost -- it must, since application of socially responsible practices further constrains choice, and with increased environmental uncertainty, the cost of making the morally correct decision probably increases in kind. Does this argue against being socially responsible? No, because the alternative may be even costlier in the long run. Firms that ignore these constraints are not likely to sustain their competitive advantage for very long. For firms that operate under conditions whereby the long-term is heavily depreciated (e.g., firms facing near extinction due to bankruptcy, or adopt a hit-and-run approach to the market), social responsibility may simply not pay. Firms in this category are merely placeholders in a market of easy entry and exit where there is a total absence of reputation

effects, no opportunity to build a competitive advantage, and profits that are either extremely thin or highly unsustainable. Many of these characteristics are descriptive of firms in (nearly) perfect markets. This is why it has been argued that perfect competition is a breeding ground for unethical behavior (Baumol, 1991; Sethi and Sama, 1998).

However, for a majority of firms, social responsibility has long-term consequences that recommend it. This is the enlightened self-interest argument. Moreover, some would argue that the business firm is an integral part of society -- in fact, it is a powerful and influential member of society. As such, corporations have a mandate to subscribe to the norms and values of that society and should, in fact, lead the way in setting high standards as role models for followers in their industries. This view is best expressed in the social contract argument, first articulated in the commercial context by Bowen (1953), and steeped in the moral philosophy of Locke, Rousseau and Hobbes. Social contract refers to agreements made -- either explicitly or implicitly -- between business and the society in which it operates and on which it relies for needed resources and conferred status and legitimacy (Donaldson, 1989). Ultimately, social responsibility is good for society, and it is sometimes good for business. But business has to be **willing to act in a socially positive manner** even in the absence of a quantifiable pay-off, if the benefits to society are to be realized -- an argument partly lodged in the moral agency literature (May, 1988). As Schwab argued (1996: 500), "good and rich are not synonymous, and the just may well have to suffer".

The question then arises, can every firm be expected to conduct itself at the same level? The answer is "no". In light of the contention that social responsiveness is not cost-

free, firms have specific **abilities** with which to respond to social issues, and the context of the firm goes a long way to further defining the type of social issues the firm is likely to address. In addition, firms' predisposition to engage in a social response varies from organization to organization. Trade-offs between alternatives made available to the firm by way of its ability to exploit environmental opportunities are made by managers whose decisions are influenced by their own social orientation, as well as that of other corporate governing bodies. "Trading off" is an essential element to the concept of choice. There is not always a clearly better solution. Increasing complexities of business render properties of choice ambiguous. If it were not so, there would be no talk of ethical dilemmas.

Analytic Framework: Structure-Conduct-Performance Paradigm. The logic of this model follows the Structure-Conduct-Performance (S-C-P) paradigm as first developed by Mason (1939) and Bain (1956). This study has a correlational design, however, so it does not allow inferences regarding cause. The general model suggests that (Biggadike, 1981):

> Environment + Firm Capabilities + Current Competitive Position ===> Strategic Choice ===> Performance.

The strategic choice of interest is that of a firm's social response posture. This analysis proceeds at the corporate level, since it is at that level that strategic choices are made. The analytic framework representing the S-C-P view of corporate social response choices from which the research model derives is depicted in Figure 4.

This framework presents a view of corporate social responsiveness against the backdrop of industry structure conditions. The structure of the industry contributes to both profitability levels and market capitalization rates in the industry. Relevant factors include, but are not limited to: 1. Intensity of Competition, 2. 2. Regulatory Scope, and, 3. Stage in Industry Life Cycle. As such, one might expect to see different types of responses between firms from different industries due to industry-level variations. For example, a highly regulated industry (e.g., utilities) may opt to respond to social concerns via philanthropic donations. This might be due to the fact that excess profits are a deterrent in securing a rate increase from regulatory officials, so company executives are induced to absorb profits by attending to charitable causes (Levy and Shatto, 1980; Williamson, 1964). Future research might be directed in analyzing the specific type and target of social responses implemented by the firm, and determine whether similarities obtain within industries.

This framework also posits that environmental turbulence acts as a moderator variable between industry structure characteristics and slack opportunities, such that highly turbulent environments (great uncertainty and dynamism) will lessen the benefits delivered to firms in the form of profitability and market capitalization rates.

The larger analytic framework also includes social performance outcome variables, which provide direction for future research. These variables are measures of the effectiveness of the strategic social posture assumed by the firm. They are typically assessed through reputational rating indexes, such as Fortune's Most Admired Index (business rating business), KLD index (external stakeholder rating), and Most Desirable Companies to Work For (Moskowitz index - ratings by employees). Given the critiques lodged against these

indices as true measures of corporate social performance, particularly the Fortune index (Baucus, 1995; Wood, 1995), it would be useful to triangulate these measures of social performance with measures obtained by surveying other stakeholder groups. Although reputational indices certainly have their flaws and limitations, they are useful, when combined with other measures of the same phenomenon, in detecting a firm's *reputation* for corporate social performance as perceived by a very influential stakeholder group (Brown and Perry, 1995).

Research Model. Proceeding from this analytic framework, the research agenda for this dissertation takes form, which is best described as an inquiry into the constraining and enabling effects on the social responsiveness of firms. The research model appears as Figure 5. This model is the nucleus of the larger analytic framework. That is to say, if the social response behaviors do not actually occur in the context of the arguments presented, then much of the preceding model would require modification. It is for this reason that social response strategies were chosen as the central topic of this dissertation. The elements of the analytic framework being tested for this study focus on the firm's ability and predisposition to choose a specific response. The degree of slack at the firm level derives from market-generated opportunities and depends on the relative position of the firm in that market. Therefore the strategic slack of the firm subsumes an industry effect. Main effects of industry characteristics on strategic choice are beyond the scope of this study. Specifically, relationships among the following variables are examined:

Firm-Level Strategic Slack: an external market-based variable measured as above normal rents (operationalizations of variables are described fully in a subsequent section). Slack is the link that translates market-generated opportunities into firm ability, and is created as a function of the firm's relative market share, relative market power and goodness of fit with environmental contingencies.

Corporate Governance Social Orientation: an internal institutional variable measuring the degree of social orientation in corporate strategy formulation present in the firm's two primary oversight mechanisms: (1) Board of Directors, and (2) Shareholders. Corporate governance allows us to treat the choice of a social response strategy as a strategic management *process*, and not simply as an isolated strategic decision made at one point in time. This process is ongoing and institutional. The importance of oversight is clearly made in the recent Texaco debacle, where discrimination was alleged despite written anti-discrimination policies that were already in place. There were simply no control procedures lodged in the governing mechanisms of the firm to insure that policies were being effectively carried out.

While the orientation of the governance structure toward social response is treated here as an internal variable, it should be noted that there may be a correlation between a firm's industry structure and corporate governance structure. This implies an intercorrelation between market-derived slack and governance variables in the model. The anticipated correlation is due in part to an industry bandwagon effect. In industry environments where rivals in a growth market are competing vigorously for share, the dominant practice is copied by most firms in the industry, i.e., it is institutionalized. Institutional theory tells us

that the accepted behavior in an industry establishes the "rules of the game" for all players -- strategic choices are made within the parameters set by these rules, and are therefore institutionally safe (DiMaggio and Powell, 1988; Meyer and Rowan, 1977). The market rewards you for playing by the rules, and protects you from being punished for mistakes. This concept takes the notion of "dominant logic" (Prahalad and Bettis, 1986), or "dominant paradigm" in the words of historian and scientist Kuhn (1970), to the industry level[4].

Social Response Strategies: a categorization scheme of four strategic social postures derived in part from the RDAP scale (Carroll, 1979; Clarkson, 1988, 1991, 1995).

In applying the RDAP postures that appear in the literature, I had some disagreement with the definitions that have been associated with them. They do not seem to coincide with the theoretical underpinnings that sustain them, nor with practice against which they are used as measures. The definitions and terminology have been modified accordingly, although it is not likely that in doing so, there is any substantial risk of derailing the synthesis of literature in the field, as long as the definitions match up with theoretical arguments and actual practice. In fact, these definitions are more in line with a typology of response offered back in 1975, by Davis and Blomstrom, i.e., withdrawal, public relations

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[4] The implications of institutional theory are very interesting for this study in particular, and for the Social Issues in Management (SIM) field in general. The research model suggests that firms make strategy under conditions of bounded rationality, and do not always choose the most economically efficient option; rather, some firms "survive through legitimacy -- by acting in socially expected ways. Firms may adopt a practice because other neighboring firms have done so, and because academics have rationalized them" (Rumelt, Schendel and Teece, 1994). This quote further suggests that we in academe can and do influence firm conduct, and argues for our continued research in the field of social performance and ethics.

approach, legal approach, bargaining, and problem solving. The definitions of the response categories for purposes of this research follow:

Reactive has been renamed "Resistant" to avoid confusing this posture with one of accommodation. **Resistant** is a posture of social inaction that poses a tension between the firm's social performance and the expectations of stakeholders. It is similar to Davis and Blomstrom's withdrawal approach. **Accommodation**, by contrast, is a reactive stance. It describes a relatively passive response to social issues where the firm is doing all that is required, but after the fact. That is, the firm does react to mandated change, but does not initiate change. This is associated with Davis and Blomstrom's legal approach. The "**Defensive**" posture adopts the same name as the one in the original RDAP scale, but is defined differently as one that seeks to defend, or justify the company's stand and allocates its resources to that defense. In other words, it does not avoid social responsibility, but its activity in narrowing the Performance-Expectations gap is to lower expectations of stakeholders, or improve their perceptions of the firm's social performance, through influence and education (Sethi, 1977). This may well assume a very high attention to social issues, and a substantial allocation of resources to the management of them, though not necessarily in the direction stakeholders would expect or desire. This is analogous to Davis and Blomstrom's public relations approach. Effectiveness of this strategy depends on the ability of the firm to persuade stakeholders, be they government or private citizens, to change their expectations in the direction of corporate policy (e.g., tobacco companies taking out advocacy ads to fight the regulation of their industry, appealing to stakeholders' concern with freedom of speech and choice). In fact, defensive strategies may well be

proactive. For this reason, proactive is renamed as well, and termed "**Progressive**" in the research model. It still defines a posture that anticipates social issues and acts to meet or exceed changing expectations prior to them becoming issues of public policy; however, it is reserved for firms demonstrating a willingness to change their performance in the direction of stakeholder claims. These firms may improve their social legitimacy with stakeholders by correcting performance before the fact or by partnering with stakeholders to arrive at mutually beneficial solutions. Stakeholders are expected to view the progressive response as one that is more sensitive to their concerns than they would a defensive response. This response combines Davis and Blomstrom's bargaining and problem-solving categories.

Response categories are carved out by the intersection of two broadly specified bi-polar dimensions relating to perceptions of the: (1) "ACTIVITY" of firms in managing their response to social issues, with anchors being proactive on one end of the dimension and passive on the other; and, (2) "PREDISPOSITION" of firms to appear sensitive in their response to social issues, with highly sensitive firms on one end of the dimension, and highly insensitive firms on the other end. Evaluation of firms' relative positions along these dimensions is captured through a survey instrument administered to industry analysts. Response modes are summarized in the table appearing below:

MODIFIED RDAP SCALE

RESPONSE MODE	DESCRIPTION OF RESPONSE	DIMENSIONS: ACTIVITY	DIMENSIONS: PREDIS-POSITION
Resistant	Shows indifference to the concerns of society, either flagrantly through violation of laws and norms; or, passively, through social inaction.	Passive	Insensitive
Defensive	Defends/contests claims against the company's position. Activity focuses on lowering stakeholder expectations via influence and education.	Proactive	Insensitive
Accommodative	Moves the company's performance up a notch to adapt to changing conditions in the environment, but does so only after changes are made apparent(laws, regulations, industry norms).	Passive	Sensitive
Progressive	Anticipates social issues and contracts with stakeholders to improve perceptions of the firm; and/or, meets changing expectations prior to them becoming issues of public policy. Seeks to have an impact on the environment.	Proactive	Sensitive

Public Visibility: a measure of public awareness of the corporation as reflected in media reports. Greater visibility is expected to induce firms toward more actively addressing social issues, even given a relatively weak slack position. Often, the threat of

stakeholder backlash will impel firms that were previously resistant or merely accommodative to more proactively defend or advance their social posture.

3.3 Hypotheses Development

This model and the preceding discussion suggest the following hypotheses for testing:

Independent Effects. The firm's ability to act on market-generated opportunities resides in its relative market position vis a vis competitors. This ability is termed "strategic slack" in the model and refers to above-normal rents at the firm's disposal, granting firm management increased discretion in its allocation of resources. Cyert and March (1963) and Thompson (1967) treated slack as both an organizational buffer against environmental adversity, and as an organizational enhancement that permits the firm to take advantage of environmentally-generated opportunities ("organizational slack"). Similarly, strategic slack (extra rents) may be allocated toward defending the firm against onslaughts by external and internal stakeholders; progressing the firm toward some desired future state, the vision of which may or may not be shared by external and internal stakeholders; or invested in ventures that promise a short-run payoff. Given the current climate of heightened social concerns among a diversified set of firm stakeholders, it is not unlikely that corporate management may be inclined to allocate strategic slack toward efforts to narrow the performance-expectations gap facing the firm. Certainly, the absence of strategic slack would operate so as to preclude a sustained effort on the part of the firm to narrow that gap. This suggests the following relationships:

H.1 *Firms' relative strategic slack will be positively related to their social response activity level such that:*

H.1a *The measure of firms' standardized ROE will be positively related to social response activity score.*

H.1b *The measure of firms' standardized ROC will be positively related to social response activity score.*

H.1c *The measure of firms' standardized ROS will be positively related to social response activity score.*

H.2 *Measures of firms' relative strategic slack will be more strongly related to social response activity level than will measures of the social orientation of the governance mechanisms.*

H.3 *Firms with high levels of relative strategic slack will be more likely to adopt a proactive social response strategy than firms with low levels of slack.*

Slack, however, must be consistently available in order for firms to feel free to disburse it. Inconsistency in slack levels may lead to hoarding behavior on the part of firms. It is therefore predicted that:

H.4 *Volatility in generation of firms' strategic slack will be negatively related to social response activity level such that:*

H.4a *The measure of firms' variance in ROE will be negatively related to social response activity score.*

H.4b *The measure of firms' variance in ROC will be negatively related to social response activity score.*

H.4c *The measure of firms' variance in ROS will be negatively related to social response activity score.*

H.5 *Measures of firms' volatility in the generation of strategic slack will be more strongly related to social response activity level than they will to predisposition of response level.*

H.6 Firms with low rates of volatility in generation of strategic slack will be more likely to adopt a proactive social response strategy than firms with high rates of volatility.

"Corporate social responsibility and corporate governance are frequently juxtaposed and go hand in hand" (Kohls, 1985: 165). Oversight of firm conduct provided by corporate governance mechanisms will act to direct managerial slack toward social ends only to the extent that these governing agents exhibit a social orientation. Social orientation is defined as a willingness to allot a share of firm resources to the achievement of social objectives. Therefore, social orientation of the governance mechanism is associated with a predisposition for a socially responsive strategy as follows:

H.7 Firms' social orientation of the governance mechanisms will be positively related to their social response predisposition level such that:

H.7a The measures of a socially oriented Board of Directors will be positively related to social response predisposition score, with % Women on the Board, % Outsiders on the Board, % Non-Business Outsiders on the Board, and % Years SRC on Board being positive indicators of a socially oriented Board; and, Concentrated Authority and Board Size being negative indicators of a socially oriented Board.

H.7b The measures of socially oriented Stockholders will be positively related to social response predisposition score, with % Institutional Ownership and % Social Institutional Ownership being positive indicators of socially oriented Stockholders; and, % Insider Ownership being a negative indicator of socially oriented Stockholders.

H. 8 Measures of a social orientation of the governance mechanisms will be more strongly related to social response predisposition level than will measures of relative strategic slack.

H.9 Firms with a strong social orientation in their governance mechanisms will be more likely to adopt a sensitive social response strategy than will firms with a weak social orientation in their governance mechanisms.

Model Effects. Once relationships are established between slack and activity, and governance and predisposition, it is the job of this research to test the overall model. Ideally, a synergistic effect will be discovered whereby each category of strategic social response can be associated with a predicted set of twin conditions in the discriminator (independent) variables. This is somewhat analogous to examining interaction effects in MANOVA. Model effects are captured in the following four hypotheses.

H.10 Firms categorized as "Progressive" will be characterized by relatively high strategic slack and low slack volatility combined with a relatively strong social orientation of their governance structures.

H.11 Firms categorized as "Defensive" will be characterized by relatively high strategic slack and low slack volatility combined with a relatively weak social orientation of their governance structures.

H.12 Firms categorized as "Accommodative" will be characterized by relatively low strategic slack and high slack volatility combined with a relatively strong social orientation of their governance structures.

H.13 Firms categorized as "Resistant" will be characterized by relatively low strategic slack and high slack volatility combined with a relatively weak social orientation of their governance structures.

"Moderator" Effect. The public visibility construct has been demonstrated to have a link with the social performance of firms such that highly visible firms have been found to have a greater concern for society in at least one study (Aupperle, 1984); and, visibility

was significantly related to a firm's reputational index ranking in another (Fombrun and Shanley, 1990). Generally, the claim made here is that a company with high public visibility, whether the nature of that exposure be favorable or unfavorable to the firm, cannot afford to remain passive. Public scrutiny will demand that firms actively respond to public concerns. Firms with high visibility, then, are expected to have proactive strategies of social response at a greater rate than low visibility firms, even given that independent variables related to strategic slack would not predict them to do so. It is also likely that high visibility firms will be characterized by a stronger social orientation in their governance mechanisms. This could be attributable to: (1) the vigilance with which a more socially oriented governance structure provides oversight, thus exposing firm actions (both positive and negative) to the attention of the public; or, alternatively and after the fact, to (2) efforts on the part of the firm to correct, effectively or cosmetically, a weak social orientation in governance as a response to higher public scrutiny. The term "moderator" is placed in quotes to reflect the inability of the proposed analytic technique (discriminant analysis) to take moderators into account. However, there is a procedure of stratification that acts similarly to moderator analysis in regression, and is described further in a subsequent section (4.5). Therefore, given previous findings, the following hypotheses are offered:

H.14 High public visibility firms will be more likely to adopt a proactive social strategic response than will low public visibility firms.

H.15 The predicted relationships between firm-level social orientation of the governance mechanisms and adoption of social response strategies are moderated by public visibility such that:

H.15a High public visibility weakens predicted relationships of governance variables with insensitive responses (resistant and defensive).

H.15b High public visibility strengthens predicted relationships of governance variables with sensitive responses (accommodative and proactive).

Although it is conceded that public visibility is partially a function of size, all of the sample firms are relatively large, effectively serving as a control for size. It follows that the variation in public visibility among firms in the sample should be a truer reflection of just how discernible a single firm's actions are to stakeholders relative to other firms in the sample than it would be given a sample of large and small firms. It is also likely that public visibility will reflect an industry effect. For example, firms in industries that deal directly with end-users may be more visible than firms in industries whose exchange relationships occur further up the distribution channel.

Summary of Predicted Relationships: The relationships predicted by the preceding hypotheses are summarized in the Figure 6.

CHAPTER 4. RESEARCH DESIGN AND METHODOLOGY

4.1 Research Design and Sources of Data

Choice of research design for this study was dictated by the research questions posed and by the availability of data. The design of this research is described as non-experimental and cross-sectional. Although the theoretical discussion suggests that modeled relationships are not intrinsically static, the nature of the relationships tested in this study are, nonetheless, correlational rather than causal. The objective of this research is to describe and explain the phenomena of interest. Prediction is precluded by use of the non-experimental approach. However, use of discriminant analysis does allow for a test of the predictive robustness of the derived discriminant function(s), permitting cautious inferences of causality.

Independent variable data were collected from existing data bases (secondary data) including published annual reports, company proxy statements, Value Line, Compact Disclosure and Edgar On-Line databases, and Wall Street Journal Yearly Indices. A measure of social response posture, the dependent variable, was more of a challenge. As researchers have pointed out (Abbott and Monsen, 1979; Carroll and Beiler, 1975; Kohls, 1985), measurement in the SIM research field is problematic and will probably always be so because: (1) the concepts are not amenable to quantification; (2) lack of a common metric or uniform standards make comparison difficult, e.g., how does one compare social performance of firms representing different industries, with different stakeholders, operating

in different economic and socio-political environments?; and, (3) data are unavailable and/or expensive to collect.

A measure of social responsiveness for this research was based on the responses to a survey instrument developed specifically for this project and administered to industry analysts from four major investment houses in New York City (2-4 analysts per industry). This method is chosen for several reasons.

First, the bulk of studies in the area of corporate social responsibility have relied on: (1) reputational indices, (2) content analysis, or, (3) surveys of CEOs. Each of these approaches have major drawbacks, as researchers employing them have acknowledged.

Reputational indices, most notably the *Fortune* reputation data, have been criticized as inappropriate surrogates for social responsibility, given the suspiciously high correlation between items in the survey dealing with external or community orientation and measures of financial performance (Conine and Madden, 1986; Fryxell and Wang, 1994; Preston and Sapienza, 1990; Sobol and Farrelly, 1988; Wood, 1995). Therefore, while the index may be a fair measure of financial vigor, it falls short when taken as a broader measure of ethical or social orientation (Fryxell and Wang, 1994). Although efforts have been made to remove this halo bias from the index (Brown and Perry, 1994b), it remains a dubious representation of the corporate social responsibility domain (Baucus, 1995; Wood, 1995). Moreover, as Brown and Perry (1995) themselves cautioned us, the halo-removed data cannot be used to check a relationship between aspects of corporate social performance and measures of financial performance, as is the case here.

Content analysis has been widely used in the corporate social performance field (Abbott and Monsen, 1979; Beresford, 1973, 1975, 1976; Bowman, 1978; Bowman and Haire, 1975; Fiol, 1995; Fry and Hock, 1976; Ingram and Frazier, 1983; Preston, 1978). Its main advantages are that it allows for inclusion of a large sample of firms, uses publicly available data -- thus allowing for replication -- which is not costly to obtain. Conversely, documents typically analyzed in this context, e.g., annual reports and President's letters, are more often than not impression management devices with "more public relations value than informational value" (McGuire, Sundgren, and Schneeweis, 1988: 859). Moreover, one runs the risk of wrongly assuming that stated intent is equivalent to action, or even perception, and consequently arriving at inappropriate conclusions. Finally, this method is plagued with problems of validity.

Survey data have been criticized as being too subjective. However, the research domain under investigation has been described as one of subjectivity. As Waddock and Mahon (1991: 233) explicitly stated, "CSP is predominantly an *assessment or evaluation* of corporate behaviors made from an *external perspective*". The survey method of obtaining information is effective to the extent respondents are expert at accurately and assessing corporate behavior (Abbott and Monsen, 1979; Aulakh and Kotabe, 1997). The problem is that those who are expert often lack objectivity. Surveying CEOs about their own companies is illustrative of this conflict of interest. Firm insiders are not impartial enough to provide reliable data (Sonnenfeld, 1982; Waddock and Mahon, 1991). In addition, the non-response bias introduced by surveying corporate executives has been widely criticized as a confound to validity. It stands to reason that those CEOs with social interest will be

more likely to respond to queries about social responsibility. In fact, research has operationalized a firm's concern with social issues as its willingness to respond to a social responsibility survey (Parket and Eilbirt, 1975). Further problems associated with surveying CEOs derive from a concern with their universal ability to accurately gauge their external environments and their own companies' social performance vis a vis competitors. For this reason, the strategy opted for here was to survey industry analysts, who are recognized for their expertise in developing and objectively evaluating industry information (Brown and Rozeff, 1983; Mehra, 1996). While it is true that *Fortune's* reputational index also includes industry analysts as part of their respondent group, that particular survey does not isolate social responsiveness issues, contributing thereby to a halo effect attached to a firm's financial performance, as explained earlier. The context and goals of the survey developed for this research are clearly different from those of the *Fortune* survey, which will, hopefully, contribute to a clearer analysis of the social responsiveness construct.

The second reason a survey of industry analysts approach was chosen is that this study relies on intra-industry comparisons of firm behavior. Industry analysts are more likely than CEOs, and other insiders, to have a clear picture of the firm against the backdrop of general industry conditions and other industry members' performance.

Thirdly, industry analysts track a number of firms intensely, allowing them a unique and profound insight into firm behavior. It is their mandate to advise public investment firms and other institutional investors regarding the soundness of investment decisions. Their knowledge of firm performance includes perforce social performance, since social responsibility has become an increasingly critical consideration in investment decisions

(McGuire, Sundgren, and Schneeweis, 1988). Analysts' focus on 10-20 companies also responds to the concern over sample size when surveying observers to rate firms, as raised by Abbott and Monsen (1979) and Cochran and Wood (1984) -- to wit, the evaluation of a large sample of firms by a single respondent requires a lengthy questionnaire and probably results in a minimal response rate. The approach used in this research circumvents this problem since each respondent is required to assess merely 10-20 firms on which he or she is well-informed.

Finally, the relevance of industry analysts' judgments to the practicing manager is apparent. Arguably, it may be asserted that no other dominant coalition (Cyert and March, 1963) of stakeholders is more critical to the publicly-traded firm in terms of its influence on such long-term firm outcomes as reputation, status and capital market performance, than are industry analysts. Waddock and Mahon (1991) made the argument that each stakeholder group has its own bias that influences its judgments about firms. While it is true that surveying a select group of stakeholders immediately introduces that bias into the analysis, I submit that industry analysts' bias is in the direction of market performance, and not with any particular social issue. For example, Sonnenfeld (1982), in his study of the forest products industry, found that industry analysts were more favorably inclined toward the industry than activist stakeholders, academics and government regulators; however, they also had broader, multi-issue interaction with sample firms than the other single-issue groups. Therefore, while there may be bias in industry analysts' perceptions, this bias can be tested for in by including control questions in the survey instrument. For other stakeholder groups, the bias may not be as evident, uniform, or detectable.

4.2 Sample

This research was initiated with a judgmental sample, by industry, of 244 publicly traded U.S. firms that met the following criteria for size:

Inclusion in the Fortune 1000

OR a market capitalization of >$1 billion

Controlling for size is critical due to the positive relationship of firm size with sensitivity to social issues, as demonstrated by Abbott and Monsen (1979). It is necessary to include firms that have high market capitalizations in order to represent growth firms in the sample. Firms were culled primarily from the Fortune 1000, which took care of most size considerations automatically. Additional sample firms that are "up and comers" in their respective industries were identified by the surveyed industry analysts. The sampling plan sought to represent a variety of industries as defined by the Fortune 1000 (Fortune industrials and service corporations) and Value Line. Fifteen industries targeted for inclusion were: Aerospace & Defense, Chemicals, Banking, Computers & Peripherals, Computer Software and Data Services, Electric Utilities (East), Semi-Conductor, Food Processing, Paper & Forest Products, Medical Services, Integrated Petroleum, Drug, Newspaper Publishing, Telecommunications (Service and Equipment), and Environment. Industry names and firm membership within industries ultimately derived from Value Line Database to correspond with the use of Value Line financial performance data in the measurement of strategic slack. Industries were selected to provide approximately equal representation from manufacturing or processing industries and services/high-tech industries. They have also been chosen with

an eye to variable industry structure characteristics, so that enough variance would be produced among firms in terms of their response categories. For example, it was desirable to include industries that are both highly regulated, e.g., Electric Utilities and Drugs, and relatively unregulated, e.g., Computer Software and Data Services; both mature, e.g., Banking and Food Processing, and young/growth, e.g., Semi-Conductor; and, both highly concentrated, e.g., Environment, and highly fragmented, e.g., Chemicals. The total number of firms in the sample was determined by considerations of power and effect size, and expectations of attrition rates. The number of firms per industry depended on the tracking ability of industry analysts.

A list of targeted firms for this study is included as Appendix A. This list of 244 firms was compiled to accommodate inevitable problems of data collection that were expected to reduce the sample size and pose a threat to power. Ideally, it was expected that the final sample would not fall below 86 firms, which would represent an attrition rate from the target sample of approximately 65% -- a very conservative expectation. The "86" number represents a sample size sufficient to detect a medium effect (Cohen, 1977) at a .05 level, given the proposed method of data analysis. This was arrived at as follows: To be within .05 of the optimum error rate, discriminant analysis requires about 2.7k observations if the distance between groups is moderate (equivalent to detecting a medium effect), with k = number of predictor (discriminator) variables (Lachenbruch, 1975). In this analysis, "k" actually is equal to the number of measures used to operationalize the variables. Proposed are an initial set of three (3) strategic slack-related measures, three (3) measures of slack variability, nine (9) governance social orientation measures, and one (1) measure of public

visibility, for a total initial set of 16 measures. At the .05 error rate, this would translate to a needed sample of about 43 firms, given medium between-group differences. Lachenbruch's recommendation pertained, however, to a two-group problem. A four group analysis would require twice as many firms, or 86 in our case. Similarly, Lachenbruch suggested that each group in the multiple discriminant analysis should ideally contain no fewer than 20-25 members. Therefore, in a four group problem such as that posed in this research, a minimum sample of between 80-100 firms was sought. These numbers are very conservative estimates given an expectation of a reduction in the number of discriminator variables in the final analysis from the proposed number of 16 in the initial phases of the analysis. A final sample exceeding 86 firms was anticipated, which would provide enough degrees of freedom to permit designation of a subset of the sample as a holdout sample. The discussion of Discriminant Analysis in a subsequent section explains the value of using a holdout sample.

The final sample for this study included 140 firms from 11 industries. These firms and industries are indicated by **bold** lettering in the Appendix A. An explanation of response rates and sample attrition is included in a subsequent section "4.4 Measures" when I describe the collection of data to measure social response strategies.

4.3 Time Periods

Previous studies in the field have obtained financial performance data over relatively short time periods, which does not allow for adequate smoothing of the data. Accounting measures of financial performance, for example, often contain irregularities in any one year

that could distort results if averaged merely over a period of two to three years (Cochran and Wood, 1984). The time period for this study is a span of five years from 1992-1996 for collection of the financial discriminator data. Five years is chosen because "...empirical research about response behaviors shows that there is a significant lag (as much as 5 years) before a strategic response is initiated" (Smith and Wilson, 1995: 145). Data was averaged over the period for each firm, and standardized relative to the industry in which each firm is a member.

Governance data was collected at one point in time, at the end of the period 1996. The reason for this is that board of director and ownership composition, which comprise the measures of governance social orientation, are not as subject to misleading deviations as are financial performance data; and, I was interested in the most current governance data available. In order to test this assumption of minimal variation in governance structures over the five-year period, 20 of the sample firms were selected at random, and data were collected for the governance measures in the study for 3 distinct years: 1992, 1994 and 1996. Averages were calculated and compared with the 1996 data proposed as measure for the analysis. Differences were highly insignificant, lending credibility to our assumption that variation over time was minimal. The only measure that demonstrated a somewhat significant change for the 20-company trial sample over the five-year period was "% of women on the Board of Directors" ($p<.15$), which showed a marked upward trend. However, this particular trend is one that will probably persist, and is not a matter of transient fluctuation requiring smoothing.

Industry analysts' responses, collected in real time, reflect their perceptions of firms' prevailing social responsiveness postures. Use of a multiyear time frame for selected secondary data and a one-time collection of primary data has its precedent in James and Hatten (1995) who also used a discriminant analysis procedure for data analysis .

A problem arises with firms that have newly appeared during the five-year period preceding this analysis, either as newcomers to the industry or as formerly private firms that have gone public; and, with those firms that have changed composition through merger or divestiture either during the five-year span (e.g., Chase/Chemical) or since the end of the five-year span (e.g., Bell Atlantic/NYNEX). For firms that newly appear during the five-year span, the data was averaged over the available number of years. Firms with less than two full years of data were dropped from the sample. For merged firms, Value Line has restated the financial data for the two previously separate firms, thus permitting treatment of the newly merged entity as the firm of interest. Nonetheless, newly merged entities (e.g., Bell Atlantic/NYNEX) may not yet reflect a unified corporate culture or policy on social issues on which industry analysts can accurately estimate a posture, and will tend to reflect analysts' perceptions of the dominant firm's strategic social response. Mergers that have a three year life or more may have enough of an identity to warrant more accurate estimates on the part of respondents.

4.4 Variables and Measures

This study develops 16 measures of the four discriminator variables used in the study, i.e., strategic slack, slack variability, social orientation of the governance structure,

and public visibility; and, it defines four social response strategies (categorical outcome variables) based on survey responses. These measures are elaborated below.

Strategic Slack: The operationalization of strategic slack as financially-derived measures has precedence in the strategy literature (Bourgeois, 1981; Bourgeois and Singh, 1983; Bromiley, 1991; Singh, 1986; Waddock and Graves, 1997). Theoretically, the link between excess profits and managerial discretion in the allocation of funds, i.e., strategic slack, can be traced to Williamson's (1964) notion of "expense preferences".

Expense preferences refers to the belief that managers do not have a neutral attitude toward all classes of expenses. Rather, some expenses have positive values attached to them and are incurred not only for their contributions to profits, but also for the manner in which they reinforce managerial objectives. This departs from conventional economic theory, which treats all expenses symmetrically. The focus of Williamson's (1964) theory is on self-interested managerial objectives that may depart from owner objectives, or the principal-agent problem. The concern of this research lies in determining to what extent management may view expenses related to social responsibility goals as having positive value, and how this might create opportunities for management to direct excess (slack) resources to unrelated expenses which may include social performance objectives -- the principal-agent-society problem.

The three classes of expenses for which management is said to have a preference, according to Williamson (1964) are (1) staff, i.e., general administrative and selling expenses, (2) emoluments, and (3) discretionary profit. Staff enlargement enhances personal security and careerist objectives of management. Emoluments refer to the portion of

management salaries and perquisites that is discretionary, such as bonuses, company cars and trade association memberships, to name a few. They are economic rents and are unrelated to productivities. Rather, they are a source of material satisfaction, status and prestige. The more invisible they are (i.e., not part of managers direct salaries), the less likely they are to provoke discontent among owners (stockholders) or labor. Discretionary profit, which is the class of expenses most relevant for this research, is that amount by which earnings exceed a minimum performance constraint. If one thinks of zero profits as the lower bound of firm viability, and maximum profits as the upper bound, then management seeks to operate within a discretionary band of *acceptable* profits such that stockholders remain satisfied. This band narrows under conditions that approximate perfect competition, which supports the view that perfect markets are less inclined to allocate resources toward social ends. Determination of that acceptable level involves the relative performance of rivals, the historical performance of the firm, and special current environmental conditions affecting the firm.

Given this model, Williamson suggests that the firm seeks to maximize its utility of expense preferences, but does so subject to minimum acceptable profit constraints; and, that managerial discretion in the allocation of excess resources increases with weakened competition and a munificent market environment. In the context of this argument, it is therefore more useful to be concerned with capturing the relative profit picture of the firm and the extent to which those profits exceed satisficing limits than with absolute profits. Whether these discretionary profits are allocated to self-interests or other-interests is further

determined, according to this study's research model, by the social orientation of the firm's governance mechanisms.

It follows that firm-level slack be measured as the financial performance of the firm relative to relevant rivals in the market, over a multi-year time period; and, that the financial measures chosen reflect owners' concerns with firm performance as well as the excess profits available to firms net of ordinary expenses. Defining strategic slack so as to include *relative* measures of financial performance has practical value as well as theoretical value, given the new SEC rule requiring firms' proxy statements to include five-year return on investment comparisons with "peer companies" (Berenbeim, 1995: 24). Descriptions and justifications of the choice of strategic slack measures appear below:

1. Average Return on Equity (ROE) Relative to Industry Average ROE over the 5-year period (Standardized ROE) - because it is a measure of CEO's ability to make use of shareholders' funds. The more strategic slack, as measured by ROE above the industry norm, the more tolerant shareholders will be of the discretionary policies of management. As Teitelbaum (1996, Fortune) stated, if you earn a consistently high ROE, you can keep your dividend check -- shareholders recognize that the value of their investment is quickly accelerating[5]. ROE is a useful measure when comparing firms within industries as is the

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[5] Alfred Marshall, originator of the theory of perfect competition, recognized this point as well. He observed that the separation of ownership from control in the joint stock company makes effective criticism of management for anything less than gross negligence unlikely. This argues against the profit maximization view and in favor of the adaptive or "satisficing" (Simon, 1947) model of firm behavior. Profit is therefore not the only goal pursued by management, with other goals dictated by personal interests and relevant stakeholder demands.

case in this study, because accounting practices that differ among industries can distort inter-industry comparisons. For example, a drug company's biggest investment, R&D, gets treated as an expense instead of an asset, thus reducing shareholders' equity, increasing conventional measures of leverage, and the slim asset base keeps turnover high. The effect is to bolster their industry's average ROE. And the business cycle affects industries differently. For example, Pharmaceuticals is not hurt in a recession nearly as much as is Banking.

Calculation of ROE is based on Value Line's computation of what is termed "Percent Earned Net Worth", where Net Worth is defined as all assets (including intangibles) less current and all long-term liabilities other than shareholder's equity, i.e., common and preferred equity.

2. Average Return on Sales (ROS) Relative to Industry Average ROS over the 5-year period (Standardized ROS)- because it is a measure of profit margin. Profit margin is one element of ROE (ROE = Profit Margin X Turnover X Leverage, where Profit Margin is Profits/Sales, Turnover is Sales/Assets, or the rate at which a company's resources are turned into sales; and Leverage is Assets/Equity). Criticisms of ROE often focus on the leverage aspect – that highly leveraged firms, i.e., firms carrying high risk, are earning smart ROEs but may not be enjoying healthy profits. Leverage is further boosted in recent years by restructuring charges that get subtracted from retained earnings, lowering equity, and boosting ROE in subsequent years; and also, by LBOs or stock buyback programs which also liquidate equity. It is useful see if a company with, for instance, high ROE is also realizing healthy profit margins, and so ROS is measured as the ratio of net profit (after taxes) to

sales. Net profit is that which is in excess of resources devoted to administrative and general selling expenses.

3. Average Return on Capital (ROC) Relative to the Industry Average over the 5-year period (Standardized ROC)- because, as with ROS, it is a check on the leverage aspect of ROE, i.e., asset turnover is a leverage-free element of the ROE formula. ROC is substituted for Return on Assets (ROA) per se to remain consistent with Value Line's computations. Value Line's Associate Research Director explained that ROC is a useful proxy for ROA when analyzing a large variety of industries and that ROC is a number that has appeal to today's investors. Firms are increasingly required to sustain their competitiveness via improved research and development capabilities and innovation. To the extent long-term capital investments continue to pay off in a fierce global market, shareholders are more willing to tolerate short-term fluctuations in earnings. ROC is a critical measure of how capital is generating sustained competitiveness for the firm. ROC is calculated as: [Net Profit plus ½ the interest charges on Long-Term Debt][6] divided by [Total Capital], where Total Capital = Long-Term Debt plus Net Worth.

The strategic slack data are normalized on the basis of average industry performance (with "industry" defined as the targeted sample firms, i.e., the top firms in the industry) to

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[6] The add back of half the interest charges on long-term debt removes the tax effect on this portion of net profits (profits after-tax). Value Line estimates the tax rate for all firms in its portfolio at 50%, in order to avoid the problems created in trying to precisely define the tax rate for each firm in each fiscal year.

allow for comparisons of the observations. This, in effect, controls for industry-specific performance patterns, as suggested by previous research (Bain, 1956; Cochran and Wood, 1984; Hambrick, 1983a; Hansen and Wernerfelt, 1989; Kedia and Kuntz, 1981; Powell, 1996; Schmalensee, 1985; Spencer and Taylor, 1987; Sturdivant and Ginter, 1977; Ullmann, 1985). In other words, although firms with excess slack have more strategic options than those without, strategic advantage only accrues to the firm if this slack is large relative to relevant competitors (Bromiley, 1991). Defining industry averages on the basis of the target sample (i.e., the original 244 firms identified in Appendix A), rather than on the basis of the entire industry, is appropriate given that the relevant competitive environment for these firms is comprised of other large firms in the industry, all of whom are competing for share.

Slack Volatility: Measures of the variance around each slack variable over the specified time period are also developed. These variances are proxies for the degree of volatility in the generation of slack, at the level of the firm, which is difficult to capture in mean values of the variables alone (James and Hatten, 1995). The slack volatility measures are defined as:

4. Variability in ROE over the 5-year period (ROEVar)

5. Variability in ROS over the 5-year period (ROSVar)

6. Variability in ROC over the 5-year period (ROCVar)

where Variability is the dispersion of values around the mean, measured as the square root of the variances (standard deviation) for performance measure over the period 1992-1996. The standard deviation calculation uses the "nonbiased" or "n-1" method of calculation.[7]

[7] The formula is: $\sqrt{n\Sigma x^2 - (\Sigma x)^2 / n(n-1)}$

Social Orientation of the Corporate Governance Structure: operationalized via measures of Stockholder Social Orientation and Board of Director Social Orientation.

Stockholders have three possible motives for holding shares: economic, social and corporate control. This research is concerned with stockholders' social motives for holding shares, and how they use their influence to affect changes in corporate social policy. While a social motive for holding shares is difficult to ascertain objectively, a review of previous research suggests various potential proxies for such a motive.

First, a positive, albeit statistically weak, relationship between institutional ownership and corporate social performance has been demonstrated (Graves and Waddock, 1994). Perhaps the relationship would have been stronger if the type of institutional investor were identified. Institutional owners with a myopic focus (Hansen and Hill, 1991) may not reward firms for their investments in corporate social responsibility, where the payoff may be farther out (Mahapatra, 1984). Even though the current climate would suggest that social responsibility reduces risk for the firm (Graves and Waddock, 1994), an institutional investor is not likely to adjust its discount rate accordingly unless the grounds for risk reduction are clear and quantifiable. Notwithstanding, institutional investors with a longer-term focus as driven by the goals of their investment decisions may be more inclined to reward firms for long-term investments in social responsibility (Blair, 1995: 174; Sodeman, 1993). These investors, e.g., social investment funds, universities and government pension funds, are also more likely to view the socially *irresponsible* firm as too risky an investment, and will divest holdings in companies if there is a concern with lagging social performance (Coffey and Fryxell, 1991). The mere threat of this action will intervene in the social

strategy response implemented by the firm. In fact, companies may seek to improve their social responsiveness in order to attract more institutional investors, as suggested by the findings of Graves and Waddock (1994). Large pension funds such as California Public Employees Retirement System (CalPERS) and TIAA-CREF, have been vigorous in their attempts to influence corporate conduct (Blair, 1995).

Moreover, it has been suggested that institutional investors may have a business relationship with the firm that would preclude independent monitoring of firm activities and discourage them from challenging management decisions, even given their powerful ownership stake in the firm (David, Kochhar and Levitas, 1998; Heard and Sherman, 1987). It has also been suggested, in the context of a discussion regarding voting on social responsibility proxies, that institutional owners with business ties tend to vote their shares conservatively, in the direction of business interests; and, that these owners rarely if ever consult with beneficial owners who may be more "hospitable to the proposed [social] reforms" (Curzan and Pelesh, 1980: 687). An attempt is made for this research to separate institutional investors having a potential business relationship with the firm from those who do not have such a relationship by creating this category of social institutional investors. Efforts to partition institutional investors has its precedent in the empirical literature (Brickley, Lease, and Smith, 1988; David, Kochhar and Levitas, 1998), although not with respect to institutional investors social motives for holding shares. Pursuing this line of reasoning, measures are included of both institutional ownership (e.g., public and private pension funds, banks, mutual funds and insurance companies) and social institutional ownership, where social institutions are broadly defined to include social investment funds,

government pension funds, universities and college retirement funds.[8] Social institutional ownership is therefore a subset of institutional ownership.

Names of institutional owners and their percentage of ownership were obtained by downloading corporate files from Compact Disclosure, which include a listing of institutional owners by name in descending order of ownership percentage, in the section of Disclosure titled "Ownership". This listing was then scanned, by company, to identify a subset of institutional owners that satisfied my criteria for social institutional ownership, and I manually calculated the relevant percentage ownership for each firm in the target sample. Government pension funds, and universities and college retirement funds were easy to identify. Social investment funds were flagged on the basis of their inclusion in Good Money's list of social funds. An updated version of this list of social investment funds was obtained by visiting "GOOD MONEY" (Good Money, 1998) on the world wide web (http://www.goodmoney.com/). Pursuant to my request, Mr. Lowry of Good Money, Inc. e-mailed this list to me and it is included in this dissertation as Appendix B.

Secondly, percentage of stock owned by insiders has been shown to have a negative correlation with firm reputation for corporate social performance (Brown and Perry, 1994a). Research also indicates that outsider stockholders have demonstrated more concern with how the firm performs *overall*, including in the social arena, than with how it performs exclusively in the market (Curzan and Pelesh, 1980; Economist, 1996). Therefore, a more socially oriented governance structure would be one with a lower percentage of stock owned

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[8] The inclusion of universities was recommended by their history of involvement in advocating corporate social responsibility. For example, universities were the first to divest from firms operating in South Africa under apartheid.

by insiders. Insider ownership is defined, for purposes of this dissertation, as beneficial ownership of common stock by company officers and directors. Numbers were obtained from company proxy statements and cross-validated with Value Line data.

Intervention of stockholders in corporate social strategy formulation is calculated, therefore, as a function of the following three measures:

7. Percentage of total common shares held by institutional investors (%Institutional Ownership): expected to relate positively to sensitivity in social responsiveness.
8. Percentage of total common shares held by institutional social investment funds, universities and college retirement funds, and state and local government employee pension funds (% Social Institutional Ownership): expected to relate positively to sensitivity in social responsiveness.
9. Percentage of total common shares held by insiders (% Insider Ownership): expected to relate negatively to sensitivity in social responsiveness.

Sources of these data, as indicated above, are SEC corporate disclosure files -- 10K (annual), 10Q (quarterly), 8K (monthly) reports, and company proxy statements (microfiche, hard copy and Edgar On-Line Database); Compact Disclosure Database; and Good Money Social Investment Fund Database.

Ownership measures reflect end-of-year 1996, or nearest end-of-fiscal year date in cases where the company's fiscal year deviated from the calendar year.

Board of Directors provide a level of firm governance that is viewed somewhat cynically by corporate stakeholders, whether their concern is with economic or social performance of the firm. This is due to the fact that, despite many recent efforts at board reform that would render the board more independent of top management, which is the subject of its supposed scrutiny, most board directors have close ties to management that transform the monitoring and correction function of the board into one of rubber-stamping corporate policy (Jones and Goldberg, 1982; Pfeffer, 1972). While there is general agreement that the board is little involved in formulating corporate strategy (Lorsch and MacIver, 1989), it does have the authority to hire and fire top management, though it rarely exercises this function independently. Recently, it has been suggested that the real struggle for corporate control has been won by money managers whose huge institutional investments in firms constrain the strategic formulations of the firm and even go so far as to push the board into firing CEOs of firms with poor market performance. Preliminary evidence does not suggest that these pressures are anything but economically motivated (Berenbeim, 1994; New York Times, 1993; Stewart, 1993).

The Board *does* maintain some influence in the social arena however, in the form of a Social Responsibility Committee. The existence of such a committee on the board, or its equivalent (e.g., public policy committee) can exert some influence on management that is not delivering a strong social response (Kohls, 1985). Weidenbaum (1997) reported that approximately one in five large U.S. firms now has a public policy committee on their boards whose role it is to give top-level attention to social policy issues.

Firms with a social responsibility committee or equivalent on the Board were identified by examining corporate proxy statements. For those firms having such a committee, I went back successively through each of the last five years to determine if the committee had been part of the Board for the entire period in question or a portion thereof. The names of the committees that were accepted as "social responsibility committees" for the sample firms included the following (in alphabetical order): Board Affairs and Public Policy; Communications; Corporate (Business) Affairs; Corporate Issues; Corporate Public Policy; Corporate Public Policy and Environmental Affairs; Corporate (Social) Responsibility; Environmental Affairs; Environmental and Ethics; Environmental Policy; Environmental, Safety and Health; Environmental, Safety and Public Policy; Environmental and Social Responsibility; Employee & Public Responsibility; Executive and Public Policy; Health, Safety & Environmental and Public Policy; Public Affairs; Public Interest; Public Issues Review; Public Issues and Social Responsibility; Public and Legal Affairs; Public Policy; Public Responsibility; Social Responsibility; and, Stakeholder Relations and Public Policy. To determine whether the listed committee qualified as a "social responsibility committee" for this study, descriptions of the committees' functions were scanned. For example, if a committee's functions were described as monitoring compliance with laws and regulations, it was not included. In one case, a Communications Committee *was* included owing to its described function of establishing and maintaining positive communications with external stakeholders.

The proportion of time that a Social Responsibility Committee or equivalent is calculated results in a number between 0 (no social responsibility committee) and 1 (the

committee has been in place throughout the entire 5-year period). A committee was included *only if* it was a standing committee of the board. Ad hoc committees were not included. For companies that came into existence during the 5-year period, a score of "1" was awarded if the committee had been in place since the company's inception. A judgement was made that in the case of a committee existing in name only, that is, no meetings of the committee were held in any particular year, the committee was deemed *not to have been in place* for that given year, and the score was adjusted accordingly. This information was also made available via company proxies.

Further, research of board reform has suggested a positive relationship between percentage of outsiders on the Board of Directors and social responsiveness of the firm (Bowman, 1978; Eisenberg, 1976; Jones, 1986; Kohls, 1985; Stone, 1975).[9] For example, Bowman (1978: 67) proposed that "a company with a majority of outside directors ... should be in a position to receive more and better counsel about the changing environment in which it is embedded, and also to act responsively to such information and counsel". Recent scandals at Archer, Daniels Midland, which had a perfidious insider board, provide anecdotal support for this claim. While a growing trend in outsider representation on the board has been evident in recent decades (Bianco, Byrne, Melcher, and Maremont, 1997), there is some evidence that there is a turn in the tide. Daboub, Rasheed, Priem and Gray

[9] Not all empirical analysis leads to this conclusion. A study by Kohls (1985) found mixed results for the relationship between outsiders on the board and a measure of social responsiveness; however, the measure of social responsiveness was derived from a questionnaire administered to company CEOs, which may be a confound to the obtained results.

(1995: 149), citing a study by Kesner and Johnson (1990), revealed that the proportion of outsiders on the board is declining "for the first time since 1966".

Board of Director outsiders are defined as "directors who are not employees, former employees, former officers, or persons who receive or have received compensation from the company for any services other than their service as a director" (Blair, 1995: 80-81). It is also important to determine the *independence* of those outsiders, not only from the CEO, but from banks, law firms, suppliers, and other institutions tightly bound to the interests of management (Eisenberg, 1976; Kohls, 1985). In an effort to capture this, insiders were defined as directors who are affiliated with the firm either through family, employment by the firm or its affiliates, or former employment by the firm or its affiliates. The insider category also extends to include any employee of a company which, by dint of its significant stock ownership in the target firm (i.e., majority stockholder), designates that employee to have a seat on the target firm's Board of Directors.

Non-affiliated directors are defined as outsiders, which were further partitioned into two groups: (I) outsiders with a business orientation (representatives of corporations, banks, and other for-profit enterprises.); and, (ii) outsiders with non-business interests, specifically: government representatives (politicians, judges, and government agency officials, e.g., EPA employees); not-for-profit agency employees (e.g., Foundation presidents and head of Conservation funds); practicing physicians; lawyers (unless their services were contracted by the firm, in which case they were considered insiders); labor, trade, energy or environmental consultants; heads of state and ambassadors; philanthropists (e.g., Mrs. Nelson Rockefeller); independent artists and architects; academics (professors, deans and

provosts of academic institutions); scientists and lab researchers who are not affiliated with publicly traded corporations; economists and economic advisors; religious (e.g., clergy, sisters, pastors or rabbis); military (e.g., retired Armed Forces personnel); and journalists. Research has shown that the broader outsider/insider dichotomy may be unable to detect the value of outsiders on the board (Gautschi and Jones, 1987). The partitioning proposed here will assist in more clearly defining the contribution outsiders on the board make to determining a firm's social response posture.

Another factor of board composition that has been forwarded as a potential link to the firm's level of social responsiveness is the percentage of women on the board. Women have traditionally been "outsiders" to the halls of corporate power, and glass ceiling effects have been demonstrated to extend to the boardroom (Catalyst, 1995).[10] Nonetheless, women are making inroads, with the percentage of Fortune 500 companies with women on the board increasing yearly (Catalyst, 1995). Women directors do complain that they are often left out of the more powerful committees, with their strongest presence being felt on social responsibility committees (Ward, 1997: 164). For purposes of this research, the point is a salient one, at least to the extent that a social responsibility committee proves to have some impact on a firm's social responsiveness posture. Further, as outsiders, it is expected that women may contribute a unique perspective on corporate activity and performance that

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[10] Catalyst's 1995 report found that while 81% of Fortune 500 companies had a women on their board, women still occupied only 9.5% of all available board seats for these firms. A Business Week (1995) article also found that a few select women sit on multiple boards, and become sought out members of boards when high profile firms seek to increase their board diversity. The result is that it becomes difficult for these women to contribute effectively; and, a large number of qualified women are locked out from the opportunity to sit on a Fortune 500 board (Ward, 1997: 163-164).

would translate into a greater emphasis on the social role of the corporation in society. Again, this is a positive outcome. One might expect, therefore, to see the percentage of women on the board to have a positive relationship with a firm's predisposition to be socially responsive.

A general structural variable that has received a fair amount of attention in the governance literature is that of overall board size. Research has asserted that board size is positively correlated with firm size (Zald, 1969) and is positively related to the complexity of interdependencies facing the firm (Pfeffer, 1972). In a recent study, Sanders and Carpenter (1998) found that board size had a positive relationship with degree of internationalization. It would follow that a larger board would be better equipped to handle the increasingly complex issues emanating from a diverse set of increasingly assertive external stakeholders; and, a large board would be better equipped to effectively monitor managerial social performance (Jones, 1986). On the other hand, too large of a board may prove unwieldy in the handling of intricate stakeholder issues (Herman, 1981). Korn/Ferry, in its 1995 annual survey of Boards of Directors, found that most directors put the effective size of the board at 12, with an outsider/insider ratio of 3:1. Notwithstanding, there has been a trend to larger boards as firms invite more outsiders to sit on the board (Bianco, Byrne, Melcher and Maremont, 1997); and, as they seek experts from a variety of disciplines to respond to the myriad collection of concerns advanced by their assorted constituencies (Jackson, 1992). One possible downside to this trend is the increasing likelihood that the average director is serving on more than an acceptable number of boards -- "acceptable" in

terms of a number small enough to permit the director's meaningful involvement on the job.[11]

It is expected that larger-than-average size boards, in spite of their representation from a wide set of external constituencies, will have a negative association with perceived sensitivity in firms' response postures. This expectation owes to the unwieldiness inherent in large groups and the corresponding difficulties in providing a timely response; and, to the belief that large boards are more likely to contain directors who are serving on a number of boards simultaneously, thus limiting their monitoring effectiveness.

Finally, a measure of concentrated authority on the board is examined, which is operationalized as the duality of CEO and Chairman of the Board designations in one individual. This practice is widely evidenced in American corporate boardrooms (Boyd, 1995). Recent calls for board reform have focused a great deal of attention on this dual role of the CEO and the potential it has for undermining the board's monitoring capability over top management performance. Nonetheless, there is a vigorous debate over the relative value of board independence that a separation of roles permits (Boyd, 1994, 1995; Jensen, 1993); and the value of a clear line of decision-making authority that accompanies the concentrated authority model (Finkelstein and D'Aveni, 1994). While research on the contribution that this variable makes to the social responsiveness of the firm is scant, it is

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[11] Board reform has pushed for limiting directors to service on no more than two or three boards. In fact, an early effort at reforming American corporate boards in 1980 came in the form of a House bill on governance called the "Corporate Democracy Act" which called for, among other things, limiting directors to service on no more than two boards and attaching criminal penalties to the failure of a director to carry out his or her duties. This bill, while never making it out of the lower House, sent a clarion call to corporate boardrooms for "stricter governance standards" (Ward, 1997: 59).

expected that the concentration of authority in one individual will tend to have a negative association with the predisposition of the firm to respond to social issues. This assertion is based on agency theory which would predict that the greater the discretionary power of the CEO to allocate resources, the more likely it is that such allocation will favor CEO interests over others' interests (Eisenhardt, 1989). The variable "concentrated authority" is a dummy variable, with a value of "1" if the CEO and Chairman of the Board are one and the same person, and "0" if the functions are divided between two separate individuals.

Therefore, board intervention in social policy monitoring is calculated as a function of the following measures:

10. Proportion of time over the last 5 years that a social responsibility committee (or equivalent) existed on the board (%YrsSRC): expected to relate positively to sensitivity in social responsiveness.
11. Percentage of outsiders on the board (%Outsiders): expected to relate positively to sensitivity in social responsiveness.
12. Percentage of outsiders representing non-business interests on the board (%NonbusOut): expected to relate positively to sensitivity in social responsiveness.
13. Percentage of women on the board (%Women): expected to relate positively to sensitivity in social responsiveness.
14. Board Size (Boardsze): expected to relate negatively to sensitivity in social responsiveness.

15. Concentrated Authority (Concauth) - a dummy variable: expected to relate negatively to sensitivity in social responsiveness.

Board structure and composition data were obtained from Conference Board databases, Compact Disclosure database, Korn/Ferry International *Board of Directors, Annual Surveys*, and company proxies and annual reports.

Board of Director measures reflected end-of-year 1996, or nearest end-of-fiscal year date in cases where the company's fiscal year deviated from the calendar year. The social responsibility committee variable covered a five-year span, from 1992-1996 fiscal years.

Public Visibility: As Logsdon and Wartick (1995) pointed out in their critique of reputational indices, reputation itself influences corporate performance rankings; however, factors explaining how reputation is developed are not clear. Among the factors they suggest as having a bearing on different perceptions of a firm's social posture is public visibility, measured as degree of media exposure. Media exposure is a good proxy for public visibility because stakeholders who are likely to judge corporate social performance would also have access to quality media sources, whereas they may be ignorant about specific corporate policies that do not get covered in the news, nor are they typically privy to personal anecdotes on firm activities.

Bowman and Haire (1976) found that more visible corporations, often in terms of size, were more likely to self-disclose socially responsible actions. Ullmann (1985: 542) suggested that visibility of an **industry** and size of the firm are intervening variables in

determining the level and scope of social performance. That is, large firms in more visible industries are likely to receive more pressure to perform in a responsible fashion.

The contention of this researcher is that size is only one element of visibility, and that visibility is equally relevant at the firm level as at the industry level. For example, The Body Shop is relatively small in size, but highly visible because of its uniqueness and appeal. Visibility, in this case, both influences and is influenced by social response strategy.

The concern here is with the impact, if any, of public visibility on type of response adopted. Given that a firm with a high level of public visibility is more likely to engage in socially responsive behavior, there is a need to control for this factor in the analysis. This variable is operationalized as follows:

16. Public Visibility (PubVis), calculated as the number of news stories mentioning the firm in the most highly circulated business newspaper in the U.S., i.e., The Wall Street Journal, over the last 5 years.

While it is agreed that the nature of that exposure, e.g., positive versus negative, or socially-driven versus economically-driven, is also critical in determining the type of response adopted by the firm, a content analysis of the articles is beyond the scope of this research. It would be worthwhile in future research to see if negative or positive visibility have differentiable impacts on the firm's likelihood to respond in certain ways.

Social Response Strategies: Social response strategies, as defined earlier, are Resistant, Defensive, Accommodative and Progressive. Categorization of firms is based on survey responses from industry analysts for the firms they track. The survey instrument

developed to measure social response postures in this research appears as Appendix C. It includes three Likert-type scales: (I) Social Responsiveness Posture Scale (SRPS), composed of two (2) items developed to determine the nature of the firm's social response along an "Activity" dimension and a "Predisposition" dimension, as described in an earlier section; and, a third item that aims to capture the strategic orientation of the firm's top management team (long-term vs. short-term) which, although not formally hypothesized, may be an important control variable; (II) Industry Characteristics Scale (ICS), containing five (5) items that seek to define the industry (market) environment; and, (III) Perceptual Scale (PS) composed of ten (10) items that are aimed at capturing the analyst's personal view of the value of corporate social responsibility in general. These last two scales are included to permit informal tests relating industry structural characteristics to type and frequency of social response strategies adopted by incumbent firms; and relating perceptual biases of respondents to their relative placement of firms along the "Activity" and "Predisposition" dimensions described earlier. Such tests are not prescribed for this dissertation, although they may be recommended as post-hoc analyses by the results obtained herein; therefore, it is prudent to collect the pertinent data.

The "Activity" and "Predisposition" items were converted from a 1-7 range, as it appears on the survey instrument, to a -3 to +3 range for purposes of analysis. This was done in an effort to not unnecessarily bias responses by including negative numbers on the scale. The two -3 to +3 axes allowed for a clear identification of the position of each firm in the response space, and proper assignment of firms to a response category. Firms with high-high responses (greater than or equal to 0 on each dimension) were classified as Progressive; low-

low (less than 0 on each dimension) as Resistant; high-low (greater than or equal to 0 on "Activity" and less than 0 on "Predisposition") as Defensive; and low-high (less than 0 on "Activity" and greater than or equal to 0 on "Predisposition") as Accommodative. The survey was self-administered, with delivery by hand or by mail to research department heads at four investment analyst firms. Access to respondents for completion of the survey was set up in advance with research directors at several of the major investment houses and mutual funds, in an effort to improve the response rate.

One hundred and seventy-five (175) surveys were distributed, by hand and by mail (with postage paid return envelopes), to four investment houses in the New York metropolitan area. Approximately one hundred and twenty-five (125) of these were actually delivered to industry analysts. Of those, 38 were returned, reflecting a response rate of 30.4%. Of the 38 returned, 9 were unusable either because of extremely tardy returns or, in the case of 5 of the surveys, incomplete responses. This resulted in an effective response rate of 23.2%. The 29 surveys covered 140 of the original 244 firms, and 11 of the original 15 industries. Firms receiving multiple responses numbered 87, and those with single responses numbered 53. The industries included in the analysis, which are also indicated in bold in Appendix A along with the company names, are: Aerospace and Defense (2), Chemicals (3), Computers and Peripherals (3), Computer Software and Services (2), Drugs (4), Food Processing (2), Integrated Petroleum (2), Paper and Forest Products (2), Semi-Conductor (3), Telecommunications (3), and Environment/Waste Management (3). Numbers appearing in parentheses represent the number of responses received for each industry.

Validity and reliability of the survey instrument: The survey instrument devised for this project raises issues of validity and reliability. These issues are addressed in this section.

To ensure that the items on the survey are representative of the constructs being measured (content validity), and following the method used by Aupperle, Carroll and Hatfield (1985), I solicited the opinions of an independent panel of six judges from the SIM and Strategic Management fields. The judges' task was to determine whether the "Activity" and "Predisposition" dimension are clearly and comprehensively described, and whether the four categories are adequately contained by the two dimensions, as described in the instrument. Opinions were reviewed, and feedback given to the judges, who rendered opinions on this second iteration via E-mail (modified Delphi technique). The criteria for inclusion of the dimension definition statements in the final instrument was agreement of a majority of the six judges on the wording of the items.

Criterion-related validity may be established in two ways for this research. First, through designation of a holdout sample, discriminant analysis will allow for a test of the robustness of the derived discriminant function's predictiveness, by assigning firms in the holdout sample to social response categories on the basis of that function, and then seeing the percentage of firms accurately classified. Another way of establishing criterion-related validity is by gauging the actual behavior of firms (identifying specific policies, programs and initiatives engaged in by firms) against the response categories in which they are placed. This second proposed criterion-related validity study is beyond the scope of this study, though it may be the subject of future research.

As a simple test of construct validity, or the way the measure relates to other variables in the theoretical system (Babbie, 1989), one could triangulate results obtained in this study by comparing them with those of existing databases, e.g., reputational indices such as *Fortune*'s survey and the Kinder Lydenberg, Domini (KLD) index. This would require an ordering of response categories hierarchically, which is not substantiated by theory. As a first pass, however, it would be interesting to see if there is any correlation between firms classified in this study as Progressive, which is clearly an outstanding posture of social responsiveness, and the firms rated highest on reputational indices. This will not be tested formally in this study, but some attention will be devoted to this question as an avenue for future research.

Reliability of the instrument is partly a factor of asking respondents for information with which they have great familiarity, and partly a factor of the clarity of the questions being asked (Babbie, 1990: 132-133). The choice of industry analysts as respondents is an attempt to address the familiarity issue. They serve as a proxy for expert judgment. Each of the respondents had a minimum of five years experience analyzing the particular industry for which they provided data. The second issue, that of clarity, was approached by way of an informal pre-test. The survey, in draft form, was administered to two classes of MBA students (approximately 90 students in all) at a large, northeastern business school. Students were asked to rate the firm in which they were employed relative to competitor firms, not for purposes of subjecting their responses to a formal analysis, but rather to determine if the scales were clear and provided a reasonable variation of responses. Review of students' responses and solicitation of their comments contributed to a more reliable instrument by

recommending certain changes in the presentation and layout of the scales that improved clarity.

Finally, reliability of the instrument is further established via the use of multiple respondents (raters) for a majority of these companies. While it would have been preferable to include only companies with at least two raters in the final sample, it would also have unduly restricted sample size, resulting in a threat to power. An alternative strategy, and the one adopted here, was to include all firms for which a response was received, as long as two conditions were met: (1) the industry in which the sample firm is a member was represented by a minimum of two raters; *and,* (2) high interrater reliability scores were obtained for firms that *did* have two or more respondents. This last condition provides some assurance that the single response firms are being rated reliably (Babbie, 1989). Interrater reliability scores (Cronbach's Alpha) were therefore calculated for firms with multiple respondents for the Activity, Predisposition and Strategic Orientation Dimensions (Items 1, 2 and 3 on the survey). Reliabilities were .86, .84 and .63, respectively. In keeping with Nunnally's (1967) recommendation for exploratory research, reliabilities above 0.50 were considered as adequate. Therefore, the analysis proceeded with a sample of 140 firms.

4.5 Data Analysis - Description of Estimation Methods

The method used to analyze data is dictated by the research design of the study (Cook and Campbell, 1979). This study adopts a **non-experimental** design. Relationships suggested by the model are **correlational** (causality is not inferred); and, data on independent (discriminator) and dependent variables are collected to represent a single time

period (a **cross-sectional** design). These conditions dictate the kinds of analyses that are suitable. Each method has underlying assumptions that cannot be violated by the choice of design if appropriate inferences are to be made from the results. The following methods are employed:

Stage One - Developing and validating a survey instrument for administration to industry analysts.

> Content and Construct Validity Analysis

> Reliability Tests

Stage Two - Developing the measures of, and relationships among the discriminator variables, i.e., Firm-level Strategic Slack, Slack Volatility, Social Orientation of the Governance Structure, and Public Visibility; and, establishing the relationships between slack-related variables and "Activity" scores, and governance-related variables and "Predisposition" scores

> Tests for Normality and Identification of Outliers

> Descriptive Statistics and Correlations

> Principal Components Analysis

Stage Three - Examining the Ability of Slack, Governance and Public Visibility Variables to classify firms into four Strategic Response Strategy Categories:

> Descriptive Analysis: Frequency Distributions

> Multiple Discriminant Analysis - Descriptive and Predictive

Validity and Reliability tests related to the survey instrument (Stage One) are described in an earlier section of this dissertation (Section 4.4: Variables and Measures). A description of the methods used in Stages Two and Three, as well as the rationale for their use, appears in this section.

Tests for Normality and Identification of Outliers. The first step in data analysis is that of screening the data to insure that it adequately meets the assumptions of the proposed analysis. First, it was necessary to look for values lying outside of an appropriate range for each variable and to determine whether these values were true outliers, or errors. Histograms and stem-and-leaf diagrams were useful in making such identification, and in the case of extreme outliers, values were checked against original sources to clean the data of errors. Remaining outliers were not omitted automatically, however. A rule of thumb in statistical analysis is to remove no more than 1% of the data as outliers. With approximately 2100 relevant data points, this would mean eliminating no more than 21 for my sample.

Outliers should be removed on the basis of theoretical inference. I chose not to remove "outliers" representing extreme values for public visibility, for example, because the magnitude of these values was relevant to my analysis. Similarly with % Social Institutional ownership and % Outsiders on the Board, where extreme values were worthy of inclusion in the analysis. The outliers that created problems lied more in the area of the slack-related variables, where an anomaly in operations for a firm could result in highly distorted slack values, even given the smoothing provided by averaging over a 5-year period. For example, General Mills spun off restaurants, selling *Gorton's* in May of 1995. Divestiture of these

and other assets in 1995 and 1996 resulted in highly inflated values for standardized ROE and ROC, and exaggerated variances in those values for the 5-year period. Therefore, the decision was made to remove the relevant data for General Mills. In all, 13 points of data were removed, or .62% of the data base. It was important to limit the number of outlier values removed for another reason, i.e., SPSS removes all cases (firms) for which there is missing data when performing a discriminant analysis. The elimination of 13 data points covered 9 cases, reducing the sample size for the discriminant analysis from 140 to 131.

Normality is an important, although not entirely necessary assumption underlying the discriminant procedure. For optimal results, i.e., smallest misclassification error rates, the assumption is that discriminator variables follow a multivariate normal distribution in each group, and have equal variance. Although it may be the case that these assumptions are not met completely in this research, Jackson (1983: 106, 233) advises that in practice, discriminant analysis is quite robust even when these assumptions are not met. It is important to be especially cognizant of these assumptions when examining the contribution of non-cardinal discriminator variables (e.g., whether or not the firm has a "concentrated authority" model), which by definition are not normally distributed.

Tests for multivariate normality and homoscedasticity are recommended (Dillon and Goldstein, 1984:399; Hawkins, 1981) and are typically made available through the computer programs often used for discriminant analysis. This dissertation used SPSS 8.0, and tested for normality in the discriminator variables using the Kolmogorov-Smimov statistic (skewness statistic) with a Lilliefors significance level. The assumption of normality was rejected when the ratio of the skewness statistic to its standard error was less than -2 or

greater than +2.[12] In these cases, the log(base 10) was used to transform the variable and render it more symmetric. The log-transformed data were then used in subsequent analyses.[13]

Descriptive Statistics and Correlations among Discriminator Variables. Before embarking on a discriminant procedure, it is important to establish the relationships among the discriminator variables. This is due to the fact that the joint contribution of the discriminators to the power of the discriminant function is dependent on the degree and direction of the correlation between them. The contribution of each incremental discriminator variable is important to ascertain in order to arrive at a discriminant function that is parsimonious and does not include a number of "noise" variables (Lachenbruch, 1975: 75), i.e., one that is interpretable. Therefore, sample means, standard deviations and a pooled covariance matrix were calculated, from which all pairwise correlations were computed for all the Xs in the model.

Pearson pairwise correlations were also computed for all X and Y combinations. Correlational analysis of pairwise X and Y combinations helps interpret results with respect to Hypotheses 1a, 1b, 1c, and Hypotheses 4a, 4b, 4c for predicted relationships between the slack variables and the Activity scores; and with respect to Hypotheses 7a and 7b for predicted relationships between the governance variables and the Predisposition scores.

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[12] Histograms for each variable were also examined to verify skewness, and to display improvements in skewness when the log(base 10) of the variable was used as a substitute. A large positive value for skewness reflects a long right tail in the histogram and a large negative value, a long left tail.

[13] Log-transformed data included the variables: ROE Variability, ROC Variability, ROS Variability, Board Size, %Insider Ownership, and Public Visibility.

Comparing the strength and significance of all pairwise correlations will comprise the first step in examining the claims proposed in Hypotheses 2, 5 and 8. One-way ANOVAs (with social responsibility category as the factor) were also computed to assist in interpreting results, specifically with respect to Hypotheses 3, 6 and 9.

Exploratory Principal Component Factor Analysis. Four principal variables (constructs) are developed for this research that are predicted to have an impact on a firm's social response mode. They are: Strategic Slack, Volatility of Slack, Social Orientation of the Governance Structure (which might be considered as two-dimensional, with Board of Director governance as one element of the variable, and Stockholder or Ownership governance as the second element of the variable), and Pubic Visibility. Since the measures proposed as operationalizations of these variables have been newly defined and combined specifically for this research, some assurance is sought that these measures are successfully operationalizing the variables identified in the theoretical model. This is accomplished by performing an exploratory principal component factor analysis on the independent variables. Principal component analysis determines which measures load together, rather than stipulating them a priori. Though it is expected that some correlation among measures defining different variables will be found, it is also expected that strategic slack measures will load together, as will volatility measures, governance measures, and the public visibility variable. Factors will be extracted using varimax rotation with the minimum eigenvalue established at 1.00. Reliabilities (scale alphas) were computed for each factor, and measures with low factor loadings, i.e., below .40, were excluded from the factor scale (Nunnally, 1978). Discriminant analysis proceeded using the factors obtained through rotation.

Measures that did not load on any factor, or that loaded alone on one factor, entered into the discriminant analysis as single-item variables. Use of factors contributed to a more parsimonious model and improved power considerations for interpretation of results.

Descriptive Analysis of Response Modes - Frequency Distributions. A descriptive analysis in the form of observed frequencies of the response strategies is performed as a prelude to the multiple discriminant analysis procedure. This is done to ensure that all strategic social response categories defined in this research are, indeed, observed in the sample data set in numbers substantial enough to warrant inclusion of the response mode in subsequent analysis. A similar procedure was used in Smith and Wilson (1995).

Multiple Discriminant Analysis. In order to test the strength and significance of the hypothesized relationships in multidimensional space, and as a formal test of Hypotheses 10-15, a multiple discriminant analysis is performed. Discriminant analysis is an inference procedure first developed by Fisher (1936) whereby a linear discriminant function is developed as a statistical parameter for discriminating among two or more population groups (Karson, 1982: 169). This is accomplished by describing a discriminant function wherein the coefficients chosen represent a maximization of the distance between groups (Mahalanobis's distance), i.e., the maximum difference between group means (Lachenbruch, 1975: 5). Discriminant analysis is used both as a technique to describe and test between-group differences (Lachenbruch, 1975); and, as an allocative function to assign observations to one of two or more "mutually exclusive and exhaustive categories" (Karson, 1982: 159) [14].

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[14] Although the response categories are presented as mutually exclusive and exhaustive for conceptual reasons, i.e., to distinguish among the options, the discreteness of these categories is speculative. Firms may engage in more than one response, and the responses themselves could

The tests involved and the allocation functions used are identical with those of multivariate analysis of variance (MANOVA); and, the sample discriminant function -- a linear combination of discriminator variables -- is analogous to the sample linear regression problem for a two-group case, and to a canonical correlational analysis when there are more than two groups.

Discriminant analysis is the appropriate choice for this research for a variety of reasons. First, discriminant analysis is appropriate when the outcome (identifier) variable is categorical in nature. Although multiple regression using dummy variables may also be applied to analyze the data, it is recommended that discriminant analysis be the procedure of choice when observations are collected "systematically on the basis of the ....identifier variable" (Jackson, 1983: 237), as is the case in this research. That is, it was essential to collect data on firms representing a wide range of values in social responsiveness.

Cluster analysis is another often used technique, reserved for research in which the explicit groupings are not known a priori. In this research, group membership *is* known a priori for the observations, thus precluding cluster analysis. Finally, a classification rule for clustering or categorizing the observations is sought. This also precludes use of multidimensional scaling which "deals with configurations rather than groupings" (Jackson, 1983: 237).

Secondly, discriminant analysis answers the questions posed by this research; specifically, it addresses the issue of whether or not the model-generated variables of

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just as easily be described along a continuum (from "do nothing" to "do more than is expected"). Such a hierarchic ordering of responses, however, introduces judgements of "bad" and "good" responses which was undesirable for purposes of this research.

strategic slack and corporate governance social orientation (discriminator variables) provide a useful criterion for identifying firms with specific types of strategic social responses. Calculation of a discriminant function employing those discriminator variables yields information to this end. By examining the adjusted coefficients of each discriminator variable (adjusted by the variable's sample standard deviation), the contribution of each variable to the discriminant function can be ascertained. In so doing, both the validity of the model is tested, and a rank-order of variables is derived based on their relative contribution to explaining the difference between groups. Further, it is possible, with discriminant analysis, to apply a stepwise variable selection procedure, serving to identify a useful subset of the original discriminator variables that may facilitate interpretation.

Finally, there is the predictive ability of the multivariate discriminant analysis technique. Assuming a meaningful classification rule is found, this rule can then be applied to future observations to predict the type of social response that will be characteristic of any particular firm given its values on the discriminator variables. Results may be useful to policy makers, investment fund analysts, and managers. With the data on industry membership available to us, it is also possible to see whether the model fits reasonably well across all industries, or better with some types of industries than others.

CHAPTER 5. RESEARCH RESULTS - TESTS OF HYPOTHESES

5.1 Descriptive Statistics, Pearson Correlations and One-way ANOVAs

Descriptive Statistics for all the variables in the sample appear in Table 1. The mean values for Activity and Predisposition are positive, and lie close to 0. With respect to standardized slack variables, ROE and ROS both have a mean of about .24, and ROC has a mean of .46. These means indicate the normalized values of firms' 5-year average financial performance relative to their respective industries. Normalization was calculated on the basis of the target sample of 244 firms which, as was explained earlier, determined the "industry". Mean results indicate that the firms in the final sample tend to perform slightly (less than one standard deviation) above the norm for the industry. Slack volatility variables were log-transformed to adjust for skewness in the variables. Original values for slack variability in ROE, ROC and ROS had means of 6.34, 4.21 and 2.41 respectively, with generation of ROE evidencing the greatest degree of turbulence.

With respect to governance variables, the mean percentage of outsiders on the board for the sample is close to 72%, which is consistent with findings of Korn/Ferry and the Conference Board regarding an ideal ration of outsiders to insiders on the board of 3:1. The mean of the percentage of non-business outsiders is approximately 22%, demonstrating that the large majority of outsiders are, in fact, business affiliated. The mean percentage of women on the board is about 9%. Given the actual mean board size for the sample, this translates to an average 1.02 women on the average board. Board size appears in Table 1

as log-transformed data. Actual mean Board size is 11.3, with the smallest board having 5 directors, and the largest having 26. Social Responsibility Committees or their equivalent have a mean presence on the boards of the sample firms of about 38% of the time studied, or approximately 1.9 years. Concentrated authority is a dummy variable, and the mean value of 81% suggests that approximately 81%, or 113 of the original 140 firms, have CEO and Chairman of the Board authority vested in one individual. This indicates that the trend of concentrated authority continues to persist in American firms.

Ownership variables (stockholder governance data) show means of approximately 57% institutional ownership, and 4.75% social institutional ownership. Insider ownership is a log-transformed variable, derived from raw data that displays a mean of 5.6% beneficial ownership of common shares by insiders (directors and officers of the company). This variable has a wide range of values, however, with a minimum value of .01% insider ownership, and a maximum value of 55.2%. One could argue that more outlier firms could have been removed (I removed one firm where insider ownership was highly skewed due to the existence of a large foundation which claimed beneficial ownership); however, the extreme values on this variable were useful to the analysis, and there was also a concern related to unduly limiting the sample size, since a large number of "extreme" values remained on both ends of the variable range.

A similar dilemma attaches to the public visibility variable. This variable ranged from 1 to 1044, with a mean value of 108 and a standard deviation of 161. Clearly, public visibility of firms demonstrates wide variance. It was contemplated to standardize the variable within industry as was done with the financial slack variables, but I found that the

variance was not industry-specific, and the decision was made to keep the variable unstandardized.

Pearson Correlations: A correlational analysis was performed as the first step in exploring the association hypotheses. Pearson correlation coefficients with flagged significance levels appear in Tables 2 and 3. Table 2 provides all pairwise correlations for all the variables in the study; Table 3 provides a similar analysis with labeled factors substituted for the majority of the original 16 variables. A subsequent section explains how the factors were derived. Two-tailed tests of significance were used, which is recommended in exploratory research when the direction of the examined relationships is not established in advance.

Hypotheses predicted that standardized slack variables would be positively related to activity scores (H.1a, H.1b and H.1c) and that this relationship would be stronger than that between governance social orientation and activity scores (H.2). Correlational analysis bears these predictions out, with Standardized ROE, ROC and ROS all correlating in the predicted direction and with high statistical significance ($p<.01$) with activity scores (.567, .560 and .427, respectively). Although some statistically significant correlations appear between selected governance variables related to the social orientation of the board of directors (% Outsiders on the Board, % Women on the Board, and % Years SRC on the Board), even these correlations (.177, .171 and .269 respectively) are much weaker than those between strategic slack variables and the activity dimension. The factor labeled "Strategic Slack" (Table 3) also shows a unique, positive and highly significant correlation with the "Activity" dimension, lending further support to H.1 and H.2.

Similarly, with respect to the predicted relationships between measures of the social orientation of the governance mechanisms and predisposition scores, it was found that for certain measures related to the board of directors, i.e., %Outsiders, %Non-business outsiders, and %Women, correlations lend support to H.7a (.326, .221 and .208 respectively) with statistical significance of $p<.05$ or better. Both "board size" and "concentrated authority" demonstrated the predicted negative relationship with predisposition, but their correlations were not strong enough to reject the null hypothesis that the relationships evidenced could have occurred by chance. The lack of statistical significance can also suggest that the relationship between the paired variables is not linear. Notwithstanding, scatter plots in bivariate space did not indicate a patterned non-linear relationship between these pairs of variables. The variable "%Yrs SRC" did not behave as expected. Its relationship with activity scores was significant and positive; its relationship with predisposition scores was in the opposite direction of that predicted, although it is so close to 0 as to be meaningless, and highly insignificant statistically. As is noted subsequently, this relationship performs differently in a multivariate space than it does in a bivariate space, and may therefore be dependent on the performance of other variables in the set.

Stockholder governance variables related in the expected direction with Predisposition (H.7b), with insider ownership negatively associated with a firm's predisposition to sensitivity toward social issues, and both Institutional Ownership and Social Institutional Ownership relating positively with the Predisposition scores. Statistical significance only obtained for insider ownership (-.221) and social institutional ownership (.268) at the $p<.01$ level. It is interesting to note that social institutional ownership appears,

at this first pass, to have a greater positive association with a firm's predisposition to respond than does institutional ownership.

H.8 predicted that the governance social orientation variables would be more strongly related to Predisposition than would measures of strategic slack. This is generally borne out by the obtained correlations for which there is statistical significance; although, standardized ROC does share the limelight, having a correlation of .215 with Predisposition that rivals that obtained between Predisposition and % Women (.208). Standardized ROC is still much more strongly correlated with Activity, however (.427); and governance variables are generally more strongly correlated with Predisposition than with Activity, as predicted.

Results displayed in Table 3 further support H.7a, H.7b and H.8, demonstrating a unique and highly significant and positive correlation between the factor labeled "Insider-Outsider Governance" and the "Predisposition" dimension; and, between the factor labeled "Institutional Ownership" and the "Predisposition" dimension. These factors are more strongly correlated with predisposition than are the slack-related variables, as predicted by H.8.

Regarding the volatility of slack variables, the prediction was for a negative relationship between each of the measures and activity scores (Hypotheses 4a, 4b and 4c), for which the obtained correlations lend support. Each measure of variability -- ROE , ROC and ROS – demonstrated a negative association with the "Activity" dimension (-.122, -.076, -.224, respectively), although only variability in profit margin (ROS Variability) did so with statistical significance. All three measures were also negatively associated with

Predisposition, although not as strongly (-.111, -.060, and -.107, respectively) in each case, and in no case were the correlations statistically significant (H. 5). Table 3 confirms this evidence, with the factor labeled "Volatility of Slack" demonstrating a negative, though not statistically significant correlation with both the "Activity" and "Predisposition" dimensions.

The public visibility variable, for which no specific bivariate predictions were made, had a weak but positive relationship with both Activity and Predisposition (.071 and .099, respectively), suggesting that increased Public Visibility is associated with perceptions of more activity on the part of firms in the social arena, and a more sensitive predisposition toward social concerns.

Intercorrelations among the discriminator variables is of interest in this analysis. Variables have been developed that, in some cases, are subsets of other variables (e.g., social institutional ownership as a subset of institutional ownership, and non-business outsiders on the board as a subset of outsiders on the board), so evidence of multicollinearity is anticipated. Given the intent to perform a principal component factor analysis, high intercorrelations between certain pairs of variables was not only anticipated, but also desirable. Of particular note are the highly significant correlations ($p < .01$) between Standardized ROE and ROC (.849), ROC and ROS (.565), ROE and ROS (.435), ROE Variability and ROC Variability (.834), ROC Variability and ROS Variability (.641), ROE Variability and ROS Variability (.576), Outsiders on the board and Non-business outsiders (.255), Outsiders and Women on the board (.266), Women and Non-business outsiders on the board (.221), Social responsibility committee on the board and Non-business outsiders (.220), Institutional ownership and Social institutional ownership (.612), Insider Ownership

and Outsiders on the Board (-.433), Insider ownership and Women on the Board (-.385), and, Insider ownership and Social responsibility committee on the Board (-.263). The correlations of these variable pairs might have been anticipated given the relationships that have been established among these variables from a review of the literature. Some other, less anticipated results include the highly significant correlations ($p<.01$) between Outsiders on the Board and Standardized ROC (.223), Outsiders and Variability in ROS (-.239), Women on the Board and Standardized ROE (.260), Women and Variability in ROS (-.257), and Social responsibility committee and Variability in ROS (-.238). These correlations have interesting implications for how new trends in board reform are positively related to relative trends in firm financial performance. This avenue of inquiry is not part of this study, although it bears investigation in future research.

Finally, some compelling results relate to the variables of Board size and Public Visibility. Correlations obtained between Board size and measures of the variability of slack were all highly statistically significant ($p<.01$) and negative. One might infer that larger boards are characteristic of firms with more stable financial performance, which has some validity in practice. In fact, the sample demonstrates that firms in more mature industries do tend to have larger boards than those in younger, high-tech industries. It stands to reason that Board size would be found to be significantly and positively correlated with % Women on the board and the existence of a Social responsibility committee on the board, which is borne out in the sample (.365 and .390, respectively, with $p<.01$). Clearly, larger boards have greater degrees of freedom in establishing a variety of standing committees, and in including less traditional directors on the board as older directors retire their seats.

With respect to Public Visibility, it is worthy to note that its relationship with Standardized ROE was positive and highly significant (.218, $p<.01$) suggesting that firms with high levels of media exposure are also the ones that are earning the highest returns, although the causal direction of this relationship is undetermined. Public Visibility is also highly and positively correlated with several measures of governance, including: %Non-business outsiders on the board (.278), %Women on the board (.348) and Board size (.227); and, it is highly and negatively associated with other measures of governance, including: %Insider ownership (-.280) and %Institutional ownership (-.270). While an interpretation of these results is not readily apparent, they might suggest that concentrated ownership of shares and less active media exposure go hand-in-hand (again, the causal flow between these events would be useful to uncover, but is precluded by the cross-sectional nature of the data); and, that firms with more non-traditionally composed boards also receive greater media exposure, perhaps due to the fact that less traditional boards are characteristic of more innovative firms. These interpretations are conjecture, and are neither deemed to be evident from the data nor suggested by the underlying theoretical formulations. Once principal component factors are substituted for all but the public visibility discriminator variable, it is possible to see similar correlations between Public Visibility and the factor labeled "Institutional Ownership" (-.283) and the factor labeled "Insider-Outsider Governance" (.332), both statistically significant at the .01 level. The difference in direction of these two relationships mirrors that found in the correlational analysis of all 16 variables. Given that the interest in Public Visibility is as a stratifying variable, it is thought that any effort to attach additional meaning to these bivariate relationships would be premature.

One-way ANOVAs: One-way ANOVAs with the Social Response Categories used as Factor Levels were conducted to assist in interpretation of results. Descriptives and the ANOVA results are provided in Tables 4a and 4b for the 16 discriminator variables in the model; and in Tables 5a and 5b for the substituted Principal Component Factors plus Public Visibility. These results yield some useful information with respect to the claims made in Hypotheses 3, 6 and 9. For example, looking at Table 4a, the mean standardized slack variables are negative in all cases for "passive" response strategies (Resistant and Accommodative) and positive in all cases for "proactive" response strategies (Defensive and Progressive), lending support to Hypothesis 3. Results for volatility of slack are less conclusive, although it is true that for each measure of slack volatility, highest rates of volatility are associated with firms that have adopted resistant strategies of social response (extremely passive firms and extremely insensitive firms); and, the lowest rates of volatility are associated with firms that have adopted a defensive strategy of social response (proactive firms, and also insensitive firms). There appears to be little differentiation between Accommodative and Progressive firms when considering the effect of variability in ROE and ROC, suggesting that "Slack Volatility" is more closely allied with the "Predisposition" of firms to respond to a social issue than with the "Activity" of firms' social response strategy. Only in the case of ROS variability is there evidence of support for Hypothesis H.6, whereby distinctly higher rates of volatility in ROS are more characteristic of firms that have adopted a passive social response strategy (Resistant and Accommodative, with respective mean scores of .3506 and .2820 on the log of ROS Variability); and, distinctly lower rates of volatility in ROS are more characteristic of firms that have adopted a proactive social

response strategy (Defensive and Progressive, with respective mean scores of .1373 and .1556). This suggests that managerial discretion in allocation of resources to the monitoring and resolution of social issues, whether it be executed defensively or progressively, is a function of a consistently available profit margin from operations.

Table 4a provides some support for Hypothesis 9, which predicts a relationship between the social orientation of the governance mechanisms and the adoption of a sensitive social response strategy. For example, the mean values for Accommodative and Progressive response categories (sensitive modes) are clearly higher than those for Resistant and Defensive response categories (insensitive modes) in the cases of %Outsiders on the board, %Non-business outsiders on the board, %Institutional ownership and %Social institutional ownership; and, lower in the case of %Insider ownership, which was predicted to be a negative indicator of social orientation of the stockholder group. However, %YrsSRCommittee appears to make a difference for proactive firms (Defensive and Progressive) versus passive firms (Resistant and Accommodative), as does the variable Concentrated Authority".

Results of one-way ANOVAs (Table 4b) indicate that statistically significant differences among the response categories are found for the Strategic Slack variables (ROE, ROC and ROS), % Years Social Responsibility Committee, % Outsiders on the board, and % Social Institutional Ownership ($p<.01$); and, for % Non-business outsiders on the board, %Women on the board, and % Insider ownership ($p<.05$). Volatility in the generation of ROS is also a fairly significant differentiator between social response strategic groups ($p<.10$).

Tables 5a and 5b lend themselves to easier interpretation, incorporating as they do the principal component factors as substitutes for most of the original discriminator variables. Table 5a results support Hypothesis 3, i.e., strategic slack is uniquely positive for firms adopting proactive strategies of response, and negative for firms adopting passive strategies of response. This table also demonstrates a cleaner dichotomy between sensitive and insensitive social response strategies on governance variables, providing clearer support for Hypothesis 9. Specifically, firms with more outsider representation in their governance structures and a stronger social orientation in stockholder governance mechanisms will tend to adopt a sensitive social response strategy (Accommodative and Progressive) over an insensitive approach (Resistant and Defensive). Table 5b indicates that the Factors labeled "Strategic Slack", "Insider-Outsider Governance" and "Institutional Ownership" have the greatest statistical significance in differentiating between group means.

Post Hoc Comparisons: The results of ANOVA clearly indicate a difference among group means. However, the procedure assumes that only one test is performed when in actuality, multiple tests of a difference between pairs are being conducted. The result is an over-stated confidence in the significant levels, due to the fact that with each additional pairwise test, the confidence range for acceptance widens, *effectively* permitting rejection of the null hypothesis at less significant p-values. In other words, the probability of making a Type 1 (alpha) error increases. To adjust for this, multiple comparison procedures may be conducted to protect from identifying too many differences as significant when, in reality, they are not. The Bonferroni method of multiple comparisons is used, which is the recommended method when the number of comparisons is not very large, as is the case here.

Tables 6, 7 and 8 provide post hoc comparisons for three factor variables that demonstrated significant differences between the means in the ANOVA procedure, i.e., Strategic Slack, Insider-Outsider Governance, and Institutional Ownership. On Table 6, reading down the column of mean differences for Strategic Slack and noting the asterisks (*) designating a statistically significant difference between the means ($p<.05$), Resistant (a passive response) differs significantly from Defensive and Progressive (two proactive response categories); Defensive (a proactive response) differs significantly from Resistant and Accommodative (two passive responses); Accommodative (a passive response) differs significantly from Defensive and Progressive (two proactive responses); and Progressive (a proactive response) differs significantly from Resistant and Accommodative (two passive responses). Further, for all significant differences, the related 95% confidence intervals do not contain 0. This is very positive support for Hypothesis 3.

Similarly, looking at Table 7 and reading down the column of mean differences for Insider-Outsider Governance, Resistant (an extremely insensitive social response strategy) differs significantly from Progressive (an extremely sensitive social response strategy) and, if one were willing to accept a significance level of .10, Resistant also differs significantly from Accommodative, a sensitive social response category. Defensive (an insensitive social response strategy), although not differing from the sensitive social response strategy termed "Progressive" at a .05 level of statistical significance, does differ meaningfully. The statistical significance for this comparison is .073 ($p<.10$)[15], which is a very acceptable level

[15] Note that in the cases of a comparison between Resistant and Accommodative, and Defensive and Progressive, the respective confidence intervals only *just* contain zero.

for rejection of the null in an exploratory study of this nature.[16] These findings lend support to Hypothesis 9.

In the case of Institutional Ownership (Table 8), the only statistically significant difference between the means obtains for a comparison of Defensive (an insensitive, proactive response strategy) with Accommodative (a sensitive, passive response strategy). This result is inconclusive with respect to Hypothesis 9, since the difference may be owing to a difference in activity *or* predisposition.

5.2 Principal Component Factor Analysis

A more succinct summary of the relationships described in Section 5.1 above are provided in Tables 3, 5a and 5b, which incorporate "Factors", or "Components", as substitutes for 15 of the original 16 discriminator variables, plus the Log of Public Visibility as a separate variable. The method used to obtain these factors is described in this section.

Principal Component Factor Analysis is a data reduction method whereby linear combinations of the measures (16 discriminator variables, in the model) are formed that account for the variation, or spread, of each dimension in multivariate space. The results of principal components analysis (PCA) yield these linear combinations in order of descending amount of sample variance explained. Each successive linear combination, or component, explains a smaller and smaller portion of the total variance, and is independent from the other components. There will be as many components as there are variables, but

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[16] I owe this insight to conversations with Professors in the Statistics Department of Baruch College, the City University of New York, most notably, Dr. Ed Wolf.

ideally one wants to see the first few components explain a large portion of the variance of the original 16 variables. The variances are estimated as eigenvalues, and I used an eigenvalue of 1 as a cutoff point for factor extraction.

The goal was to develop components representing multiple measures of the four concepts predicted to influence the firm's adoption of a social response strategy, i.e., Strategic Slack, Volatility of Slack, Social Orientation of the Governance Mechanisms, and Public Visibility. Ideally, the result of a PCA would allow measures of the same construct to load together, and for measures of different constructs to load separately. This goal was accomplished, as described subsequently.

As input to the PCA, 15 of the 16 original discriminators were entered, excluding the stratifier variable "Public Visibility", which was treated separately in the analysis. The results of a varimax rotation are displayed in Table 9. Five components were extracted on the basis of the eigenvalue cutoff criterion.[17] These five components accounted for approximately 67.5% of the total variance (see Table 10). Inclusion of a sixth component would have increased cumulative explanation to 74%, but at the expense of parsimony. Moreover, the six-component rotated solution was not as clearly interpretable as the five-component solution.

With varimax rotation, the extracted components are more easily subject to interpretation and labeling. Each of the original 15 variables had a factor loading greater

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[17] A scree plot of the eigenvalues indicated a logical cutoff after the fourth component. Nonetheless, the rotated factor solution was not as useful for purposes of interpretation as the five-component solution, and would have sacrificed a fair amount of variance explained. The decision to retain five components was made, therefore, on the basis of theory, interpretableness, and statistical meaningfulness.

than .40 on a unique factor (Nunnally, 1978), with the exception of the dummy variable, "Concentrated Authority", which had high loadings on both Factor 3 (.541), and Factor 5 (-.521), although in opposite directions. This result was a highly desirable one, and the pattern of loadings was also clearly interpretable. The measures related to volatility in the generation of slack (ROE Variability, ROC Variability and ROS Variability) all loaded highly on Component One, and in the same (positive) direction. Therefore this component was termed "Volatility of Slack". Component 2 consisted of only three measures, all loading at .75 or higher. These three measures were the standardized measures of ROC, ROE and ROS, and this component was therefore labeled "Strategic Slack". Measures of %Outsiders, %Women, and %Non-business outsiders on the board all loaded highly and positively on Component three (.633, .587, and .481), and failed to load highly on any other component. In addition, the measure of %Insider ownership (of common shares) loaded highly, negatively, and *uniquely* on this component (-.763), while Concentrated Authority loaded highly and positively (.541), but also loaded highly and negatively on Component 5. While the presence of Concentrated Authority presents some problems to a clear interpretation, the other measures appear to relate to insider versus outsider governance, with primary focus on the Board of Directors. It suggests an element of governance that addresses the conflict between the traditional model of governance, wherein insiders had prominence, and a newly emerging model wherein outsiders, women, and non-business directors have prominence. The label "Insider-Outsider Governance" was assigned to this component. Component 4 is unmistakably describing a set of measures relating to Stockholder governance, specifically, institutional and social institutional ownership

(loadings are .905 and .864, respectively). This component was named "Institutional Ownership". Finally, Component 5 has three measures with strong loadings: Board size (.716), %YrsSRCommittee (.633) and Concentrated Authority (-.521). This component was interpreted as relating to the structure of the Board, with concentrated authority negatively positioned against the size of the board and the existence of a social responsibility committee or its equivalent on the board. The label for this component is "Board Structure".

The components extracted and labeled in this step of the analysis are used in several of the subsequent discriminant analyses, and will be referred to by label names in the following section.

5.3 Multiple Discriminant Analysis with Four Groups

Considerations and Assumptions. A multiple discriminant analysis (MDA) was conducted to test the validity of the overall model (captured in Hypotheses 10-13) by evaluating the ability of the discriminator variables to discriminate in predicted ways among the four social response strategies. Prior to performing MDA, it is useful to determine if each of response categories is represented by a fair portion of the cases (companies) to warrant inclusion in the final analysis. Morrison (1969: 161) pointed out that an adequate total sample size "is of little comfort without a sufficient number of individuals in each group." Frequency counts per category of social response yielded the following: Resistant (27), Defensive (32), Accommodative (29) and Progressive (43). Given the differences in group sizes, SPSS was instructed to weight the groups according to size when computing

posterior probabilities[18]. The counts satisfied power constraints, which recommended that each category contain at least 20 cases for a meaningful analysis, i.e., to discern a medium effect with an error rate of .05-.15. The number of cases analyzed totaled 131. As described previously, nine of the original 140 cases were rejected from the analysis by the SPSS program due to missing values in the secondary data file.

It is also important to check for equal covariance matrices among the groups, since "a linear discriminant function is appropriate only when the groups' covariance matrices are equal (or nearly equal)" (Morrison, 1969: 162). SPSS provided a successful test for this in its Discriminant Analysis procedure.

A second consideration was whether or not to enter the variables in a stepwise fashion. Huberty (1984: 160) cautioned against an overuse of the stepwise procedure in discriminant analysis. He asserts that stepwise analysis is less useful as a means of ordering and selecting variables than it is as a tool: (1) for a preliminary analysis to discard late-entering variables when the total number of variables is exceedingly large; and, (2) when a "predetermined ordering of the variables is specified", i.e., theory dictates the ordering of variable entry. Therefore, when performing analyses with all sixteen (16) discriminator variables, it could be useful to use a stepwise procedure as a variable reduction technique; but it seems less appropriate to use a stepwise procedure when the variables number six (6) and include the extracted components from PCA. Several analyses were run for this study

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[18] Morrison (1969) warned of the errors that may be attributable to largely unequal group sizes. Interpretation of the resulting classification tables can be rendered difficult. That is why an adjustment for relative group size is an important step to consider prior to running the MDA. A related issue is whether the ratio of the sample group sizes is representative of the ratio of group sizes in the population (Huberty, 1984), an assumption for which validity is difficult to assess.

using, alternatively, all sixteen (16) discriminator variables and six (6) discriminator variables, i.e., the five (5) components extracted from PCA plus Public Visibility, and a stepwise approach was used in the case of the 16-variable model. Presented herein are the detailed results for the most meaningful models, i.e., those with the greatest statistical *and* theoretical significance; although, in the last segment of this section, I have reported results for some alternative models as a means of comparison.

Descriptive Results of Multiple Discriminant Analysis. Results of the first MDA, which incorporated the extracted components for PCA plus Public Visibility as the discriminator variables, appear in Tables 11-16. Table 11 presents the group means on the discriminator variables for the analysis sample. The means indicate that the direction and magnitude of Strategic Slack differ between proactive (Defensive and Progressive) and passive (Resistant and Accommodative) firms, as predicted by H.3; and, that the direction and magnitude of social orientation of the governance mechanisms (Insider-outsider Governance, Institutional Ownership, and Board Structure in the opposite direction) differ between insensitive (Resistant and Defensive) and sensitive (Accommodative and Progressive) firms, as predicted by H.9. Predictions regarding Volatility of Slack are not as clearly supported, although the means on this discriminator variable *are* slightly lower for proactive (Defensive and Progressive) than for passive firms (Resistant and Accommodative), as predicted by H.6. The stronger difference here is between Resistant (relatively high mean volatility of .142) and Defensive (relatively low mean volatility of -.171), which do represent a passive and a proactive strategy of social response respectively.

Tables 12a and 12b indicate that three canonical discriminant functions were extracted (the maximum allowable in a four-group problem), although only the first two are significant to keep (see Table 12b). The first function explains 74.4% of the variance, the second function explains 24.9%, and the third function explains less than 1%. The cumulative variance explained by the first two functions is 99.3%.

Once I had arrived at the discriminant functions, the next step was to determine if the distance between groups was statistically significant. This was done to ascertain if it was necessary to find better discriminator variables, or to reduce the number of those variables in the model if "differences are even greater than would be expected" (Lachenbruch, 1975: 25). The sought-after result was to arrive at discriminant functions that together would explain a sizeable portion of the ratio of between-group to within-group variability. As Dillon and Goldstein pointed out (1984: 397), the discriminant functions extracted need not be orthogonal, and in fact rarely are. Discriminant scores *between* functions, however, will be uncorrelated. Another evaluation I wanted to make was whether the discriminant functions performed well with future samples, i.e., would they classify firms accurately.

In Table 12b, the first column labeled "Test of Function(s)" refers to tests of the null hypothesis that the means (centroids) of all three canonical functions are equal in the four groups. Significance is determined as a chi-square transformation of Wilks' lambda (SPSS, 1998: 276). Results indicate that the first function reflect true (population) differences at a $p<.0001$ level, so the null is rejected. The test labeled "2 through 3" indicate whether or not the additional functions reflect true differences or random error once the first function is removed. For this test, Wilks' lambda is .832 with an associated significance level of

$p<.05$ ($p=.011$), demonstrating that the centroids of functions 2 and 3 differ significantly across the four groups. However, when both functions 1 and 2 are removed, Wilks' lambda is associated with an extremely high significance level of .954, which does not permit a rejection of the null. Therefore, it is worth keeping only the first two functions.

To determine what discriminators make up these discriminant functions, it is helpful to look at the information presented in Tables 13 and 14 which represent, respectively, the standardized discriminant function coefficients and the pooled within-groups correlations between discriminator variables and standardized canonical discriminant functions. It appears that the first discriminant function is primarily composed of one discriminator variable, "Strategic Slack". That is, generation of slack provides the most explanation in differentiating among groups in the sample. The second discriminant function is composed largely of three discriminator variables: "Insider-Outsider Governance", "Institutional Ownership", and "Board Structure". These three discriminators make up the measures that operationalize the construct "social orientation of the governance mechanisms". The first two of these discriminators both appear in the same (positive) direction. Board Structure is negatively signed, which coincides with the prediction that overall board size would contribute negatively to a social orientation in the governance structure; but, does not fit with the expectation that the existence of a social responsibility committee on the board, the other principal element of "Board Structure", would be a a positive contributor to social orientation of the governance structure. These discriminators add significantly to the explanation of differences among groups in the sample, explaining an additional 24.95% of the total observed variance. The third function, which is not significant enough to keep, is

composed almost exclusively of "Volatility in Slack", followed by "Public Visibility". For each discriminant function, other discriminator variables have lower loadings (coefficients) and can be viewed as less important, as Table 14 indicates (James and Hatten, 1995).

Table 15 helps in interpretation of results with respect to testing the overall model (Hypotheses 10-13). Results suggest that the first discriminant function (Strategic Slack) separates proactive firms from passive firms; and, that the second discriminant function (Social Orientation of the Governance Mechanisms) separates insensitive firms from sensitive firms. These results support the model and the specific predictions in H.10 - H.13, with the exception of predictions related to Volatility of Slack. It is important to keep in mind, however, that the third function is very weak in providing any additional explanation of variance, and therefore any interpretation attached to it should be viewed with extreme caution. If the findings suggested by the third function were incorporated, it might be concluded that Volatility of Slack is differentiating between extremes, i.e., Resistant and Progressive firms represent the extremes of the response categories, and are separated by function 3 from Defensive and Accommodative. Given that it is not the intention of this study to hierarchically order response categories on the basis of normative judgement, this finding is not terribly meaningful.

Table 16 indicates the linear discriminant functions derived for the analysis sample [19]. In support of the overall model, it is evident that passive firms are classified on the basis on relatively low strategic slack, while proactive firms are classified on the basis of

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[19] The coefficients appearing in the linear discriminant functions are computed from the canonical discriminant function coefficients (SPSS, 1998).

relatively high strategic slack; and, that insensitive firms are classified on the basis of a weaker social orientation of their governance mechanisms, while sensitive firms are classified on the basis of a stronger social orientation of their governance mechanisms. It is also the case that proactive firms are classified on the basis of lower volatility in slack than passive firms. Regarding Public Visibility, it appears that passive firms are classified on the basis of media exposure that is high relative to proactive firms. The "moderating" effect of this variable is tested more formally in a subsequent analysis.

A territorial map of these functions appears as Figure 7. This plot "marks the regions into which is group is classified" (SPSS, 1998: 282), with the x-axis defined by canonical function 1 (Strategic Slack) and the y-axis defined by canonical function 2 (Social Orientation of the Governance Mechanisms). For example, all firms bordered by 1's are classified into the "Resistant" group, all firms bordered by 2's are classified into the "Defensive" group, and so on. Moving counterclockwise, the upper right-hand quadrant of the territorial map represents firms classified as "Progressive", with positive values on Strategic Slack and positive values on Governance Social Orientation. The upper left-hand quadrant represents firms classified as "Accommodative", with negative values on Strategic Slack and positive values on Governance Social Orientation. The lower left-hand quadrant represents firms classified as "Resistant", with negative values on both Strategic Slack and Governance Social Orientation. The lower right-hand quadrant represents firms classified as "Defensive", with positive values on Strategic Slack and negative values on Governance Social Orientation. This map offers validation of the Summary of Hypotheses figure (Figure 6), excepting the behavior of the "Volatility of Slack" variable.

Predictive Ability of the Model. Classification tables were then produced for the analysis sample to ascertain the overall success of the model for classifying cases into one of four groups. Table 17 provides the results of this procedure. The overall success of this six-variable model for classification is 53.4% (the "hit rate"). With four groups of equal size, random assignment would result in approximately 25% correct classification, thus a notable improvement over chance was realized. A statistical test of the predictive performance of the model and comparisons of the observed "hit rate" with the proportional chance criterion and the "fairest" criterion is described further along in this section when Table 19 is presented. Classification worked best in this model for the Progressive group, with 72% correct classification; misclassification was highest for the Defensive group, with nearly 66% of cases misclassified.

Table 17 incorporates results of a cross-validation procedure available in SPSS. In the count of correctly classified cases ("original") in the top half of Table 17, it is important to recognize that the classified cases are the same ones used to estimate the classification coefficients. This results in an optimistic bias of the classification success rate. In order to mitigate this upward bias, SPSS provides a method of cross-validation that relies on a "leave-one-out" procedure. In other words, each case (company) is classified into one of the four social response categories on the basis of a classification function "computed from all the data *except* the case being classified" (SPSS, 1998: 260). The cross-validation procedure results in a less optimistic success rate of 49.6%. As with the original model, Progressive firms are most often correctly classified, and Defensive firms are most often misclassified.

An improvement on the cross-validation (leave-one-out) procedure is the use of a holdout sample. A holdout sample is a more robust technique to reduce the upward bias associated with using the same database for both generating the discriminant function and testing its predictive ability. The sample size for this study was not so large as to wholly recommend this procedure. Nonetheless, according to the criteria provided in Lachenbruch (1975) as described in Section 4.2 of this dissertation, "n" is marginally large enough to permit a cross-validation using a holdout sample.

In conducting this procedure, I decided that the percentage to hold back for the test sample would be set at approximately 30% (or 39 firms). This would allow the "training set" of variables, i.e., the variables used to estimate the discriminant function(s), to total 92 (131 less 39), a number theoretically large enough to calculate statistically meaningful discriminant functions. SPSS then estimated the functions using the training set of 92 cases, and applied the functions to the test set of 39 cases as a measure of cross-validation (predictive validity). To choose the cases that would comprise the test set, I used successive trials of the random number generator in SPSS until sample sizes for each of the observed four social response categories were fairly equivalent. These trials numbered five. The test sample consisted of 9 firms originally classified as Resistant, and 10 each originally classified as Defensive, Accommodative and Progressive. Of the training set, 18 were from the Resistant category, 22 were Defensives, 19 Accommodatives, and 33 Progressives. The results of the holdout classification appear in Table 18. Of the selected cases (the training set), 59.8% of the cases were correctly classified, and the leave-one-out cross validation yielded a success rate of 52.2%. The unselected case group (test set) did not fare so well.

Only 38.5% of the cases were classified correctly. Nonetheless, as is explained subsequently, this subsample still performed significantly better than chance. It is interesting to note that in the test set of cases, only 10% of the Defensive firms were correctly classified using the discriminant functions. This category of social response proves the most unwieldy in the analysis. Discussion of this phenomenon follows in Chapter 6 of the dissertation.

In evaluating the results of classification for both the original analysis sample (Table 17) and the training and test sets (Table 18), it is desirable to demonstrate *statistically* that classification success rates, or the observed "hit rates" improve upon those expected by chance. A test statistic, Press's Q (Press, 1972), was calculated manually[20]. This statistic requires a determination of the number of observations that are expected to be correctly classified for the analysis sample, and for each subsample (James and Hatten, 1995)[21], with the hoped for result being that all samples perform significantly better than expected. The results of these manual computations are displayed in Table 19, and the computational formulae appear in Appendix D. Lehmann (1989) suggested that in testing the significance of the classification tables, two criteria be used to establish "expected" classification rates. Following this recommendation, and the procedure used in James and Hatten (1995), Table 19 gives results of the proportional chance criterion (Morrison, 1969) and the "fairest"

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[20] Press's Q is distributed as a chi-square with 1 d.f. (Press, 1972: 382).

[21] Following James and Hatten (1995), the percent of observations one could expect to correctly classify is calculated using two criteria: the proportional chance criterion, and the "fairest" criterion. These procedures are described in Morrison (1969) and Mostellar and Bush (1954) respectively. The formulas for these calculations appeared in James and Hatten, Appendix 2.

criterion (Mostellar and Bush, 1954). Tests demonstrate that the original sample and subsamples all perform significantly better than expected, suggesting that the derived discriminant functions are "reasonably effective discriminators" (James and Hatten, 1995: 167).

Stratification of the Sample Based on Level of Public Visibility. Stratification, in effect, controls for public visibility and could be similarly applied to a variety of potential control variables, some for which I have collected data in the course of performing this research (e.g., the personal bias of the respondents that is captured in Part III of the questionnaire, and the dimension "Strategic Orientation" that appears as item 3 in Part I of the questionnaire). These analyses lie outside the scope of this study, although they do suggest avenues of future research.

Analyses were performed on the sample cases stratified by the public visibility variable. I employed a simple stratification scheme of high-low public visibility, using the standardized Z-scores of the public visibility discriminator variable (log of public visibility) to partition the cases. Firms with Z-scores below zero were ranked as low public visibility firms, and firms with Z-scores above zero were ranked as high public visibility firms. A separate MDA was conducted for each group to see if the discriminant function coefficients differed meaningfully under different conditions of public visibility (high or low). Both analyses used the five (5) components extracted from PCA and entered them together. (Stepwise analyses were also run in trials, but did not improve the interpretation of results).

The test for Hypothesis 14 is relatively straightforward and is accomplished by simple frequency counts. The "n" for low public visibility firms was 63, with 13 Resistants,

16 Defensives, 16 Accommodatives, and 18 Progressives. The "n" for high public visibility firms was 68, with 14 Resistants, 16 Defensives, 13 Accommodatives and 25 Progressives. These frequency counts offer support for the "moderator" Hypothesis 14, in that a greater percentage of high public visibility firms adopted a proactive strategy than did low public visibility firms (60% versus 54%). A statistical test of a significant difference between the means yielded support for the hypothesis with $p<.10$, an acceptable error rate given the sample size.

Hypotheses 15a and 15b suggest that the discriminant functions for the high public visibility group will be less supportive of the association between governance and predisposition of response level for firms categorized as "insensitives", and more supportive of this association for firms categorized as "sensitives", than were the discriminant functions for the entire sample. To demonstrate support for these "Moderator" hypotheses, in comparison with the full analysis sample, high visibility firms were expected to have higher mean values on the governance variables for *all* categories of response; and similarly, high visibility firms were expected to have larger classification coefficients on governance-related variables in all categories of response. The antithesis is assumed by default, i.e., that low public visibility firms will be characterized by *weaker* social orientation in their governance mechanisms when compared to the full sample.

Results of the MDA for high visibility firms and low visibility firms are displayed in Tables 20a and 20b, and 21a and 21b. For each subsample, group-level statistics and classification function coefficients are shown. Hypotheses 15a and 15b receive partial support as evidenced by comparing the results appearing in these tables with those appearing

in Tables 11 and 16 for the full sample. Group means for high visibility firms are higher on the governance dimension labeled "Insider-Outsider Governance" (Table 20a) than those for the full sample (Table 11) in every category of social response, albeit still negatively signed in the case of Resistant firms. While this result is supportive of Hypotheses 15a and 15b, evidence relating to ownership governance runs counter to expectations. Institutional ownership is markedly lower in each response category for high visibility firms than for the full sample. Opposite results obtain for low visibility firms, as would be expected. Comparing Table 21a with Table 11, all groups for low visibility firms have lower means on the "Insider-Outsider Governance" variable than do sample firms as a whole, and higher mean institutional ownership values in every category but Resistant, where the values are close to equal. A test for mean differences (independent samples test) yielded a difference between high and low visibility firms on both governance variables with significance at the $p<.01$ level for insider-outsider governance, and at the $p<.05$ level for institutional ownership (see Table 22). A discussion of these results is incorporated in Chapter 6.

While it was not formally hypothesized, an industry effect was anticipated. When I examined which industries were represented by firms ranked low on public visibility versus those represented by firms ranked high on public visibility, I found a preponderance of low visibility firms in the following industries: Chemicals, Paper & Forest Products and Environment (Waste Management). High visibility firms were dominant in; Aerospace and Defense, Computers (both Peripherals and Software & Services), Food, and Telecommunication Services. Semi-Conductors, Petroleum and Drug industries all split about evenly on low and high visibility firms.

Reporting on Results of Alternative Models. In order to determine if a 16-variable model provided better explanation, several additional MDAs were run entering all 16 discriminators at once, and entering the 16 discriminators in a stepwise fashion, using Wilks' lambda as the cutoff criterion. The 16-variable non-stepwise model yielded three canonical functions, with the first two explaining 94.4% of the variance and proving significant enough to keep, as was the case in the 6-variable model. The first canonical function could also be described as Strategic Slack, composed largely of Standardized ROE, ROC and ROS, and it alone explained 63.5% of total variance. The classification results for this model were: 64.9% correct classification, and 48.1% for the cross-validation (leave-one-out) procedure. This compares with obtained, correct classification rates of 53.4% and 49.6% for the model presented above (refer back to Table 17). While the 16-variable model improves upon overall classification of the original cases, the increase in the success rate comes at a very high price to parsimony. The value of the improvement to classification success rate is challenged further when the predictive (cross-validation) ability of the derived functions from the 16-variable model is examined. In this case, the 16-variable model does not perform as well as the 6-factor model.

When the 16 variables were entered stepwise, 3 canonical functions were again identified, with the first 2 explaining 99.8% of total variance. The stepwise procedure retained 4 variables which were, in order of importance: (1) Standardized ROC, (2) %YrsSRCommittee, (3) %Insider Ownership, and (4) Board Size. The first canonical function related primarily to Standardized ROC, and the second function related primarily to %YrsSRCommittee and %Insider Ownership. Certainly, some explanatory power is lost

when using this model in comparison to the 6-variable model with components. In terms of classification rates, the results were: 52.6% correctly classified, and 48.1% of cross-validated cases correctly classified, which represents a slight deterioration from the results achieved in the 6-variable model presented earlier. It is often the case that stepwise variable selection will not produce the best model (Huberty, 1984; SPSS, 1998), and should therefore only be used when warranted by an ordering of variables that is established *a priori*.

CHAPTER 6. DISCUSSION AND SUMMARY OF RESULTS

The analytical techniques employed in this research set out to answer questions regarding the interpretation and description of discriminator variable effects on the formation of groups, specifically the adoption of one or another social response strategy. According to Huberty (1984), there are two ways of using discriminant analysis: (1) as a descriptive technique, and (2) as a predictive technique. The main concern of this research, which is exploratory in nature, was in the first use of discriminant analysis, i.e., as a descriptive technique. The crux of the inquiry consisted of discovering: (1) if there existed an explanatory, parsimonious set of variables that would differentiate among pre-assigned groups; (2) if this set of variables would align themselves in expected configurations and differentiate among groups in expected ways; and, (3) if a meaningful interpretation could be attached to the resulting structure underlying these effects. MDA, combined with the use of PCA, permitted this inquiry to proceed. The use of MDA as a predictive technique was of some interest here, although not central to the research questions. Predictive discriminant analysis is concerned primarily with "hit-rates" (percent of correct classifications), and whether obtained hit rates improve significantly upon chance. Success in responding to the questions posed through descriptive discriminant analysis encouraged the use of predictive analytic techniques. The results of the predictive segment of this analysis are a font for future research endeavors.

With regard to the descriptive element of this study, hypotheses received substantial support, with the exception of those predictions relating to "Volatility of Slack". Findings

indicated that slack variables loaded together and were associated most strongly with firms' activity level of social response; and that governance variables loaded in two groups that were both associated most strongly with the predisposition of firms to respond to social issues. Evidence also supported the overall model of multidimensional space partitioned into four response categories that were largely defined by the dimensions of firms' activity in responding, and firms' predisposition to respond. Notably, strategic slack offers the most explanation in differentiating among firms' response strategies.

The findings tentatively suggest profiles of the four social response categories. Firms adopting a Progressive response tend to have relatively high levels of strategic slack compared to industry rivals, relatively low variability in generation of slack, heavier outsider representation on the board and less insider ownership of shares, more women on the board, more non-business outsiders on the board, a higher level of institutional ownership, especially social institutional ownership, and greater media exposure. Accommodative firms appear to be similarly governed, but have much lower levels of relative strategic slack with slightly higher variability in the generation of that slack. Defensive firms are characterized by very high levels of relative strategic slack (higher than Progressives), the lowest rate of variability in generation of slack, and a governance structure that lies in direct opposition to that of Progressive and Accommodative firms. They also seem to enjoy less public visibility on average than do Progressives and Accommodatives. Resistant firms have very low relative strategic slack, on a par with Accommodative firms. The variability with which that slack is generated is the highest for the Resistant category. Analysis indicates that the governance structure of Resistant firms parallels that of Defensive firms, although

Resistant firms have greater insider representation both on their boards of directors and in terms of percentage of shares owned by insiders.

With hindsight, it appears that slack volatility may act as a moderator in this model, much as was postulated with respect to the public visibility variable. In any case, volatility in the generation of slack did behave in certain predictable ways. For example, the means on this variable were lower for proactive firms than they were for passive firms (see Table 11); and proactive firms were classified on the basis of lower values for slack volatility than were passive firms (see Table 16). PCA also confirmed that these variables loaded together, and separately from standardized slack variables. The main function of slack volatility appeared to be in discerning between extreme postures of social response, i.e., Resistant vs. Progressive (see Table 15).

With respect to the predictive element of this study, original classifications and cross-validation classifications performed statistically better than expected as demonstrated by Press's Q and the computation of proportional chance criterion and "fairest" criterion. While more confidence in results would accrue with larger sample sizes and more refined measures in related future research, this study serves as an important first step in identifying discriminators that may be useful in assigning firms to social response strategy groups, particularly with respect to strategic slack discriminators.

The most problematic of the four categories appears to be the "Defensive" category. This may owe to the difficulty that respondents may have had in discerning between the constructs "Activity" and "Predisposition". Defining these dimensions was a time-consuming task for which agreement among judges was not immediate nor unanimous. The

final rendition of the two definitions was a significant improvement over earlier efforts. Nevertheless, it would be useful to revisit the definitions used in the administered survey to determine if further improvements in distinguishing the two constructs are possible. It may also be the case that the respondents for this study (industry analysts working for investment firms), who tend to view the notion of corporate social responsibility with a modicum of skepticism and its value as limited, are not prone to viewing firm behavior as "insensitive" when they are simultaneously characterizing that behavior as "active". In other words, respondents may have been able to better comprehend the conditions under which a firm would respond actively and sensitively, or passively and insensitively, or even passively and sensitively (firms that *want* to do good, but have little capacity to carry it out); however, the notion of a firm being active and insensitive -- a Defensive firm in the scheme of this study -- may be difficult to grasp. It may well be that the high misclassification rates in the Defensive category relate to these definitional dilemmas.

The effect of the stratifier, "Public Visibility", on results was not entirely as expected. Although the variable did effectively weaken predicted relationships between governance and the adoption of insensitive responses, and strengthen predicted relationships between governance and the adoption of sensitive responses in terms of the "Insider-Outsider Governance" dimension, it had the opposite effect of that expected on "Institutional Ownership". It may be that while increased public attention has a relationship (cause-and-effect unknown) with a more progressive-looking board (more outsiders, women and non-business representatives) and with a reduction of insider share ownership, it does not have a relationship with higher levels of institutional or social institutional ownership. This may

reflect a combination of two phenomena: (1) divestiture of shares on the part of institutions when firms' public visibility has strongly negative content; and, (2) the substitution of public visibility as a form of institutional governance that renders actual institutional oversight less necessary. It is worth noting that in an initial principal components factor analysis, public visibility loaded with the governance variables. This "substitution" effect premise has some logical appeal, as the media is increasingly being used by stakeholders and firms alike to, in the former case, exercise some oversight of firm conduct and, in the latter case, to act as a podium for defending or promoting firm conduct.

The cross-sectional nature of this study precludes inferences regarding cause-effect relationships. The research model implies a directionality that the study is incapable of corroborating or refuting. The objective of this exploratory research was to test the existence of certain hypothesized relationships among a set of variables and to determine whether these relationships were positive or negative. To date, this is the first study that has tested these relationships empirically in one model of social responsiveness, qualifying it as an essential first phase in understanding the process of strategic social response.

A concern related to use of MDA is the possibility that the initial observations are not correctly classified. Inaccuracy in initial assignment in an area as ambiguous as that of social responsiveness is clearly a threat to the robustness of the resulting discriminant functions. Nonetheless, studies have demonstrated that random initial misclassification will not significantly affect error rates for the discriminant function computed from this misclassified data (Lachenbruch, 1966; McLachlan, 1972). The underlying assumption in these studies is that the misclassified data are a random sample of the parent population

(Lachenbruch, 1975), an assumption which may not obtain for this study. In fact, it is more likely that those firms which are "border-line" cases will be misclassified than those that are not, challenging the randomness assumption. Graphical representation of the group centroids in reduced discriminant space helps address this issue. Figure 8, for example, shows a plot of group centroids for the first discriminant analysis, i.e., the analysis of all 131 cases in the sample. It is clear that group centroids do lie in close proximity to the discriminant function axes. This informs us with relatively certainty that there are a fair number of "border-line" cases. If the number of "border-line" cases is over-abundant, a clear interpretation of the MDA solution is obscured. The solution obtained for this study appears to offer a clear interpretation in spite of the existence of "border-line" cases, and the distance between groups centroids is significant enough to warrant the assumption that group overlaps are not so large as to be confounding results.[22]

A summary of results is presented in Table 23. Overall, results of this study appear encouraging. Nonetheless, these results must be interpreted with caution and approached with a full awareness of the study's strengths *and* limitations. These are treated in the concluding chapter which follows, along with suggested avenues for future research.

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[22] There is a procedure, described in Dillon and Goldstein (1984: 411-413), whereby group overlaps are depicted by plotting isodensity ellipses for each group, with the size of the ellipse specified a prior. The SPSS Base 8.0 program used for this study did not contain this advanced procedure. It is recommended for future related studies that such a procedure be performed, which would require the purchase of add-on enhancements to the SPSS Base system.

CHAPTER 7. CONCLUSION: POTENTIAL CONTRIBUTIONS, LIMITATIONS, AND AVENUES FOR FUTURE RESEARCH

7.1 Potential Contributions of the Study: Implications for Theory, Research and Practice.

Theoretical implications. This study develops an integrative model of corporate social response strategies that:

(a) Incorporates elements of a firm's market position bearing on its **ability** to respond to social issues.

(b) Addresses the firm's **predisposition** to respond via elements of governance not previously analyzed in this context.

© Combines the impact of external market-based and internal governance resources on the firm's ability and predisposition to respond, and explains response in terms of these twin conditions.

Further, the social responsiveness construct is operationalized in the context of the performance-expectations gap in a unique effort to link theory and practice.

Research Implications. This study contributes to the research of corporate social performance in the following ways:

(a) It performs a systematic, comprehensive and replicable analysis of survey response data for a fairly large sample of firms from a wide variety of industries.

(b) It develops measures of strategic slack, social orientation of the governance mechanisms, and a categorization of social responses based on a firm's attempt to narrow the performance-expectations gap.

© It incorporates a measure of public visibility as a moderating factor in the explanation of how responses differ among firms with otherwise similar attributes.

(d) Combined use of secondary data and primary data helps reduce the mono-method bias that has plagued survey research in the field.

Practical Implications. The findings of this study suggest avenues for improving firm response to social issues and/or tempering the expectations of stakeholders i.e., closing the performance-expectations gap.

Results also recommend effective public policy reform appropriate to societal objectives and to the capabilities of the firm. Board reform, for example, while explanatory, appears to have limited effectiveness in achieving societal goals, especially for firms with heavily restricted amounts of strategic slack. This finding has a level of practical import.

It is also conceivable that public visibility has power in determining, or effecting a change in the level of corporate social responsiveness, regardless of the ability of a firm's governing bodies to exact such changes. This suggests that stakeholders might make better use of the media as a means of inducing socially responsive conduct on the part of firms. Social institutional ownership also appeared as an important new variable, having more explanatory power in distinguishing between groups than did overall institutional ownership.

Most importantly, it is clear that the largest amount of explanation in the differences observed among firms' social responsiveness strategies is provided by their relative market position, i.e., strategic slack. Although the cause-effect directionality of this effect is not established, the findings indicate that meaningful improvement in the social responsiveness of corporations is best achieved through economic incentives that provide firms with the discretionary capability to make socially responsible choices. Education of stakeholders around this issue is also recommended by the findings of this study. If stakeholder expectations were tempered to reflect their understanding of the relative financial performance of the firm, the pressure would shift to those firms that *do have* the financial wherewithal to actively respond to social concerns.

7.2 Limitations of the Study

The following are possible limitations of the study:

1. Content validity of the survey instrument is limited to expert opinion and human judgment criteria. Non-response bias may also be a threat to validity. Analysts contacted but unwilling to respond may have been biased toward a negative view of social responsiveness. Due to the confidentiality and anonymity of responses, it was not feasible to conduct an analysis of non-respondents. The characteristics of these non-respondents could have had an impact on results[23].

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[23] It is fair to note, however, that interrater reliabilities among analysts who *did* respond were very strong in spite of the variance around their views of corporate social responsiveness, as evidenced in their "Perception" scores from Part III of the survey. These scores ranged from a low of 30 to a high of 95, out of a possible range of 25 - 100. Variance was significantly higher among respondents overall than among respondents within industry.

2. Modifiers not explicitly tested in the model, e.g., corporate culture, and top management team characteristics, are possible sources of error, since they may impact on the chosen strategy of social response. In trying to identify a model that is explanatory, but at the same time parsimonious, certain factors are simply not considered, and are assumed to be distributed normally among firms in this study, which may or may not be a valid assumption.

3. Cross-sectional, non-experimental design limits inferences regarding the direction of relationships of interest.

4. The sample used limits generalization of results to large, for-profit U.S. firms, an external validity issue. Privately held companies, as well as not-for-profit organizations (NGOs and public sector organizations) are not included in the population to which study results are generalizable because their competitive conditions are different as are their governance mechanisms. There are clear reasons why a similar analysis of firms domiciled in different countries may obtain different results. Take, for example, the large Japanese firm whose corporate governance is typically defined through the *keiretsu* structure, a web of interrelationships with banks, business partners and shareholders based on long-term cooperation and mutual trust. This type of governance structure may wield entirely different influences on corporate strategy and may have different consequences for social performance outcomes. Moreover, government regulations vary across the globe, creating restrictions for certain firms in terms of profits, governance mechanisms, and even social response policies.

5. Finally, although restriction of the sample to relatively large firms was a necessity in controlling for size, it may create a problem of small variances that are difficult to detect. Even though the analysis is based on *relative* resource capabilities, all the sample firms may be sufficiently endowed with slack resources so as to create very little discernible difference in behavior. This is essentially a power issue. With a large enough sample, even very small effects are detectable. However, if the effect is very small, the value of the study is diminished, and it would argue for a wider variety of firms, and/or inclusion of a larger number of discriminating variables.
6. Operationalizations of the variable "social orientation of the governance mechanisms" represent early attempts to define a construct still in its infancy. Thus, further refinement of these measures, or the development of new proxies, may be required to elicit more meaningful explanation.

7.3 Avenues of Future Research: A Research Stream

Additional subjects for exploration emanate from the research reported here. The following represent possible research questions that might be investigated:

1. Do social response strategies cluster in predicted ways among industry structure characteristics? The information is almost fully gathered for this phase of the research. Firms industry membership is part of the data base, and respondents provided information on industry structural characteristics that can be cross-validated by the use of secondary data sources. Industry information is available archivally to act as proxies for various industry structure characteristics. For example, stage in the industry life cycle might be represented

by R&D expenditures as a % of Sales, and rate of growth in profits/sales; concentration ratios such as the Heyerfindahl index can serve as a proxy for degree of concentration/fragmentation although admittedly, this particular indicator is not without its problems. One sticky variable is that of regulatory scope. Measures of this variable are available in the literature (e.g., % of sales to the government), but are very poor proxies. Regulatory scope might be measured using the industry analysts' estimations of whether or not the industry is over- or under-regulated which is collected as part of this research. Once proxies are established and the data collected, a clustering of firms by social response strategy could then be examined to see if industry characteristics are more similar within groups than between groups.

2. Does a fit between discriminator variables and strategic social response, as prescribed by the conceptual model, have consequences for (perceived) social performance, measured either by reputational indexes, or more ideally, by surveys of affected stakeholders? It would be interesting to investigate the degree to which a fit between firm social response strategy and the discriminator variables results in a higher firm rating from stakeholders than a lack of fit, ceteris paribus. In other words, if the drivers of social response mode predict a defensive response, would implementation of an accommodative response be viewed negatively by stakeholders who believe the company should be spending more of its resources on changing stakeholder expectations, not on meeting their demands reactively? Alternatively, if an accommodative response is predicted, and the company adopts a progressive response, will judgers perceive the response as overkill, and bearing an inordinately high opportunity cost? This would be a truer measure of effectiveness than

reputational indices alone, since effectiveness is defined as the "organization's ability to create acceptable outcomes and actions" (Pfeffer and Salancik, 1978:11). It is, by definition, an external standard of evaluating company performance, although that evaluation can and is certainly manipulated by the organization. Pfeffer and Salancik further point out that effectiveness is not limited to economic concerns, but includes overall concerns with the usefulness of corporate activity. That is, is the corporation doing what it should be doing?

Future research could investigate this question by comparing the social performance means obtained for correctly classified groups of firms with those obtained for misclassified groups of firms. Such an exploratory study would indicate whether or not firms that conform to the theoretical prescriptions of the conceptual model outperform those that do not so conform. These results would have particular relevance for the practicing manager who may be confounded by a lack of recognition for his or her firm's social agenda.

3. Does response implementation moderate the relationship between social response strategy and effectiveness measures of social performance? Response implementation is the execution of the response and represents one of the three tiers in Carroll's (1979) tripartite social performance construct termed "issues management". This aspect of social performance asks: Is the company's response institutionalized? Is the response consistently executed? Is the response visible to relevant stakeholders? It may be that firms are behaving in a socially responsive fashion, but their activity is invisible to key stakeholders. This would argue for a better public relations effort on the part of the firm. Alternatively, firms may be so variable in their implementation of a response that they have lost credibility with

key stakeholder groups. This might argue for making social responsiveness a more integral part of the strategic planning of the firm.

4. Does organizational social response result in changes in a firm's task (industry) environment? This study's premise does not preclude the ability of the firm to influence its environment, although the focus here is on the reciprocal relationship. The interdependence of business and society, in fact, suggests a reciprocity effect. It would be interesting to see, in a time-lagged study, whether organizational social response, especially of a progressive or defensive nature (active responses) yields changes in the firm's industry environment, e.g., affecting the bargaining power relationships among firms, changing expectations and demands of constituents, and/or modifying the political and cultural environment. This has both theoretical and practical implications.

5. Is there a country of origin effect on the type of social responses firms adopt? It would be useful to open the study up to firms domiciled in other national markets to see if country of origin has a moderating effect on the type of social responses in which companies engage. It is intuitively logical to suspect that there is an effect, since both the internal and external environments of business are forged through the social and political norms of the society that supports it. The question remains: Is the country of interest, i.e., the one providing the context for investigating business social conduct, the country of origin or the country of operation? Does the advent of the "stateless corporation" have implications for firms operating in various, diverse macro environments, such that the laws and norms of the parent country are no longer as relevant? Investigation of these phenomena would contribute greatly to cross-cultural management research, and the dilemmas in social issues

management faced by multinational firms (c.f. Donaldson, 1989). It also has implications for designers of public policy who are struggling to create codes of conduct that are universally acceptable.

6. Further attention might be given to the public visibility construct and its strategic implications. It is highly intuitive that this construct plays a significant role in determining social performance, and is also probably influenced by social performance. Examining this relationship, in the context of the impression management literature and stakeholder theory could prove very fruitful, and would inform the corporate public relations function.

7. As suggested in Section 4.4 in a discussion of threats to validity, a simple test of construct validity could be conducted by triangulation of the results. Specifically, firms' social response categories, as obtained in this study, could be compared with respective firm ratings for social responsiveness as they appear in existing databases, e.g., reputational indices such as *Fortune*'s survey and the Kinder Lydenberg, Domini (KLD) index. For example, it would be interesting to see if there is any correlation between firms classified in this study as Progressive, which is clearly an outstanding posture of social responsiveness, and firms rated highest on reputational indices.

8. Significant correlations obtained between certain measures of a socially oriented Board of Directors and certain measures of strategic slack (see Section 5.1) suggest a possible study of the relationship between these two variables. It would be interesting to see if recent trends in board reform that may have positive implications for social performance of the firm may also have positive implications for economic performance of the firm. Such a study would be a novel approach to investigating the social-financial performance link.

APPENDIX A: LIST OF SAMPLE FIRMS

INDUSTRY	# of Firms	COMPANY NAMES
Aerospace/ Defense & - Diversified Co (DC)	14 **8**	**AlliedSignal(DC), Boeing, General Dynamics**, Litton, **Lockheed-Martin, McDonnell Douglas** (now part of Boeing), **Northrop Grumman**, Raytheon, Rockwell (now part of Boeing), Sequa (DC), Sunstrand, Textron (DC), **Thiokol, United Technologies (DC)**
Chemicals: Basic (B) Diversified (D) Specialty (S)	20 **12**	**Air Products & Chem.(D)**, B.F. Goodrich (CD), **Dow Chemical(B), DuPont(B), Eastman Chemical(D), Engelhard(S)**, FMC(D), **Great Lakes Chemical(S)**, Hercules(S), Lyondell Petrochemical(B), **Monsanto(B), Morton Int'l.(S)**, Olin(B), **PPG Industries(D), Praxair(S)**, Rohm & Haas(S), Sherwin-Williams(S), **Union Carbide(B), W.R. Grace(D)**, WITCO(S)
Banking & Bank Midwest (MW)	20	BankAmerica Corp, Bankers Trust N.Y., Bank of Boston Corp, Bank of NY, Banc One Corp(MW), Chase(Chemical), Citicorp, First Chicago NBD(MW), First Union Corp, Fleet Financial Group, J.P. Morgan, KeyCorp, Mellon Bank, Nationsbank, Norwest Corp(MW), PNC Bank Corp, Republic NY, U.S. Bankcorp (MW), Wachovia, Wells Fargo
Computer & Peripherals	11 **11**	**Apple, Compaq, Data General, Dell, Digital, Gateway 2000, Hewlett-Packard, IBM, Seagate Technologies, Sun Microsystems, Unisys**
Computer Software & Services	13 **9**	**America OnLine**, Automatic Data Proc., **BMC Software**, Borland, Comdisco, Compuserve, **Computer Assoc. Int'l.**, **Computer Sciences, First Data, Microsoft, Netscape, Novell, Oracle**
Electric Utilities East	23	Allegheny Energy, American Elec. Power, Atlantic Energy, Baltimore Gas & Electric, Boston Edison, Carolina Power & Light, Commonwealth Energy System, ConEd, DQE, Dominion Resources, Duke Power, Eastern Utilities, FPL Group, GPU Inc., Long Island Lighting, New England Electric, NYS Electric & Gas, Niagara Mohawk Power, Northeast Utilities, PP&L, Peco Energy, Public Svc. Entr. Group, Southern
Semi-Conductor	10 **10**	**Advanced Micro Devices, Analog Devices, Applied Materials, Intel, LSI Logic Corp., Linear Tech., Micron Technology, Motorola, National Semiconductor, Texas Instrument**

Food	21 **15**	**ADM**, Ben & Jerry's, **Best Foods** (formerly CPC Intl.), **Campbell Soup, Chiquita Brands Intl., Conagra**, Dean Foods, Dole Food, **General Mills, H.J. Heinz, Hershey Foods**, Hormel Foods, **IBP, Kellogg**, McCormick & Co., **Nabisco Holding Corp, Quaker Oats, Ralston Purina(Ralcorp), Sara Lee, Tyson Foods,** Worthington
Paper & Forest Products	18 **18**	**Boise Cascade, Bowater, Champion Intl., Chesapeake, Consolidated Papers, Georgia-Pacific, International Paper, James River Corp(now Fort James Corp, 8/13/97), Louisiana Pacific, Mead, Potlatch, Rayonier, Stone Container,Temple-Inland, Union Camp, Westvaco, Weyerhaeuser, Willamette Industries**
Medical Services	18	Beverly Enterprises, Columbia/HCA Healthcare, Health Management Associates, Healthsouth, Humana, Integrated Health, Laboratory Corp. Of America, Magellan, Manor Care, Omnicare, Oxford Health Plans, Pacificare Health Sys., PhyCorp, Sun Healthcare, Tenet Healthcare, United Healthcare, Vencor, Wellpoint Health Networks
Petroleum (Integrated)	17 **17**	**Amerada Hess, Amoco, Ashland, Atlantic Richfield, Chevron, Exxon, Mobil Murphy Oil, Occidental Petroleum, Pennzoil, Phillips Petroleum, Quaker State, Sun, Texaco, Tosco, USX-Marathon, Unocal**
Drug	19 **18**	**AHP, Amgen, Barr Labs, Biogen Inc., Bristol-Myers Squibb, Eli Lilly, Forest Labs, Genentech, Genzyme, ICN Pharmaceut.**, Immunex, **Ivax, Merck, Mylan Labs, Pfizer, Pharmacia & Upjohn, Schering-Plough, Warner-Lambert, Watson Pharm.**
Newspaper	10	Central Newspapers, Dow Jones, Gannett, Lee, Knight-Ridder, Media General, NYTimes, Times Mirror, Tribune, Wash.Post
Telecommun. Service & Telecommun. Equip.(TE)	21 **16**	**AT&T, Airtouch Communications (formerly Pacific Telesis Group)**, Alltel, **Ameritech, Bell Atlantic/NYNEX, Bellsouth, Cincinnati Bell,** Citizen Utilities, **Frontier, GTE, LCI Int'l.,** Loral(TE), **Lucent(TE), MCI, SBC Communications, SNET, Sprint,** Tel. & Data Systems, US Cellular, **US West, WorldCom**
Environment	9 **6**	**Allied Waste, Browning-Ferris Ind.**, Ionics, **OHM, Safety-Kleen, USA Waste Services**, US Filter Corp., **Waste Management**, Wheelabrator

Total # of Firms in Target Sample: 244
Total # of Firms in Analysis Sample: 140

APPENDIX B

FUNDS WITH SOCIAL AND/OR ENVIRONMENTAL SCREENS

Fund (Telephone #) - Type of Fund - Inception Date (if available)

AFW Environmental Fund - I, L.P. (212-696-2414) - V - ?
Aid Association for Lutherans (8 funds with Lutheran screens: 800-553-6319)
Alliance Global Environmental Fund (800-221-5672) - G/V - 5/90
Alternatives Federal Credit Union (607-273-4611) - certificate shares for loans for affordable housing and community development
Amana Growth Fund (Islamic religious screen: 360-734-9900) - G - 2/3/94
Amana Income Fund (ditto) - I - 6/86
American Asia Allocation Growth Fund (703-356-3720 or 1-888-222-5876) - E 10/1/96
American Mutual Fund (alcohol and tobacco screens: call 800-421-4120 for referral service) - E - ? Also see Washington Mutual Investors Fund.
American Trust Allegiance Fund (Christian Science Screen: 800-788-7285) - E - 3/97
Aquinas Funds (4 funds with Catholic social screens: 800-423-6369)
Ariel Appreciation Fund (800-292-7435) - E - 12/1/89
Ariel Growth Fund (ditto) - E - 11/6/86
Ariel Premier Bond Fund; Institutional & Investor Class (ditto) - I - 1996
Beacon Cruelty-Free Value Fund (800-892-9626) - E - 1997
Better Than Bonds (BTB) Fund (800-BTB-UTIL) - NNU - 7/11/95
Bridgeway Social Responsibility Portfolio (800-661-3550) - G - 8/5/94
Brown Capital Mangement Balanced Fund (800-525-FUND) - AA - ?
Brown Capital Management Equity Fund (ditto) - AA - ?
Brown Capital Mangement Small Company Fund (ditto) - AA - ?
Calvert Capital Accumulation Fund (800-368-2748) - G - 10/31/94
Calvert New Africa Fund (ditto) - E - 1994
Calvert New Vision Small-Cap Fund (ditto) - E - 1997
Calvert Social Investment Fund Bond Portfolio (ditto) - I - 9/1/87
Calvert Social Investment Fund Equity (ditto) - E - 9/1/87
Calvert Social Investment Fund Managed Growth Portfolio (ditto) - B - 10/21/82
Calvert Social Investment Fund Money Market Portfolio (ditto) - MM - 10/21/82
Calvert Strategic Growth Fund (ditto) - E - 5/5/94
Calvert World Values International Equity Fund (ditto) - G - 6/29/92
Cascadia Revolving Fund (206-447-9226) - community development financial institution
Catholic Values Investment Trust (888-974-4486) - I - ?
Citizens (formerly Working Assets Common Holdings) Emerging Growth Portfolio (800-223-7010) - E - 2/8/94
Citizens Global Equity Portfolio (ditto) - G - 2/8/94
Citizens Income Portfolio (ditto) - I - 6/10/92
Citizens Index Portfolio (ditto) - G - 3/3/95

Citizens Money Market Portfolio (ditto) - MM - 8/30/83
(Citizens) Muir California Tax-Free Portfolio (800-648-3448) - I - 6/11/91
(Citizens) The E Fund (800-223-7010) - MM - 7/1/95
College Retirement Equity Fund (CREF) Social Choice Account (212-490-9000) - E/P - 3/1/90
Common Sense Trust (21 funds with the sin screen: 800-225-2222) - G, I, & MM - ?
Delaware Quantum Fund (800-523-4640) - E - 1997
DEVCAP Shared Return Fund (800-371-2655) - G - 10/15/95
Domini Social Equity Fund (800-762-6814) - E - 6/3/91
Dreyfus Third Century (800-645-6561) - E - 3/22/72
Eclipse Ultra Short Term Fund (800-872-2710) - I - 12/27/94
Fidelity Select Environmental Services Fund (800-544-8888) - G/V - 6/89
Global Environment Emerging Markets Fund, L.P. (202-789-4500) - G/V - 1/90
Global Environment Fund, L.P. (ditto) - V - 10/93
Green Century Balanced Fund (800-934-7336) - B - 3/18/92
Green Century Equity Fund (ditto) - E - 6/2/91
Holland Capital Management Balanced Fund (800-304-6553) - AA - ?
Holland Capital Management Growth Fund (800-295-9797) - AA - ?
Hudson Investors Fund (201-458-8206; or 800-223-6580, ext. 383) - G - 3/12/93
INVESCO's Energy, Environmental Services and Health Sciences Funds (800-525-8085) - G/V - 1/91. Caution: The Energy Fund does invest in nuclear power.
Investors Resources Group's Institutional Equity Fund (888-744-2337) - AA & P - ?
Investor's Resources Group's Investment Trust Fund - Consumer (ditto) - AA & ? - ?
Islamia Group Growth Fund (Islamic social screens) - E - ?
Islamia Group Income Fund - I - ?
Kemper Environmental Services Fund - V - ?
Laidlaw Covenant Fund (800-COVENAN) - E - 10/2/93
Lincoln Life Social Awareness Fund (800-348-1212) - E - ?
Lutheran Brotherhood (8 funds with religious screens: 800-990-6290)
Merrill Lynch Principled Values Portfolio - unit investment trust - ? - 2/98
Meyers Pride Value Fund (invests in companies that have progressive policies towards gays and lesbians: 800-410-3337) - E - 6/13/96
MFS Fixed-Income (labor screens: 800-637-8730) - I/P - 3/94
MFS Union Standard Equity (ditto) - E/P - 3/94
MMA Praxis-Growth Fund (Mennonite screens: 800-977-2947) - E - 12/31/93
MMA Praxis-Intermediate Income Fund (ditto) - I - 12/31/93
MMA Praxis International Fund (ditto) - E - 1997
Neuberger & Berman Socially Responsive Fund (800-877-9700) - E - 3/16/94
New Alternatives Fund (800-423-8383) - N - 9/3/82
Noah Fund (Judeo-Christian screen: 800-794-NOAH) - E - 5/17/96
NWQ Socially Responsible Balanced Portfolio (213-624-6700) - B - ?
NWQ Socially Responsible Bond Portfolio (ditto) - I - ?
NWQ Socially Responsible Equity Portfolio (ditto) - E - ?

Parnassus Balanced Fund (800-999-3505) - B - 9/1/92
Parnassus California Tax-Exempt Fund (ditto) - I - 9/1/92
Parnassus Fixed Income Fund (ditto) - I - 9/1/92
Parnassus Fund (ditto) - E - 12/27/85
Pax World Fund (800-767-1729) - B - 8/10/71
Pax World Growth Fund (ditto) - G - 1997
Pioneer Group (group of 62 funds with sin screen: 800-225-6292) - 1924
Rightime Social Awareness Fund (800-242-1421) - E - 3/1/90
Security Social Awareness Fund (Class A) (800-888-2461) - E - 11/1/96
Security Social Awareness Fund (Class B) (ditto) - E - 11/1/96
Security Variflex Variable Annuity Contract - Social Awareness Series (ditto) - A - 1991
Smith Barney Concert Social Awareness Fund (formerly the Strategic Investors Fund) - ? - 1997
Social Responsibility Fund (800-669-7400) - E - ?
Stein Roe Young Investors Fund (800-338-2550) - E - ?
Timothy Plan, The (Christian fund: 800-846-7526) - E - 12/16/93
Total Return Utilities Fund (800-BTB-UTIL) - NNU - 6/24/95
Victory Lakefront Fund (African-American/diversity screen: 800-539-3863) - E - ?
Wasatch Funds (5 funds with Latter Day Saints screens: 800-551-1700)
Washington Mutual Investors Fund (alcohol and tobacco screens: call 800-421-4120 for referral service)- E - ? Also see American Mutual Fund.
Women's Pro-Conscious Equity Mutual Fund (800-385-7003) - E - 10/1/93

NOTES:
Types of funds: A - Annuity, AA - African American fund or financial Institution (majority owned or managed by African Americans), B - Balanced, E - Equity, G - Global, I - Income, MM - Money Market, N - Natural Resources, NNU - Non-Nuclear Utilities, P - for pension or institutional funds, and V - Environmental.

In 1995, USAffinity Green Fund, started in November of 1993, merged into the Domini Social Equity Fund. Citizens Index Portfolio was a merger of Citizens Balanced Fund and Citizens Growth Fund both started in June of 1992. Working Assets Common Holdings' name has been changed to Citizens Trust.

This list represents those funds which I included in a subset of institutional investors termed "social institutional investors". The subset also includes universities, government pension funds and college retirement funds.

The funds on this list were provided by: Peter Lowry, Good Money, Inc., P.O. Box 502, Dover,NH 03821-0502 (ph/fax: 207-748-3088; e-mail: goodmoney@prodigy.net.com).

Last updated on March 24, 1998

APPENDIX C: SURVEY INSTRUMENT

LETTER TO RESPONDENT

The survey you are about to complete is part of a research project aimed at evaluating the impact of competitive market conditions and internal governance factors on a firm's strategic response to social pressures. As part of this research, your company-specific expertise is solicited to help us: (1) gauge firms' relative responsiveness to the inevitable pressures brought about by external stakeholders' demands; and, (2) characterize the market environment in which these firms operate.

The survey consists of three parts with a total of 18 questions, and should take you approximately 10 minutes to complete. Part I, "Social Responsiveness" consists of 3 questions, each requiring you to rank order firms along a given dimension. Part II, "Industry Characteristics" consists of 5 questions related to industry attributes appearing in simple Likert-type format. Part III, "Perception" is a series of 10 statements for which you are asked to indicate agreement or disagreement along a 5 point scale. Specific instructions for completing the survey accompany each Part.

Please be assured that your input will remain entirely confidential. As the principal investigator, I am the only person who would be able to identify you with your responses. The resulting study will not identify respondents or their affiliations, nor will it identify company-specific responses. We are interested in relationships among variables, and your responses serve solely as data points in multidimensional space.

We will be happy to share the results of this research with you when they become available. We anticipate completion of the research during the Summer, 1998, and would be able to provide you with an executive summary shortly thereafter. If you are interested in receiving these results, you may so indicate by checking the appropriate box below. Also, please indicate whether or not you would be willing to participate in this survey again in the future, as we intend to replicate these findings.

****

a) I am [ ] am not [ ] interested in receiving research results.

b) I am [ ] am not [ ] willing to participate in future related research.

****

✏If you have responded in the affirmative to either a) or b), we will need you to write your name and address on the reverse side of this page, or attach your business card. This page will be separated from the actual survey to maintain confidentiality. Please contact me with questions. I have attached my business card and indicated phone/fax and e-mail address below. Thank you for your valuable assistance.

Sincerely,

Linda M. Sama, Principal Investigator
Phone/Fax: 212-802-6918/212-802-6873 E-mail:lmsbb@cunyvm.cuny.edu

SURVEY INSTRUMENT

Respondent Code #: _____

[Sample]Industry Category: **Environment (SIC 2-digit code: 95)**

Sample Firms:

1. **Allied Waste**
2. **Browning-Ferris Ind.**
3. **Ionics**
4. **OHM**
5. **Safety-Kleen**
6. **USA Waste Services**
7. **US Filter Corp.**
8. **Waste Management**
9. **Wheelabrator**

****Note** The firms listed above are those in our target sample. We are investigating U.S.-domiciled firms only. Please cross out any firms that you *do not* track and omit them from your survey response. For U.S. firms that you *do* track, and which are not included on our list, please add them to the list on this page and include them in your survey response.**

****

PART I - Social Responsiveness

The items in Part I are intended to gauge how firms respond, if at all, to social pressures and related stakeholder expectations. Pressures may include, for example, environmental concerns related to the production and disposal of wastes, workplace safety and health issues, consumer demands for safer products or more comprehensive services, meeting the family and personal needs of employees, and community development in the localities where firms operate. Stakeholders may include, for example, government, the community, employees, customers, suppliers and the media.

While it is true that different pressures and stakeholder groups may elicit different responses, it is also true that firms adopt a relatively consistent strategic posture with regard to social issues, just as they do with regard to commercial issues. It is this general response mode that we wish to capture in this instrument.

We are interested in your evaluation of the firms you follow along three dimensions: (1) an "Activity" dimension; (2) a "Predisposition" dimension; and, (3) a "Strategic Orientation" dimension. Specifically, we want to know how the firms you track align themselves along these dimensions *relative to each other*. We ask that you place the firm, or firms, that are MOST characteristic of the dimension anchors (described in the following section) on the endpoints of each dimension [1 and 7]. All other firms that you track should then be ranked relative to one another and the anchor firms, and placed somewhere in-between the two anchor points. This can only be an approximate rating. We are more concerned with the *relative* position of firms than with absolute rankings, and with the *manifest* behavior of firms than with their stated intentions.

Social Responsiveness: "ACTIVITY" Dimension

"Activity" refers to the extent to which a firm seeks to identify and narrow any emerging gap between its social performance and the related expectations of its stakeholders ("performance-expectations gap"). The dimension is scaled from 1 to 7.

The (1) anchor represents firms that are passive in their response to changes in stakeholder expectations. They do little or nothing to actively scan their environments or narrow the performance-expectations gap (e.g., "Stakeholders should take care of themselves"), although they may comply with existing laws and regulations (e.g., "We'll obey the rules").

The (7) anchor represents firms that are vigorously proactive in their identification of, and efforts to narrow any such gap. They may attempt to change stakeholder expectations in the direction of company interests by engaging in stakeholder education campaigns or lobbying efforts (e.g., "We hear your complaints, but..."); alternatively, they may adjust corporate policies and objectives in the direction of an identified shift in stakeholder expectations and interests (e.g., "We have a responsibility").

Note: Please place company names underneath the scale numbers (1-7), making sure that at least one company appears under each of the anchor positions, i.e., [1] and [7].

1. "Activity" dimension:

PASSIVE **Ignores Performance-** **Expectations Gap**						**PROACTIVE** **Seeks to Narrow Performance-** **Expectations Gap**
1	**2**	**3**	**4**	**5**	**6**	**7**
|	|	|	|	|	|	|

Social Responsiveness: "PREDISPOSITION" Dimension

"Predisposition" refers to the degree to which firms appear sensitive in their response to social pressures. Scaling is from 1 to 7.

The (1) anchor represents firms that appear insensitive in their response, i.e., persist in their behavior either without addressing stakeholder concerns at all (e.g., "It's not our problem"); or, while expressing views counter to those voiced by stakeholders via activities such as advocacy advertising (e.g., "Our point of view is...").

The (7) anchor represents firms that appear sensitive to societal concerns. They may voluntarily comply with existing laws, regulations and industry norms (e.g., "We'll meet your needs"); indeed, they may actually initiate new laws and regulations, ally themselves with stakeholder partners, establish internal company policies that reflect external stakeholder demands, or lead the industry in establishing norms which are socially responsive (e.g., "In anticipation of your needs, let's work together").

Note: Please place company names underneath the scale numbers (1-7), making sure that at least one company appears under each of the anchor positions, i.e., [1] and [7].

2. "Predisposition" dimension:

INSENSITIVE To Societal Concerns						**SENSITIVE To Societal Concerns**
1	**2**	**3**	**4**	**5**	**6**	**7**
|	|	|	|	|	|	|

Social Responsiveness: "STRATEGIC ORIENTATION" Dimension

"Strategic Orientation" refers to the degree to which top management (CEO and his/her direct reports) has a long-term vision for the future of the firm. Scaling is from 1 to 7.

The (1) anchor represents firms in which top management does not have a long-term vision for the future of the firm, and directs the organization with an emphasis on short-term results. In these firms, organizational members do not share a collective view of the desired future state of the firm.

The (7) anchor represents firms in which top management does have a long-term vision for the future of the firm, and directs the organization with the objective of enacting that vision. In these firms, the desired future state of the firm is understood and collectively shared by organizational members.

Note: Please place company names underneath the scale numbers (1-7), making sure that at least one company appears under each of the anchor positions, i.e., [1] and [7].

3. "Strategic Orientation" dimension:

SHORT-TERM ORIENTATION **LONG-TERM ORIENTATION**

1 2 3 4 5 6 7

PART II - Industry Characteristics

We would like you to help us characterize the industry environment in which these firms operate. Please answer these questions with the general industry in mind.

For questions 1-5, indicate how you would characterize this industry by circling the number that best corresponds with your choice. ***Each question is preceded by a description of the anchors.***

QUESTION #1: DEGREE OF REGULATORY OVERSIGHT

"Far below what is optimal" would pertain to an industry that is **in need of a great deal more regulatory oversight** in order to promote economic efficiency and/or the public interest.

"Far above what is optimal" would pertain to an industry that is **subject to far too much regulatory oversight**, i.e., superfluous regulations.

	Far Below What is Optimal	Somewhat Below What is Optimal	About What is Optimal	Somewhat Above What is Optimal	Far Above What is Optimal
1. The degree of regulatory oversight relative to its promotion of					
a) economic efficiency is:	1	2	3	4	5
b) public welfare is:	1	2	3	4	5

QUESTION # 2: DEGREE OF CONCENTRATION

"Highly fragmented" refers to industries where market **players are numerous** and competition is keen.

"Highly concentrated" refers to industries where the **top 4 market players control 75% or more of the market.**

	Highly Fragmented	Fragmented	About Average	Concen-trated	Highly Concen.
2. The degree of concentration is:	1	2	3	4	5

QUESTION #3: DEGREE OF TURBULENCE

"Extremely tranquil" refers to a market environment that is marked by: **a)** highly **stable relative market share**; and/or, **b) highly stable consumer demand**. Change is infrequent and predictable.

"Highly turbulent" refers to a market environment that is marked by: **a) constantly shifting relative share**; and/or, **b) highly unstable consumer demand**. Change is frequent and unpredictable.

	Extremely Tranquil	Tranquil	About Average	Turbulent	Highly Turbulent
3. The degree of turbulence as evidenced by					
a) shifts in relative market share is:	1	2	3	4	5
b) stability/ instability of consumer demand is:	1	2	3	4	5

QUESTION #4: HEIGHT OF ENTRY/EXIT BARRIERS

"Very low" refers to **a) entry barriers that are easily scaled by potential new entrants**, i.e., industries marked by low capital requirements, little differentiation, technological change, promise of high growth, low regulation; and, **b) exit barriers that are easily scaled by incumbents**, i.e., industries with few dedicated assets, a small union presence, low regulation.

"Very high" refers to **a) entry barriers that pose a sizeable obstacle to entry**, i.e., mature industries with reputational advantages, high differentiation, high start-up costs, heavy regulation; and, **b) exit barriers that pose a sizeable obstacle to incumbents** in the face of waning demand, i.e., industries marked by social or union contracts with employees, many dedicated assets, oversupply/over capacity, heavy regulation, networked relationships with suppliers and/or distributors.

	Very Low	Low	About Average	High	Very High
4. Height of					
a) entry barriers is:	1	2	3	4	5
b) exit barriers is:	1	2	3	4	5

QUESTION #5: EXTENT OF PUBLIC VISIBILITY

"Extremely Low Visibility" refers to an industry **not in the public consciousness**, i.e., it deals mainly with industrial customers, and is not a subject of media attention or controversy.

"Extremely High Visibility" refers to an industry **central to the public consciousness**, i.e., it sells directly to the end-user, is **often cited (negatively or positively) in the press**, or is experiencing a great deal of attention over controversies related to the industry's practices.

	Extremely Low Visibility	Low Visibility	About Average	High Visibility	Extremely High Visibility
5. Extent of visibility to the public is:	1	2	3	4	5

PART III - Perception

Please respond to the following ten (10) statements from your own point of view. For each statement, indicate whether you Strongly Disagree (SD), Disagree (D), Agree (A), Strongly Agree (SA) or are Undecided (U), by placing an "X" in the appropriate brackets [ ].

	(SD)	(D)	(A)	(SA)	(U)
1. Socially responsive firms tend to be more profitable than unresponsive firms.	[ ]	[ ]	[ ]	[ ]	[ ]
2. Social responsiveness should be considered in the strategic process only once profit goals are reached.	[ ]	[ ]	[ ]	[ ]	[ ]
3. Socially responsive firms enjoy better stakeholder relations than unresponsive firms.	[ ]	[ ]	[ ]	[ ]	[ ]
4. Socially responsive strategies are costly in the short term.	[ ]	[ ]	[ ]	[ ]	[ ]
5. Socially responsive firms are often successful at pre-empting government regulation.	[ ]	[ ]	[ ]	[ ]	[ ]
6. Socially responsive strategies rarely pay off in the long term.	[ ]	[ ]	[ ]	[ ]	[ ]
7. Companies should be socially responsive because it is the "right thing to do".	[ ]	[ ]	[ ]	[ ]	[ ]
8. A firm's level of social responsiveness is of little concern to investors.	[ ]	[ ]	[ ]	[ ]	[ ]
9. Socially responsive strategies are highly desirable from an investment viewpoint.	[ ]	[ ]	[ ]	[ ]	[ ]
10. Socially responsive strategies divert resources from other, more critical corporate activities.	[ ]	[ ]	[ ]	[ ]	[ ]

THANK YOU. THIS IS THE END OF THE SURVEY.

APPENDIX D

FORMULAE FOR COMPUTING: (1) PROPORTIONAL CHANCE CRITERION, (2) "FAIREST" CRITERION, AND (3) PRESS'S Q:

(1) Proportional Chance Criterion:

$$P_{exp} = P^2_R + P^2_D + P^2_A + P^2_P$$

(2) "Fairest" Criterion:

$$P_{exp} = (P_R \times P_{predR}) + (P_D \times P_{predD}) + (P_A \times P_{predA}) + (P_P \times P_{predP})$$

(3) Press's Q:

$$Q = (N - nK)^2 / N(K-1)$$

Where:

P_{exp} = Proportion of cases expected to be classified correctly.
P_R = Actual proportion of firms that are "Resistors".
P_D = Actual proportion of firms that are "Defenders".
P_A = Actual proportion of firms that are "Accommodators".
P_P = Actual proportion of firms that are "Progressives".
P_{predR} = Predicted proportion of firms that are "Resistors".
P_{predD} = Predicted proportion of firms that are "Defenders".
P_{predA} = Predicted proportion of firms that are "Accommodators".
P_{predP} = Predicted proportion of firms that are "Progressives".
N = Sample number of cases totaled across all groups
n = Number of correctly classified cases (or "hits")
K = Number of classification groups (4)

Table 1. Descriptive Statistics: All Variables

Descriptive Statistics

	Mean	Std. Deviation	N
Activity	.1092	1.9133	140
Predisposition	8.125E-02	1.9041	140
Standardized ROE	.2429	3.5077	139
Standardized ROC	.4601	3.7037	136
Standardized ROS	.2428	4.3058	137
%OUTSIDERS	.7196	.1550	140
%Non-business Outsiders	.2151	.1200	140
% WOMEN	9.092E-02	6.169E-02	140
%Yrs SRComiittee	.3793	.4639	140
Concentrated Authority	.81	.40	140
Log of Insider Ownership	.2475	.7519	139
%Institutional ownership	56.8919	19.2252	140
%Social Institutional Ownership	4.7472	2.0614	140
Log of Public Visibility	1.7216	.5484	140
Log of Board Size	1.0354	.1256	140
Log of ROE Variability	.6810	.3243	139
Log of ROC Variability	.5142	.3086	139
Log of ROS Variability	.2201	.3917	138

Table 2. Pearson Correlation Coefficients: All Pairs

Correlations

		Activity	Predisposition	Standardized ROE	Standardized ROC	Standardized ROS	%OUTSIDERS	%Non-business Outsiders	% WOMEN	%Yrs SRComiittee	Concentrated Authority
Activity	Pearson Correlation	1.000	.439**	.567**	.560**	.427**	.177*	.076	.171*	.269**	.140
	Sig. (2-tailed)	.	.000	.000	.000	.000	.036	.370	.043	.001	.100
	N	140	140	139	136	137	140	140	140	140	140
Predisposition	Pearson Correlation	.439**	1.000	.139	.215*	.191*	.326**	.220**	.208*	-.013	-.026
	Sig. (2-tailed)	.000	.	.102	.012	.025	.000	.009	.014	.878	.761
	N	140	140	139	136	137	140	140	140	140	140
Standardized ROE	Pearson Correlation	.567**	.139	1.000	.849**	.435**	.211*	.099	.260**	.187*	.089
	Sig. (2-tailed)	.000	.102	.	.000	.000	.013	.248	.002	.028	.299
	N	139	139	139	136	136	139	139	139	139	139
Standardized ROC	Pearson Correlation	.560**	.215*	.849**	1.000	.565**	.223**	.007	.205*	.102	-.034
	Sig. (2-tailed)	.000	.012	.000	.	.000	.009	.933	.017	.239	.698
	N	136	136	136	136	135	136	136	136	136	136
Standardized ROS	Pearson Correlation	.427**	.191*	.435**	.565**	1.000	.062	.013	.141	.070	.038
	Sig. (2-tailed)	.000	.025	.000	.000	.	.468	.882	.102	.416	.657
	N	137	137	136	135	137	137	137	137	137	137
%OUTSIDERS	Pearson Correlation	.177*	.326**	.211*	.223**	.062	1.000	.255**	.266**	.137	.027
	Sig. (2-tailed)	.036	.000	.013	.009	.468	.	.002	.001	.106	.749
	N	140	140	139	136	137	140	140	140	140	140

Table 2. Pearson Correlation Coefficients: All Pairs - Continued...

Correlations

		Activity	Predisposition	Standardized ROE	Standardized ROC	Standardized ROS	%OUTSIDERS	%Non-business Outsiders	% WOMEN	%Yrs SRComiittee	Concentrated Authority
%Non-business Outsiders	Pearson Correlation	.076	.220**	.099	.007	.013	.255**	1.000	.221**	.220**	.127
	Sig. (2-tailed)	.370	.009	.248	.933	.882	.002	.	.009	.009	.134
	N	140	140	139	136	137	140	140	140	140	140
% WOMEN	Pearson Correlation	.171*	.208*	.260**	.205*	.141	.266**	.221**	1.000	.200*	.087
	Sig. (2-tailed)	.043	.014	.002	.017	.102	.001	.009	.	.018	.306
	N	140	140	139	136	137	140	140	140	140	140
%Yrs SRComiittee	Pearson Correlation	.269**	-.013	.187*	.102	.070	.137	.220**	.200*	1.000	.072
	Sig. (2-tailed)	.001	.878	.028	.239	.416	.106	.009	.018	.	.397
	N	140	140	139	136	137	140	140	140	140	140
Concentrated Authority	Pearson Correlation	.140	-.026	.089	-.034	.038	.027	.127	.087	.072	1.000
	Sig. (2-tailed)	.100	.761	.299	.698	.657	.749	.134	.306	.397	.
	N	140	140	139	136	137	140	140	140	140	140
Log of Insider Ownership	Pearson Correlation	-.107	-.221**	-.206*	-.185*	.066	-.433**	-.171*	-.385**	-.263**	-.187*
	Sig. (2-tailed)	.211	.009	.015	.032	.445	.000	.044	.000	.002	.028
	N	139	139	138	135	136	139	139	139	139	139
%Institutional ownership	Pearson Correlation	-.048	.157	.100	.048	-.001	.142	.153	-.169*	.036	.015
	Sig. (2-tailed)	.570	.063	.242	.580	.992	.094	.071	.046	.670	.858
	N	140	140	139	136	137	140	140	140	140	140

Table 2. Pearson Correlation Coefficients: All Pairs - Continued...

Correlations

		Activity	Predisposition	Standardized ROE	Standardized ROC	Standardized ROS	%OUTSIDERS	%Non-business Outsiders	% WOMEN	%Yrs SRComiittee	Concentrated Authority
%Social Institutional Ownership	Pearson Correlation	-.055	.268**	.022	-.025	.039	.137	.184*	-.014	.009	.019
	Sig. (2-tailed)	.521	.001	.799	.775	.655	.107	.030	.872	.917	.825
	N	140	140	139	136	137	140	140	140	140	140
Log of Public Visibility	Pearson Correlation	.071	.099	.218**	.099	.065	.168*	.278**	.348**	.075	.068
	Sig. (2-tailed)	.407	.242	.010	.252	.447	.047	.001	.000	.377	.427
	N	140	140	139	136	137	140	140	140	140	140
Log of Board Size	Pearson Correlation	-.002	-.148	.167*	.114	.074	.138	.177*	.365**	.390**	-.074
	Sig. (2-tailed)	.980	.080	.049	.185	.393	.104	.036	.000	.000	.386
	N	140	140	139	136	137	140	140	140	140	140
Log of ROE Variability	Pearson Correlation	-.122	-.111	-.129	-.063	-.283**	-.029	.097	-.062	-.114	.028
	Sig. (2-tailed)	.152	.193	.130	.466	.001	.736	.257	.472	.180	.743
	N	139	139	139	136	136	139	139	139	139	139
Log of ROC Variability	Pearson Correlation	-.076	-.060	-.096	-.030	-.101	-.068	.157	-.091	-.147	-.049
	Sig. (2-tailed)	.374	.480	.264	.730	.240	.427	.065	.284	.084	.565
	N	139	139	138	135	136	139	139	139	139	139
Log of ROS Variability	Pearson Correlation	-.224**	-.107	-.270**	-.256**	-.118	-.239**	-.047	-.257**	-.238**	-.073
	Sig. (2-tailed)	.008	.213	.001	.003	.174	.005	.582	.002	.005	.395
	N	138	138	137	134	135	138	138	138	138	138

Table 2. Pearson Correlation Coefficients: All Pairs - Continued...

Correlations

		Log of Insider Ownership	%Institutional ownership	%Social Institutional Ownership	Log of Public Visibility	Log of Board Size	Log of ROE Variability	Log of ROC Variability	Log of ROS Variability
Activity	Pearson Correlation	-.107	-.048	-.055	.071	-.002	-.122	-.076	-.224**
	Sig. (2-tailed)	.211	.570	.521	.407	.980	.152	.374	.008
	N	139	140	140	140	140	139	139	138
Predisposition	Pearson Correlation	-.221**	.157	.268**	.099	-.148	-.111	-.060	-.107
	Sig. (2-tailed)	.009	.063	.001	.242	.080	.193	.480	.213
	N	139	140	140	140	140	139	139	138
Standardized ROE	Pearson Correlation	-.206*	.100	.022	.218**	.167*	-.129	-.096	-.270**
	Sig. (2-tailed)	.015	.242	.799	.010	.049	.130	.264	.001
	N	138	139	139	139	139	139	138	137
Standardized ROC	Pearson Correlation	-.185*	.048	-.025	.099	.114	-.063	-.030	-.256**
	Sig. (2-tailed)	.032	.580	.775	.252	.185	.466	.730	.003
	N	135	136	136	136	136	136	135	134
Standardized ROS	Pearson Correlation	.066	-.001	.039	.065	.074	-.283**	-.101	-.118
	Sig. (2-tailed)	.445	.992	.655	.447	.393	.001	.240	.174
	N	136	137	137	137	137	136	136	135
%OUTSIDERS	Pearson Correlation	-.433**	.142	.137	.168*	.138	-.029	-.068	-.239**
	Sig. (2-tailed)	.000	.094	.107	.047	.104	.736	.427	.005
	N	139	140	140	140	140	139	139	138

Table 2. Pearson Correlation Coefficients: All Pairs - Continued...

Correlations

		Log of Insider Ownership	%Institutional ownership	%Social Institutional Ownership	Log of Public Visibility	Log of Board Size	Log of ROE Variability	Log of ROC Variability	Log of ROS Variability
%Non-business Outsiders	Pearson Correlation	-.171*	.153	.184*	.278**	.177*	.097	.157	-.047
	Sig. (2-tailed)	.044	.071	.030	.001	.036	.257	.065	.582
	N	139	140	140	140	140	139	139	138
% WOMEN	Pearson Correlation	-.385**	-.169*	-.014	.348**	.365**	-.062	-.091	-.257**
	Sig. (2-tailed)	.000	.046	.872	.000	.000	.472	.284	.002
	N	139	140	140	140	140	139	139	138
%Yrs SRComiittee	Pearson Correlation	-.263**	.036	.009	.075	.390**	-.114	-.147	-.238**
	Sig. (2-tailed)	.002	.670	.917	.377	.000	.180	.084	.005
	N	139	140	140	140	140	139	139	138
Concentrated Authority	Pearson Correlation	-.187*	.015	.019	.068	-.074	.028	-.049	-.073
	Sig. (2-tailed)	.028	.858	.825	.427	.386	.743	.565	.395
	N	139	140	140	140	140	139	139	138
Log of Insider Ownership	Pearson Correlation	1.000	-.019	-.068	-.280**	-.216*	-.036	.114	.176*
	Sig. (2-tailed)	.	.825	.424	.001	.011	.675	.184	.040
	N	139	139	139	139	139	138	138	137
%Institutional ownership	Pearson Correlation	-.019	1.000	.612**	-.270**	-.056	-.113	-.074	.014
	Sig. (2-tailed)	.825	.	.000	.001	.509	.184	.386	.868
	N	139	140	140	140	140	139	139	138

Table 2. Pearson Correlation Coefficients: All Pairs - Continued...

Correlations

		Log of Insider Ownership	%Institutional ownership	%Social Institutional Ownership	Log of Public Visibility	Log of Board Size	Log of ROE Variability	Log of ROC Variability	Log of ROS Variability
%Social Institutional Ownership	Pearson Correlation	-.068	.612**	1.000	-.156	-.055	-.056	.002	-.029
	Sig. (2-tailed)	.424	.000	.	.066	.521	.513	.977	.737
	N	139	140	140	140	140	139	139	138
Log of Public Visibility	Pearson Correlation	-.280**	-.270**	-.156	1.000	.227**	.057	.104	-.155
	Sig. (2-tailed)	.001	.001	.066	.	.007	.507	.222	.069
	N	139	140	140	140	140	139	139	138
Log of Board Size	Pearson Correlation	-.216*	-.056	-.055	.227**	1.000	-.219**	-.309**	-.404**
	Sig. (2-tailed)	.011	.509	.521	.007	.	.010	.000	.000
	N	139	140	140	140	140	139	139	138
Log of ROE Variability	Pearson Correlation	-.036	-.113	-.056	.057	-.219**	1.000	.834**	.576**
	Sig. (2-tailed)	.675	.184	.513	.507	.010	.	.000	.000
	N	138	139	139	139	139	139	138	137
Log of ROC Variability	Pearson Correlation	.114	-.074	.002	.104	-.309**	.834**	1.000	.641**
	Sig. (2-tailed)	.184	.386	.977	.222	.000	.000	.	.000
	N	138	139	139	139	139	138	139	137
Log of ROS Variability	Pearson Correlation	.176*	.014	-.029	-.155	-.404**	.576**	.641**	1.000
	Sig. (2-tailed)	.040	.868	.737	.069	.000	.000	.000	.
	N	137	138	138	138	138	137	137	138

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

TABLE 3. Correlations: Substituting Factors

Correlations

		Volatility of Slack	Strategic Slack	Insider-Outsider Governance	Institutional Ownership	Board Structure	Log of Public Visibility	Activity	Predisposition
Volatility of Slack	Pearson Correlation	1.000	.000	.000	.000	.000	.093	-.078	-.037
	Sig. (2-tailed)	.	1.000	1.000	1.000	1.000	.290	.378	.673
	N	131	131	131	131	131	131	131	131
Strategic Slack	Pearson Correlation	.000	1.000	.000	.000	.000	.045	.568**	.166
	Sig. (2-tailed)	1.000	.	1.000	1.000	1.000	.608	.000	.058
	N	131	131	131	131	131	131	131	131
Insider-Outsider Governance	Pearson Correlation	.000	.000	1.000	.000	.000	.332**	.143	.252**
	Sig. (2-tailed)	1.000	1.000	.	1.000	1.000	.000	.104	.004
	N	131	131	131	131	131	131	131	131
Institutional Ownership	Pearson Correlation	.000	.000	.000	1.000	.000	-.283**	-.063	.226**
	Sig. (2-tailed)	1.000	1.000	1.000	.	1.000	.001	.472	.009
	N	131	131	131	131	131	131	131	131
Board Structure	Pearson Correlation	.000	.000	.000	.000	1.000	.142	.004	-.075
	Sig. (2-tailed)	1.000	1.000	1.000	1.000	.	.106	.967	.392
	N	131	131	131	131	131	131	131	131
Log of Public Visibility	Pearson Correlation	.093	.045	.332**	-.283**	.142	1.000	.071	.099
	Sig. (2-tailed)	.290	.608	.000	.001	.106	.	.407	.242
	N	131	131	131	131	131	140	140	140
Activity	Pearson Correlation	-.078	.568**	.143	-.063	.004	.071	1.000	.439**
	Sig. (2-tailed)	.378	.000	.104	.472	.967	.407	.	.000
	N	131	131	131	131	131	140	140	140
Predisposition	Pearson Correlation	-.037	.166	.252**	.226**	-.075	.099	.439**	1.000
	Sig. (2-tailed)	.673	.058	.004	.009	.392	.242	.000	.
	N	131	131	131	131	131	140	140	140

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4a. Descriptives Grouped by Variable and Social Response Category

Descriptives

		N	Mean	Std. Deviation	Std. Error
Log of Public Visibility	Resistant	31	1.6013	.5677	.1020
	Defensive	34	1.7022	.6115	.1049
	Accommodative	30	1.7746	.4436	8.099E-02
	Progressive	45	1.7838	.5513	8.218E-02
	Total	140	1.7216	.5484	4.635E-02
Standardized ROE	Resistant	31	-2.2920	3.2436	.5826
	Defensive	34	2.5309	3.6575	.6273
	Accommodative	30	-1.6700	2.3810	.4347
	Progressive	44	1.5652	2.2235	.3352
	Total	139	.2429	3.5077	.2975
Standardized ROC	Resistant	29	-2.0983	2.7153	.5042
	Defensive	33	2.1991	3.3199	.5779
	Accommodative	30	-1.6873	2.8748	.5249
	Progressive	44	2.3062	3.3242	.5011
	Total	136	.4601	3.7037	.3176
Standardized ROS	Resistant	30	-2.1098	3.6357	.6638
	Defensive	32	1.5444	3.4625	.6121
	Accommodative	30	-1.7588	3.9270	.7170
	Progressive	45	2.2199	4.2717	.6368
	Total	137	.2428	4.3058	.3679
Log of ROE Variability	Resistant	31	.7685	.3645	6.546E-02
	Defensive	34	.5953	.3243	5.562E-02
	Accommodative	30	.6806	.2704	4.937E-02
	Progressive	44	.6858	.3216	4.848E-02
	Total	139	.6810	.3243	2.751E-02
Log of ROC Variability	Resistant	31	.5729	.3316	5.956E-02
	Defensive	34	.4589	.3124	5.357E-02
	Accommodative	30	.5151	.3306	6.037E-02
	Progressive	44	.5149	.2747	4.141E-02
	Total	139	.5142	.3086	2.618E-02
Log of ROS Variability	Resistant	30	.3506	.4468	8.158E-02
	Defensive	34	.1373	.3857	6.614E-02
	Accommodative	29	.2820	.3795	7.048E-02
	Progressive	45	.1556	.3452	5.146E-02
	Total	138	.2201	.3917	3.334E-02

Table 4a. Descriptives Grouped by Variable and Social Response Category - Continued...

Descriptives

		N	Mean	Std. Deviation	Std. Error
Log of Board Size	Resistant	31	1.0474	.1678	3.013E-02
	Defensive	34	1.0668	.1029	1.765E-02
	Accommodative	30	1.0070	.1068	1.951E-02
	Progressive	45	1.0224	.1165	1.737E-02
	Total	140	1.0354	.1256	1.061E-02
%OUTSIDERS	Resistant	31	.6731	.1723	3.095E-02
	Defensive	34	.6729	.1819	3.119E-02
	Accommodative	30	.7355	.1406	2.567E-02
	Progressive	45	.7764	.1056	1.574E-02
	Total	140	.7196	.1550	1.310E-02
%Non-business Outsiders	Resistant	31	.1857	.1200	2.154E-02
	Defensive	34	.1840	.1244	2.133E-02
	Accommodative	30	.2389	9.890E-02	1.806E-02
	Progressive	45	.2430	.1228	1.831E-02
	Total	140	.2151	.1200	1.014E-02
% WOMEN	Resistant	31	6.292E-02	5.915E-02	1.062E-02
	Defensive	34	8.951E-02	5.497E-02	9.426E-03
	Accommodative	30	9.670E-02	7.582E-02	1.384E-02
	Progressive	45	.1074	5.225E-02	7.788E-03
	Total	140	9.092E-02	6.169E-02	5.214E-03
%Yrs SRComiittee	Resistant	31	.2452	.3957	7.107E-02
	Defensive	34	.5824	.4783	8.203E-02
	Accommodative	30	.1600	.3654	6.671E-02
	Progressive	45	.4644	.4782	7.129E-02
	Total	140	.3793	.4639	3.920E-02
Concentrated Authority	Resistant	31	.74	.44	7.99E-02
	Defensive	34	.82	.39	6.64E-02
	Accommodative	30	.77	.43	7.85E-02
	Progressive	45	.87	.34	5.12E-02
	Total	140	.81	.40	3.35E-02
Log of Insider Ownership	Resistant	30	.5753	.6100	.1114
	Defensive	34	.3361	.8107	.1390
	Accommodative	30	3.642E-02	.6658	.1216
	Progressive	45	.1027	.7820	.1166
	Total	139	.2475	.7519	6.377E-02

Table 4a. Descriptives Grouped by Variable and Social Response Category - Continued...

Descriptives

		N	Mean	Std. Deviation	Std. Error
%Institutional ownership	Resistant	31	56.1519	21.1435	3.7975
	Defensive	34	51.2153	21.3999	3.6701
	Accommodative	30	61.5787	19.6165	3.5815
	Progressive	45	58.5662	14.9199	2.2241
	Total	140	56.8919	19.2252	1.6248
%Social Institutional Ownership	Resistant	31	4.1703	1.9392	.3483
	Defensive	34	4.0476	1.8693	.3206
	Accommodative	30	5.7590	2.4054	.4392
	Progressive	45	4.9987	1.7464	.2603
	Total	140	4.7472	2.0614	.1742

Table 4a. Descriptives Grouped by Variable and Social Response Category - Continued...

Descriptives

		95% Confidence Interval for Mean			
		Lower Bound	Upper Bound	Minimum	Maximum
Log of Public Visibility	Resistant	1.3930	1.8095	.00	2.72
	Defensive	1.4889	1.9156	.30	2.97
	Accommodative	1.6090	1.9402	.85	2.69
	Progressive	1.6181	1.9494	.00	3.02
	Total	1.6300	1.8132	.00	3.02
Standardized ROE	Resistant	-3.4818	-1.1022	-11.16	1.70
	Defensive	1.2547	3.8071	-2.47	14.69
	Accommodative	-2.5591	-.7809	-7.96	2.12
	Progressive	.8892	2.2412	-5.55	8.24
	Total	-.3454	.8312	-11.16	14.69
Standardized ROC	Resistant	-3.1311	-1.0654	-9.07	1.64
	Defensive	1.0219	3.3763	-2.14	15.71
	Accommodative	-2.7608	-.6138	-10.53	3.06
	Progressive	1.2955	3.3168	-5.47	13.03
	Total	-.1680	1.0882	-10.53	15.71
Standardized ROS	Resistant	-3.4674	-.7522	-12.11	4.63
	Defensive	.2961	2.7928	-4.52	12.45
	Accommodative	-3.2252	-.2924	-14.14	7.68
	Progressive	.9365	3.5033	-3.31	18.76
	Total	-.4847	.9703	-14.14	18.76
Log of ROE Variability	Resistant	.6348	.9022	.07	1.54
	Defensive	.4821	.7085	-.13	1.24
	Accommodative	.5797	.7816	.08	1.08
	Progressive	.5880	.7836	.13	1.53
	Total	.6266	.7354	-.13	1.54
Log of ROC Variability	Resistant	.4513	.6946	-.10	1.27
	Defensive	.3499	.5679	-.11	1.20
	Accommodative	.3916	.6386	-.10	1.03
	Progressive	.4314	.5984	-.09	1.29
	Total	.4624	.5660	-.11	1.29
Log of ROS Variability	Resistant	.1838	.5175	-.74	1.04
	Defensive	2.747E-03	.2719	-.57	1.08
	Accommodative	.1377	.4264	-.49	.88
	Progressive	5.186E-02	.2593	-.83	.77
	Total	.1541	.2860	-.83	1.08

Table 4a. Descriptives Grouped by Variable
and Social Response Category - Continued...

Descriptives

		95% Confidence Interval for Mean			
		Lower Bound	Upper Bound	Minimum	Maximum
Log of Board Size	Resistant	.9859	1.1090	.70	1.41
	Defensive	1.0309	1.1027	.85	1.28
	Accommodative	.9671	1.0469	.85	1.20
	Progressive	.9874	1.0574	.70	1.26
	Total	1.0145	1.0564	.70	1.41
%OUTSIDERS	Resistant	.6099	.7363	.36	.93
	Defensive	.6095	.7364	.25	.92
	Accommodative	.6830	.7880	.43	.92
	Progressive	.7447	.8081	.38	.93
	Total	.6937	.7455	.25	.93
%Non-business Outsiders	Resistant	.1417	.2297	.00	.45
	Defensive	.1406	.2274	.00	.40
	Accommodative	.2019	.2758	.00	.40
	Progressive	.2061	.2799	.00	.50
	Total	.1951	.2352	.00	.50
% WOMEN	Resistant	4.123E-02	8.462E-02	.00	.17
	Defensive	7.033E-02	.1087	.00	.17
	Accommodative	6.839E-02	.1250	.00	.23
	Progressive	9.171E-02	.1231	.00	.23
	Total	8.061E-02	.1012	.00	.23
%Yrs SRComiittee	Resistant	.1000	.3903	.00	1.00
	Defensive	.4155	.7492	.00	1.00
	Accommodative	2.356E-02	.2964	.00	1.00
	Progressive	.3208	.6081	.00	1.00
	Total	.3018	.4568	.00	1.00
Concentrated Authority	Resistant	.58	.91	0	1
	Defensive	.69	.96	0	1
	Accommodative	.61	.93	0	1
	Progressive	.76	.97	0	1
	Total	.74	.87	0	1
Log of Insider Ownership	Resistant	.3476	.8031	-1.30	1.74
	Defensive	5.324E-02	.6189	-1.22	1.59
	Accommodative	-.2122	.2850	-1.70	.84
	Progressive	-.1323	.3376	-2.00	1.69
	Total	.1214	.3736	-2.00	1.74

Table 4a. Descriptives Grouped by Variable and Social Response Category - Continued...

Descriptives

		95% Confidence Interval for Mean			
		Lower Bound	Upper Bound	Minimum	Maximum
%Institutional ownership	Resistant	48.3964	63.9074	.00	93.40
	Defensive	43.7485	58.6821	.00	84.33
	Accommodative	54.2538	68.9036	.00	92.91
	Progressive	54.0838	63.0487	18.79	93.80
	Total	53.6794	60.1045	.00	93.80
%Social Institutional Ownership	Resistant	3.4590	4.8816	.00	9.91
	Defensive	3.3954	4.6999	.00	8.38
	Accommodative	4.8608	6.6572	.00	10.95
	Progressive	4.4740	5.5233	1.66	11.39
	Total	4.4028	5.0917	.00	11.39

Table 4b. One-way ANOVAs: Social Response Categories as Factor Levels

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Log of Public Visibility	Between Groups	.720	3	.240	.794	.499
	Within Groups	41.091	136	.302		
	Total	41.811	139			
Standardized ROE	Between Groups	563.891	3	187.964	22.375	.000
	Within Groups	1134.100	135	8.401		
	Total	1697.992	138			
Standardized ROC	Between Groups	577.895	3	192.632	19.959	.000
	Within Groups	1273.986	132	9.651		
	Total	1851.881	135			
Standardized ROS	Between Groups	516.356	3	172.119	11.417	.000
	Within Groups	2005.119	133	15.076		
	Total	2521.475	136			
Log of ROE Variability	Between Groups	.488	3	.163	1.565	.201
	Within Groups	14.025	135	.104		
	Total	14.513	138			
Log of ROC Variability	Between Groups	.211	3	7.030E-02	.734	.534
	Within Groups	12.933	135	9.580E-02		
	Total	13.144	138			
Log of ROS Variability	Between Groups	1.043	3	.348	2.332	.077
	Within Groups	19.975	134	.149		
	Total	21.018	137			
Log of Board Size	Between Groups	6.969E-02	3	2.323E-02	1.489	.220
	Within Groups	2.122	136	1.561E-02		
	Total	2.192	139			

Table 4b. One-way ANOVAs: Social Response Categories as Factor Levels - Continued...

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
%OUTSIDERS	Between Groups	.294	3	9.791E-02	4.372	.006
	Within Groups	3.046	136	2.240E-02		
	Total	3.339	139			
%Non-business Outsiders	Between Groups	.112	3	3.717E-02	2.675	.050
	Within Groups	1.890	136	1.390E-02		
	Total	2.001	139			
% WOMEN	Between Groups	3.760E-02	3	1.253E-02	3.468	.018
	Within Groups	.491	136	3.614E-03		
	Total	.529	139			
%Yrs SRComiittee	Between Groups	3.729	3	1.243	6.456	.000
	Within Groups	26.181	136	.193		
	Total	29.910	139			
Concentrated Authority	Between Groups	.350	3	.117	.739	.531
	Within Groups	21.443	136	.158		
	Total	21.793	139			
Log of Insider Ownership	Between Groups	5.772	3	1.924	3.595	.015
	Within Groups	72.241	135	.535		
	Total	78.013	138			
%Institutional ownership	Between Groups	1897.709	3	632.570	1.739	.162
	Within Groups	49477.967	136	363.809		
	Total	51375.677	139			
%Social Institutional Ownership	Between Groups	60.513	3	20.171	5.175	.002
	Within Groups	530.123	136	3.898		
	Total	590.636	139			

Table 5a. Descriptives Grouped by Principal Component and Social Response Category

Descriptives

		N	Mean	Std. Deviation	Std. Error
Volatility of Slack	Resistant	27	.1419926	1.1788633	.2268724
	Defensive	32	-.1705036	1.0192487	.1801794
	Accommodative	29	3.41E-02	.9766861	.1813661
	Progressive	43	1.47E-02	.8922284	.1360636
	Total	131	-5.00E-17	1.0000000	8.74E-02
Strategic Slack	Resistant	27	-.6490312	.7256991	.1396609
	Defensive	32	.5406566	.9519151	.1682764
	Accommodative	29	-.6625573	.7641108	.1418918
	Progressive	43	.4520231	.8398535	.1280765
	Total	131	-5.42E-17	1.0000000	8.74E-02
Insider-Outsider Governance	Resistant	27	-.4087468	.9996552	.1923837
	Defensive	32	-.2617312	.9723176	.1718831
	Accommodative	29	.2086199	.9591272	.1781054
	Progressive	43	.3107345	.9365009	.1428151
	Total	131	5.29E-16	1.0000000	8.74E-02
Institutional Ownership	Resistant	27	-.1169927	.9883595	.1902099
	Defensive	32	-.3660980	1.0642146	.1881283
	Accommodative	29	.3531874	1.0731187	.1992731
	Progressive	43	.1077093	.8233715	.1255630
	Total	131	-3.25E-16	1.0000000	8.74E-02
Board Structure	Resistant	27	.1159566	1.0813441	.2081048
	Defensive	32	.1986884	1.0511040	.1858107
	Accommodative	29	-.2372689	.9230493	.1714060
	Progressive	43	-6.07E-02	.9521281	.1451982
	Total	131	3.59E-15	1.0000000	8.74E-02
Log of Public Visibility	Resistant	31	1.6013	.5677	.1020
	Defensive	34	1.7022	.6115	.1049
	Accommodative	30	1.7746	.4436	8.099E-02
	Progressive	45	1.7838	.5513	8.218E-02
	Total	140	1.7216	.5484	4.635E-02

Table 5a. Descriptives Grouped by Principal Component and Social Response Category - Continued...

Descriptives

		95% Confidence Interval for Mean			
		Lower Bound	Upper Bound	Minimum	Maximum
Volatility of Slack	Resistant	-.3243502	.6083354	-2.35224	2.09578
	Defensive	-.5379820	.1969747	-1.81528	1.88894
	Accommodative	-.3373695	.4056536	-1.74608	1.49046
	Progressive	-.2598851	.2892896	-2.32191	2.11343
	Total	-.1728519	.1728519	-2.35224	2.11343
Strategic Slack	Resistant	-.9361082	-.3619542	-2.50239	.52518
	Defensive	.1974547	.8838586	-.71643	3.94415
	Accommodative	-.9532095	-.3719051	-2.42863	.52482
	Progressive	.1935543	.7104918	-1.46511	3.39516
	Total	-.1728519	.1728519	-2.50239	3.94415
Insider-Outsider Governance	Resistant	-.8041972	-1.33E-02	-2.60846	1.21702
	Defensive	-.6122891	9.88E-02	-2.18458	1.29890
	Accommodative	-.1562126	.5734524	-1.73064	2.34573
	Progressive	2.25E-02	.5989470	-1.40617	2.17526
	Total	-.1728519	.1728519	-2.60846	2.34573
Institutional Ownership	Resistant	-.5079746	.2739893	-2.84034	2.64119
	Defensive	-.7497883	1.76E-02	-2.97002	1.01829
	Accommodative	-5.50E-02	.7613800	-2.93693	2.20468
	Progressive	-.1456870	.3611057	-1.56747	2.58510
	Total	-.1728519	.1728519	-2.97002	2.64119
Board Structure	Resistant	-.3118089	.5437220	-2.43593	2.66836
	Defensive	-.1802750	.5776518	-1.71131	2.28536
	Accommodative	-.5883781	.1138403	-1.92849	2.49549
	Progressive	-.3536743	.2323693	-2.17797	1.87647
	Total	-.1728519	.1728519	-2.43593	2.66836
Log of Public Visibility	Resistant	1.3930	1.8095	.00	2.72
	Defensive	1.4889	1.9156	.30	2.97
	Accommodative	1.6090	1.9402	.85	2.69
	Progressive	1.6181	1.9494	.00	3.02
	Total	1.6300	1.8132	.00	3.02

Table 5b. One-way ANOVAs using Principal Components

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Volatility of Slack	Between Groups	1.518	3	.506	.500	.683
	Within Groups	128.482	127	1.012		
	Total	130.000	130			
Strategic Slack	Between Groups	42.244	3	14.081	20.378	.000
	Within Groups	87.756	127	.691		
	Total	130.000	130			
Insider-Outsider Governance	Between Groups	12.117	3	4.039	4.351	.006
	Within Groups	117.883	127	.928		
	Total	130.000	130			
Institutional Ownership	Between Groups	8.775	3	2.925	3.064	.031
	Within Groups	121.225	127	.955		
	Total	130.000	130			
Board Structure	Between Groups	3.417	3	1.139	1.143	.334
	Within Groups	126.583	127	.997		
	Total	130.000	130			
Log of Public Visibility	Between Groups	.720	3	.240	.794	.499
	Within Groups	41.091	136	.302		
	Total	41.811	139			

Table 6. Post Hoc Pairwise Multiple Comparisons: Strategic Slack

Multiple Comparisons

Dependent Variable: Strategic Slack
Bonferroni

(I) Social Response Category	(J) Social Response Category	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Resistant	Defensive	-1.1896878*	.217	.000	-1.7718921	-.6074836
	Accommodative	1.353E-02	.222	1.000	-.5822998	.6093520
	Progressive	-1.1010543*	.204	.000	-1.6481195	-.5539890
Defensive	Resistant	1.1896878*	.217	.000	.6074836	1.7718921
	Accommodative	1.2032139*	.213	.000	.6320021	1.7744257
	Progressive	8.863E-02	.194	1.000	-.4315153	.6087824
Accommodative	Resistant	-1.35E-02	.222	1.000	-.6093520	.5822998
	Defensive	-1.2032139*	.213	.000	-1.7744257	-.6320021
	Progressive	-1.1145804*	.200	.000	-1.6499321	-.5792286
Progressive	Resistant	1.1010543*	.204	.000	.5539890	1.6481195
	Defensive	-8.86E-02	.194	1.000	-.6087824	.4315153
	Accommodative	1.1145804*	.200	.000	.5792286	1.6499321

*. The mean difference is significant at the .05 level.

Table 7. Post Hoc Pairwise Multiple Comparisons: Insider-Outsider Governance

Multiple Comparisons

Dependent Variable: Insider-Outsider Governance

Bonferroni

(I) Social Response Category	(J) Social Response Category	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Resistant	Defensive	-.1470157	.252	1.000	-.8217953	.5277640
	Accommodative	-.6173667	.258	.108	-1.3079340	7.32E-02
	Progressive	-.7194814*	.237	.017	-1.3535346	-8.54E-02
Defensive	Resistant	.1470157	.252	1.000	-.5277640	.8217953
	Accommodative	-.4703511	.247	.355	-1.1323904	.1916882
	Progressive	-.5724657	.225	.073	-1.1753226	3.04E-02
Accommodative	Resistant	.6173667	.258	.108	-7.32E-02	1.3079340
	Defensive	.4703511	.247	.355	-.1916882	1.1323904
	Progressive	-.1021146	.232	1.000	-.7225919	.5183626
Progressive	Resistant	.7194814*	.237	.017	8.54E-02	1.3535346
	Defensive	.5724657	.225	.073	-3.04E-02	1.1753226
	Accommodative	.1021146	.232	1.000	-.5183626	.7225919

*. The mean difference is significant at the .05 level.

Table 8. Post Hoc Pairwise Multiple Comparisons: Institutional Ownership

Multiple Comparisons

Dependent Variable: Institutional Ownership
Bonferroni

(I) Social Response Category	(J) Social Response Category	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Resistant	Defensive	.2491053	.255	1.000	-.4351735	.9333842
	Accommodative	-.4701801	.261	.446	-1.1704688	.2301086
	Progressive	-.2247020	.240	1.000	-.8676811	.4182772
Defensive	Resistant	-.2491053	.255	1.000	-.9333842	.4351735
	Accommodative	-.7192854*	.250	.029	-1.3906446	-4.79E-02
	Progressive	-.4738073	.228	.239	-1.0851510	.1375363
Accommodative	Resistant	.4701801	.261	.446	-.2301086	1.1704688
	Defensive	.7192854*	.250	.029	4.79E-02	1.3906446
	Progressive	.2454781	.235	1.000	-.3837339	.8746901
Progressive	Resistant	.2247020	.240	1.000	-.4182772	.8676811
	Defensive	.4738073	.228	.239	-.1375363	1.0851510
	Accommodative	-.2454781	.235	1.000	-.8746901	.3837339

*. The mean difference is significant at the .05 level.

Table 9. Principal Components Analysis

Rotated Component Matrix[a]

	Component				
	1	2	3	4	5
Log of ROC Variability	.951				
Log of ROE Variability	.902				
Log of ROS Variability	.781		-.216		-.211
Standardized ROC		.953			
Standardized ROE		.862			
Standardized ROS		.745			
Log of Insider Ownership			-.763		
%OUTSIDERS			.633		
% WOMEN			.587	-.263	.261
Concentrated Authority			.541		-.521
%Non-business Outsiders	.201		.481	.214	.392
%Institutional ownership				.905	
%Social Institutional Ownership				.864	
Log of Board Size	-.305		.201		.716
%Yrs SRComiittee			.234		.633

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Table 10. Principal Components Analysis: Variance Explained for Extracted Components

Total Variance Explained

		Component				
		1	2	3	4	5
Initial Eigenvalues	Total	3.194	2.111	1.969	1.761	1.086
	% of Variance	21.291	14.071	13.129	11.738	7.240
	Cumulative %	21.291	35.362	48.491	60.229	67.470
Extraction Sums of Squared Loadings	Total	3.194	2.111	1.969	1.761	1.086
	% of Variance	21.291	14.071	13.129	11.738	7.240
	Cumulative %	21.291	35.362	48.491	60.229	67.470
Rotation Sums of Squared Loadings	Total	2.521	2.281	2.058	1.769	1.492
	% of Variance	16.808	15.206	13.720	11.791	9.945
	Cumulative %	16.808	32.014	45.734	57.525	67.470

Extraction Method: Principal Component Analysis.

Table 11. Group Means for Analysis Sample

Group Statistics

Social Response Category		Mean	Std. Deviation	Valid N (listwise)	
				Unweighted	Weighted
Resistant	Volatility of Slack	.1419926	1.1788633	27	27.000
	Strategic Slack	-.6490312	.7256991	27	27.000
	Insider-Outsider Governance	-.4087468	.9996552	27	27.000
	Institutional Ownership	-.1169927	.9883595	27	27.000
	Board Structure	.1159566	1.0813441	27	27.000
	Log of Public Visibility	1.7350000	.4369593	27	27.000
Defensive	Volatility of Slack	-.1705036	1.0192487	32	32.000
	Strategic Slack	.5406566	.9519151	32	32.000
	Insider-Outsider Governance	-.2617312	.9723176	32	32.000
	Institutional Ownership	-.3660980	1.0642146	32	32.000
	Board Structure	.1986884	1.0511040	32	32.000
	Log of Public Visibility	1.7105011	.6277783	32	32.000
Accommodative	Volatility of Slack	3.41E-02	.9766861	29	29.000
	Strategic Slack	-.6625573	.7641108	29	29.000
	Insider-Outsider Governance	.2086199	.9591272	29	29.000
	Institutional Ownership	.3531874	1.0731187	29	29.000
	Board Structure	-.2372689	.9230493	29	29.000
	Log of Public Visibility	1.7834266	.4487497	29	29.000
Progressive	Volatility of Slack	1.47E-02	.8922284	43	43.000
	Strategic Slack	.4520231	.8398535	43	43.000
	Insider-Outsider Governance	.3107345	.9365009	43	43.000
	Institutional Ownership	.1077093	.8233715	43	43.000
	Board Structure	-6.07E-02	.9521281	43	43.000
	Log of Public Visibility	1.7827355	.5642551	43	43.000

Table 11. Group Means for Analysis Sample - Continued...

Group Statistics

Social Response Category		Mean	Std. Deviation	Valid N (listwise)	
				Unweighted	Weighted
Total	Volatility of Slack	-5.00E-17	1.0000000	131	131.000
	Strategic Slack	-5.42E-17	1.0000000	131	131.000
	Insider-Outsider Governance	5.29E-16	1.0000000	131	131.000
	Institutional Ownership	-3.25E-16	1.0000000	131	131.000
	Board Structure	3.59E-15	1.0000000	131	131.000
	Log of Public Visibility	1.7554048	.5285892	131	131.000

Table 12a. *Canonical Discriminant Functions for Analysis Sample*

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.583[a]	74.4	74.4	.607
2	.195[a]	24.9	99.3	.404
3	.005[a]	.7	100.0	.073

a. First 3 canonical discriminant functions were used in the analysis.

Table 12b. Canonical Discriminant Functions for Analysis Sample - Wilks' Lambda

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 3	.526	80.419	18	.000
2 through 3	.832	22.972	10	.011
3	.995	.675	4	.954

Table 13. Discriminant Function Coefficients for Analysis Sample

Standardized Canonical Discriminant Function Coefficients

	Function		
	1	2	3
Volatility of Slack	-.144	.025	.940
Strategic Slack	.973	.154	.092
Insider-Outsider Governance	.132	.751	.012
Institutional Ownership	-.370	.585	.055
Board Structure	.205	-.383	.279
Log of Public Visibility	-.261	.105	.051

Table 14. Structure Matrix for Analysis Sample

Structure Matrix

	Function		
	1	2	3
Strategic Slack	.901*	.196	.138
Insider-Outsider Governance	.035	.723*	.031
Institutional Ownership	-.202	.499*	.044
Board Structure	.109	-.317*	.292
Volatility of Slack	-.108	.029	.951*
Log of Public Visibility	-.024	.126	.172*

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions
Variables ordered by absolute size of correlation within function.

*. Largest absolute correlation between each variable and any discriminant function

Table 15. Group Centroids for Analysis Sample

Functions at Group Centroids

Social Response Category	Function		
	1	2	3
Resistant	-.758	-.554	7.984E-02
Defensive	.823	-.412	-7.249E-02
Accommodative	-.948	.348	-8.223E-02
Progressive	.503	.420	5.927E-02

Unstandardized canonical discriminant functions evaluated at group means

Table 16. Linear Discriminant Functions for Analysis Sample

Classification Function Coefficients

	Social Response Category			
	Resistant	Defensive	Accommodative	Progressive
Volatility of Slack	-.171	-.536	-.273	-.346
Strategic Slack	-1.529	.330	-1.601	.125
Insider-Outsider Governance	-1.915	-1.590	-1.240	-.984
Institutional Ownership	1.292	.770	1.894	1.396
Board Structure	-.598	-.371	-1.029	-.719
Log of Public Visibility	8.314	7.554	8.568	7.886
(Constant)	-9.557	-8.035	-10.001	-8.113

Fisher's linear discriminant functions

Table 17. Classification Results for Analysis Sample

Classification Results[b,c]

		Social Response Category	Predicted Group Membership				Total
			Resistant	Defensive	Accommodative	Progressive	
Original	Count	Resistant	11	2	7	7	27
		Defensive	4	11	0	17	32
		Accommodative	5	1	17	6	29
		Progressive	1	8	3	31	43
	%	Resistant	40.7	7.4	25.9	25.9	100.0
		Defensive	12.5	34.4	.0	53.1	100.0
		Accommodative	17.2	3.4	58.6	20.7	100.0
		Progressive	2.3	18.6	7.0	72.1	100.0
Cross-validated[a]	Count	Resistant	10	2	7	8	27
		Defensive	5	9	0	18	32
		Accommodative	6	1	16	6	29
		Progressive	1	8	4	30	43
	%	Resistant	37.0	7.4	25.9	29.6	100.0
		Defensive	15.6	28.1	.0	56.3	100.0
		Accommodative	20.7	3.4	55.2	20.7	100.0
		Progressive	2.3	18.6	9.3	69.8	100.0

a. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

b. 53.4% of original grouped cases correctly classified.

c. 49.6% of cross-validated grouped cases correctly classified.

Table 18. Classification Results using a Holdout Sample

Classification Results[b,c,d]

		Social Response Category	Predicted Group Membership				Total
			Resistant	Defensive	Accommodative	Progressive	
Cases Selected	Original	Count					
		Resistant	9	0	2	7	18
		Defensive	1	11	0	10	22
		Accommodative	3	1	10	5	19
		Progressive	0	4	4	25	33
		%					
		Resistant	50.0	.0	11.1	38.9	100.0
		Defensive	4.5	50.0	.0	45.5	100.0
		Accommodative	15.8	5.3	52.6	26.3	100.0
		Progressive	.0	12.1	12.1	75.8	100.0
	Cross-validated[a]	Count					
		Resistant	8	0	2	8	18
		Defensive	3	9	0	10	22
		Accommodative	3	1	8	7	19
		Progressive	0	5	5	23	33
		%					
		Resistant	44.4	.0	11.1	44.4	100.0
		Defensive	13.6	40.9	.0	45.5	100.0
		Accommodative	15.8	5.3	42.1	36.8	100.0
		Progressive	.0	15.2	15.2	69.7	100.0
Cases Not Selected	Original	Count					
		Resistant	3	2	2	2	9
		Defensive	0	1	0	9	10
		Accommodative	3	0	5	2	10
		Progressive	0	4	0	6	10
		%					
		Resistant	33.3	22.2	22.2	22.2	100.0
		Defensive	.0	10.0	.0	90.0	100.0
		Accommodative	30.0	.0	50.0	20.0	100.0
		Progressive	.0	40.0	.0	60.0	100.0

a. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

b. 59.8% of selected original grouped cases correctly classified.

c. 38.5% of unselected original grouped cases correctly classified.

d. 52.2% of selected cross-validated grouped cases correctly classified.

Table 19. Statistical Tests on Classification Tables

SAMPLE	Proportional Chance Criterion (Expected %)	'Fairest' Criterion (Expected %)	Observed Hit Rate (Observed %)	Press's Q and Significance Level
Full Analysis Sample (n=131) %correctly classified →	25.9%	27.3%	53.4%	Q=56.49 p<.001
Training Set (n=92) % correctly classified →	26.7%	28.8%	59.8%	Q=59.36 p<.001
Test Set (n=39) % correctly classified →	25.0%	25.2%	38.5%	Q=3.77 p<.05

Table 20a. Group-level Statistics for High Visibility Firms

Group Statistics

Social Response Category		Mean	Std. Deviation	Valid N (listwise)	
				Unweighted	Weighted
Resistant	Volatility of Slack	8.045781E-02	1.1941730	14	14.000
	Strategic Slack	-.6412391	.5117603	14	14.000
	Insider-Outsider Governance	-.2642974	1.2376714	14	14.000
	Institutional Ownership	-7.7876099E-02	.6766149	14	14.000
	Board Structure	.4315717	1.1270437	14	14.000
Defensive	Volatility of Slack	8.728788E-02	.9950364	16	16.000
	Strategic Slack	.6713337	1.0300961	16	16.000
	Insider-Outsider Governance	9.633319E-02	.7707901	16	16.000
	Institutional Ownership	-.4874115	.8836220	16	16.000
	Board Structure	.6521933	.9496277	16	16.000
Accommodative	Volatility of Slack	-.1264230	.9163654	13	13.000
	Strategic Slack	-.8738962	.9129854	13	13.000
	Insider-Outsider Governance	.4980835	.9876927	13	13.000
	Institutional Ownership	-.3043784	1.0146819	13	13.000
	Board Structure	-.5457083	.8298712	13	13.000
Progressive	Volatility of Slack	.2572582	.8569439	25	25.000
	Strategic Slack	.6151631	.8712142	25	25.000
	Insider-Outsider Governance	.5079167	.9903588	25	25.000
	Institutional Ownership	-2.5453379E-02	.6415259	25	25.000
	Board Structure	.1591504	.9033877	25	25.000
Total	Volatility of Slack	.1075143	.9649073	68	68.000
	Strategic Slack	8.503557E-02	1.0886429	68	68.000
	Insider-Outsider Governance	.2502084	1.0266262	68	68.000
	Institutional Ownership	-.1982662	.7948452	68	68.000
	Board Structure	.1964949	1.0161609	68	68.000

Table 20b. Group-level Linear Discriminant Functions
for High Visibility Firms

Classification Function Coefficients

	Social Response Category			
	Resistant	Defensive	Accommodative	Progressive
Volatility of Slack	.227	6.906E-03	-1.385E-02	.175
Strategic Slack	-.912	1.038	-1.188	.929
Insider-Outsider Governance	-.309	.363	.319	.659
Institutional Ownership	-.161	-.933	-.439	-.131
Board Structure	.399	.938	-.615	.355
(Constant)	-2.015	-2.346	-2.489	-1.506

Fisher's linear discriminant functions

Table 21a. Group-level Statistics for Low Visibility Firms

Group Statistics

Social Response Category		Mean	Std. Deviation	Valid N (listwise)	
				Unweighted	Weighted
Resistant	Volatility of Slack	.2082608	1.2070608	13	13.000
	Strategic Slack	-.6574227	.9258406	13	13.000
	Insider-Outsider Governance	-.5643078	.6746336	13	13.000
	Institutional Ownership	-.1591182	1.2715550	13	13.000
	Board Structure	-.2239367	.9571022	13	13.000
Defensive	Volatility of Slack	-.4282951	1.0075330	16	16.000
	Strategic Slack	.4099796	.8804353	16	16.000
	Insider-Outsider Governance	-.6197955	1.0422081	16	16.000
	Institutional Ownership	-.2447845	1.2362948	16	16.000
	Board Structure	-.2548166	.9709507	16	16.000
Accommodative	Volatility of Slack	.1646011	1.0336173	16	16.000
	Strategic Slack	-.4908445	.5940440	16	16.000
	Insider-Outsider Governance	-2.6569236E-02	.8972987	16	16.000
	Institutional Ownership	.8874596	.8042030	16	16.000
	Board Structure	1.333809E-02	.9434233	16	16.000
Progressive	Volatility of Slack	-.3221809	.8504974	18	18.000
	Strategic Slack	.2254397	.7599937	18	18.000
	Insider-Outsider Governance	3.687041E-02	.8034456	18	18.000
	Institutional Ownership	.2926576	1.0156760	18	18.000
	Board Structure	-.3659343	.9580313	18	18.000
Total	Volatility of Slack	-.1160472	1.0316402	63	63.000
	Strategic Slack	-9.1784423E-02	.8941833	63	63.000
	Insider-Outsider Governance	-.2700662	.9027963	63	63.000
	Institutional Ownership	.2140016	1.1508243	63	63.000
	Board Structure	-.2120897	.9449149	63	63.000

Table 21b. Group-level Linear Discriminant Functions
for Low Visibility Firms

Classification Function Coefficients

	Social Response Category			
	Resistant	Defensive	Accommodative	Progressive
Volatility of Slack	2.723E-02	-.410	6.495E-02	-.299
Strategic Slack	-1.069	.637	-.966	.195
Insider-Outsider Governance	-.701	-.868	6.186E-02	8.661E-02
Institutional Ownership	-5.993E-02	-.336	.865	.217
Board Structure	-.293	-.153	-6.475E-02	-.393
(Constant)	-2.168	-1.919	-1.995	-1.428

Fisher's linear discriminant functions

Table 22. Test of Equality of Means: High vs. Low Visibility Firms

Group Statistics

	Rank of PubVis for Stratification	N	Mean	Std. Deviation	Std. Error Mean
Insider-Outsider Governance	Low Visibility	63	-.2700662	.9027963	.1137416
	High Visibility	68	.2502084	1.0266262	.1244967
Institutional Ownership	Low Visibility	63	.2140016	1.1508243	.1449902
	High Visibility	68	-.1982662	.7948452	9.638913E-02

Independent Samples Test

		t-test for Equality of Means				
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Insider-Outsider Governance	Equal variances assumed	-3.070	129	.003	-.5202746	.1694627
	Equal variances not assumed	-3.085	128.660	.002	-.5202746	.1686315
Institutional Ownership	Equal variances assumed	2.400	129	.018	.4122678	.1717509
	Equal variances not assumed	2.368	109.179	.020	.4122678	.1741064

Table 23: Summary of Results

Summary of Results - Hypotheses X Analysis					
Hypotheses: Ref.# and Relationship Tested	Correlational Analysis Tables 2 & 3	One-Way ANOVA Tables 4a, 4b, 5a,& 5b	Post-Hoc Comparisons Tables 6, 7 & 8	Multiple Discriminant Analysis (MDA) Tables 11-16 & Figure 7	MDA Tables 20a, 20b, 21a, 21b & 22
H.1a, 1b, 1c&2 Strategic Slack and Activity (+)	Supported p<.01 or better				
H.4a, 4b, 4c,H.5 Slack Volatility and Activity (-)	Directionality Supported; ROSVar Supported p<.05				
H.7a, 7b, & H.8 Governance and Predisposition (+)	Supported p<.05 or better				
H.3 Strategic Slack and Adoption of Proactive Response (+)		Supported p<.01 or better	Supported p<.05 or better	Supported	
H.6 Slack Volatility and Adoption of Proactive Response (-)		Inconclusive, except for ROSVar Supported at p<.10	n/a	Moderate Support	
H.9-Governance and Adoption of Sensitive Response (+)		Supported p<.05 or better	Mixed Support Bof D: p<.10 Stockholders: Inconclusive	Supported	
H.10-H.13 Model Effects				Supported p<.05 or better	
H.14 Public Visibility and Proactivity					Supported p<.10
H.15a & 15b Public Visibility and Sensitivity					Partial Support at p<.05

FIGURE 1: The Choice Triangle

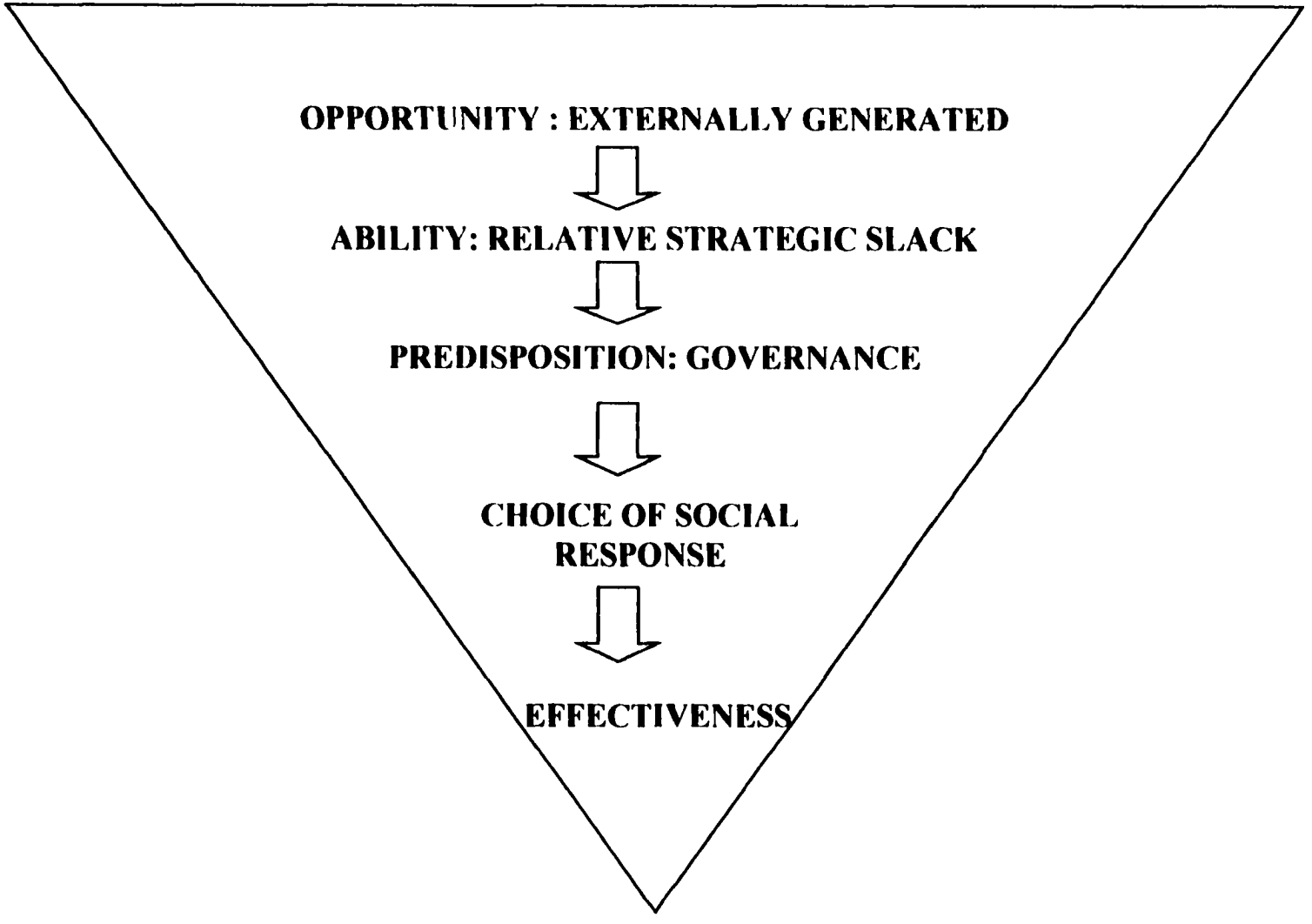
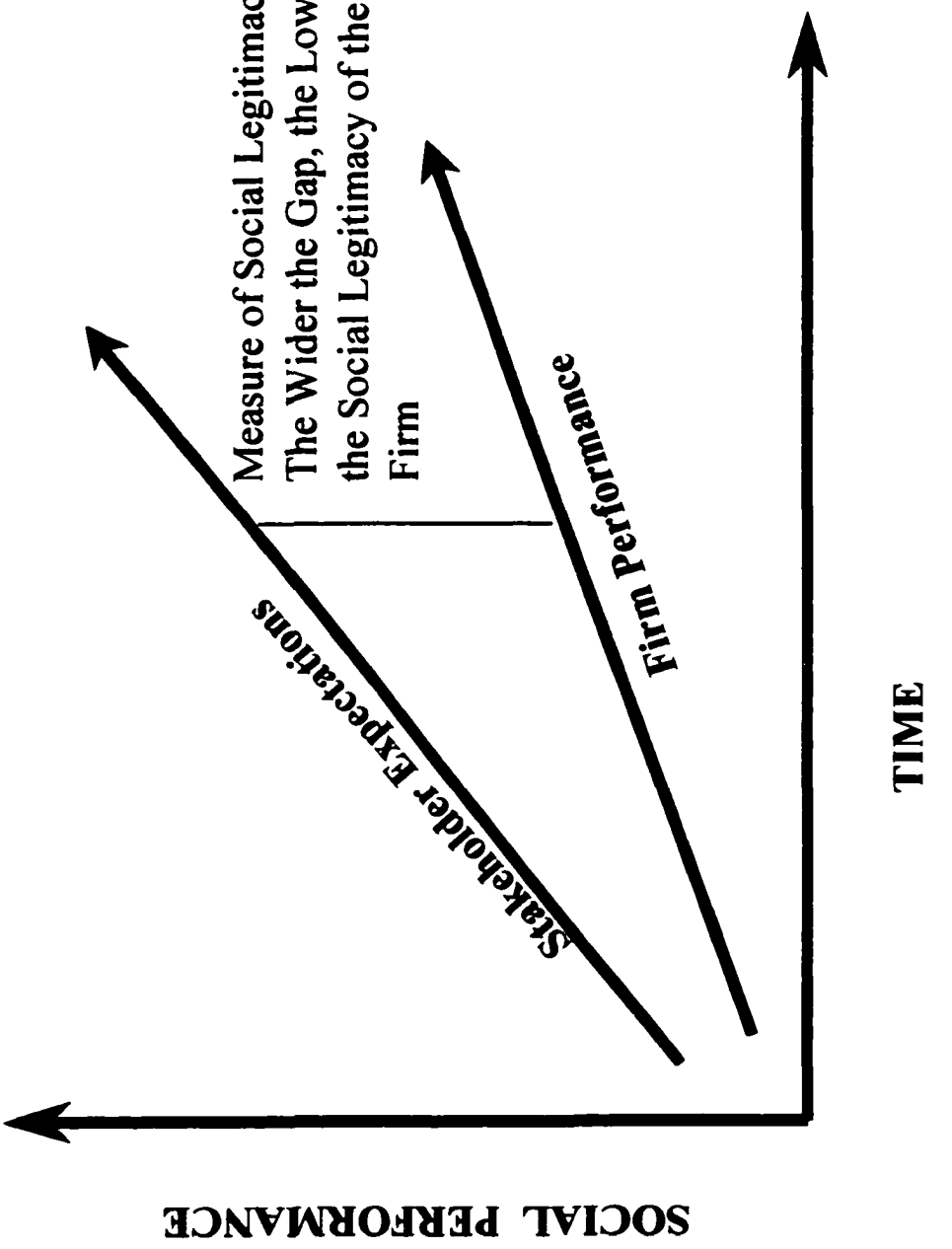


FIGURE 2:
Performance-Expectations Gap



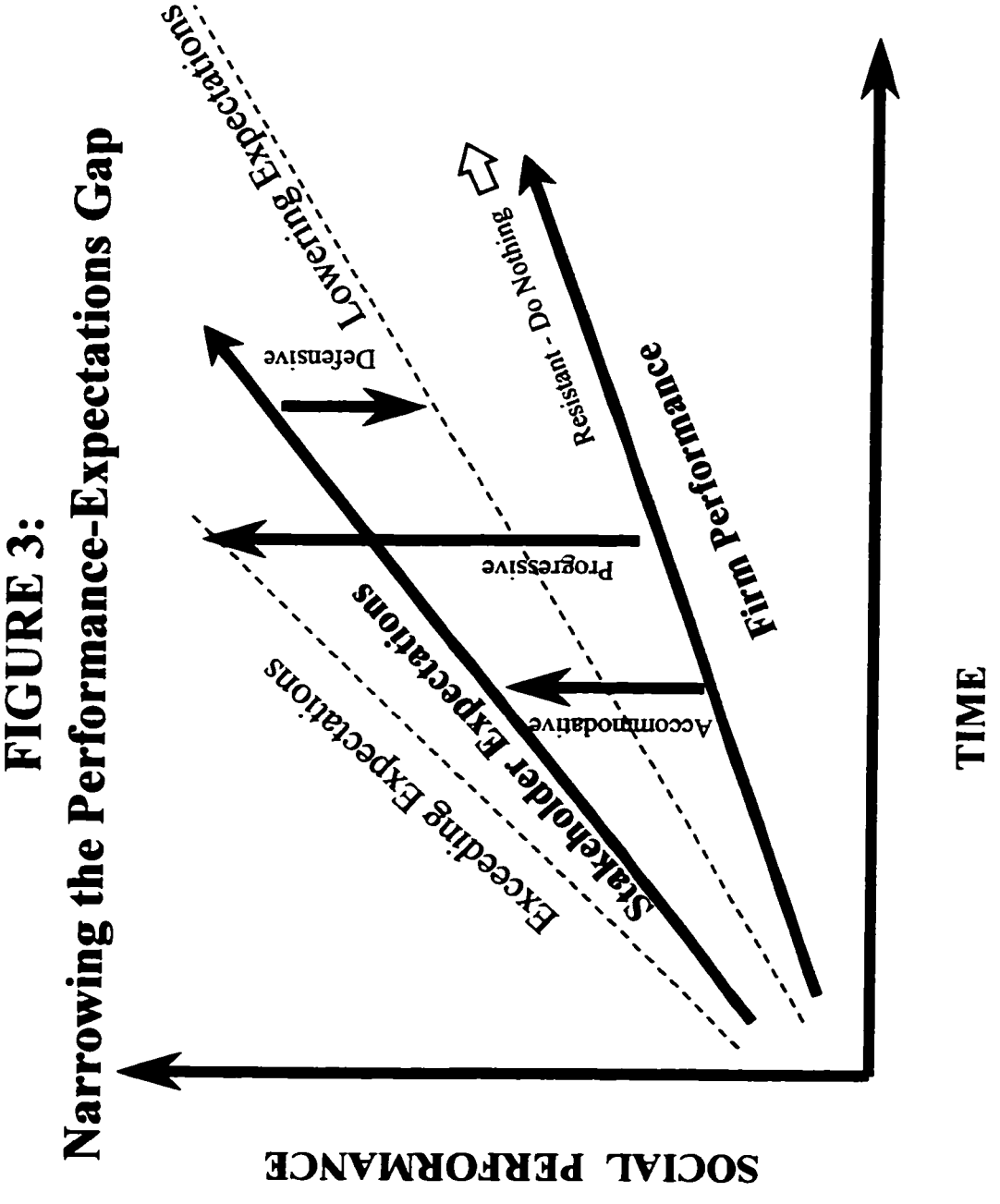


FIGURE 4: THE ANALYTIC FRAMEWORK

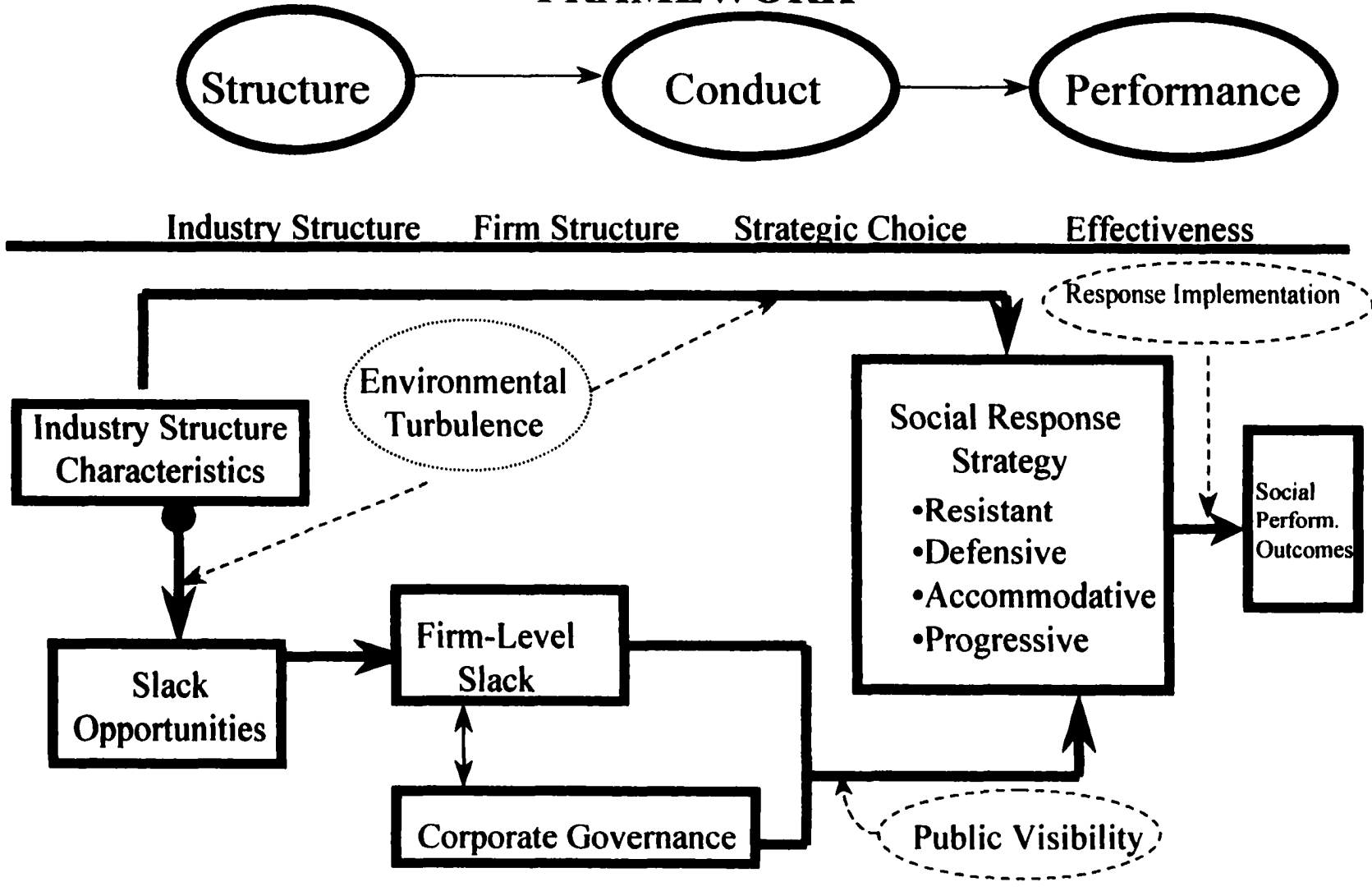


FIGURE 5: THE RESEARCH MODEL

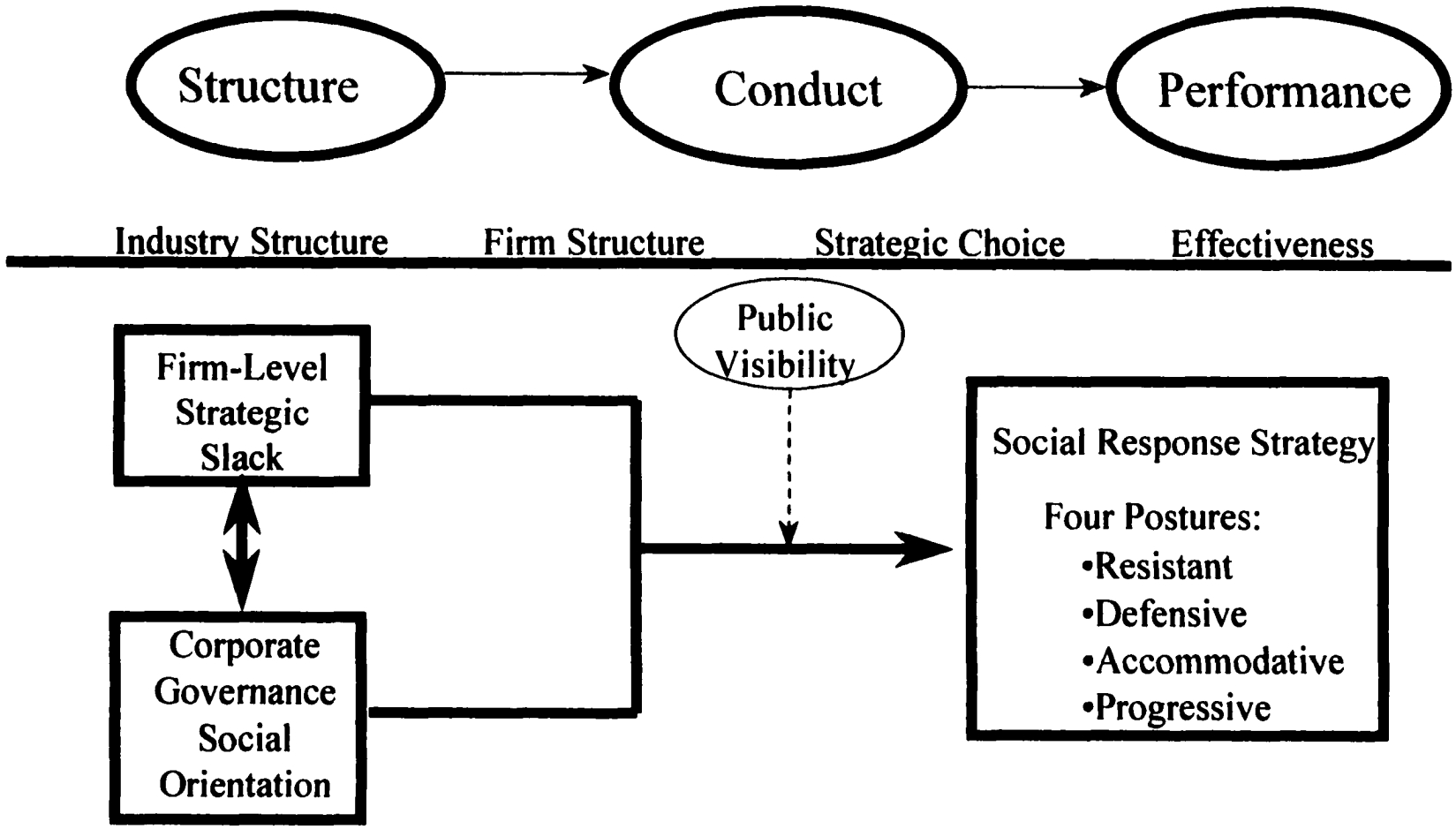


FIGURE 6: SUMMARY OF HYPOTHESES

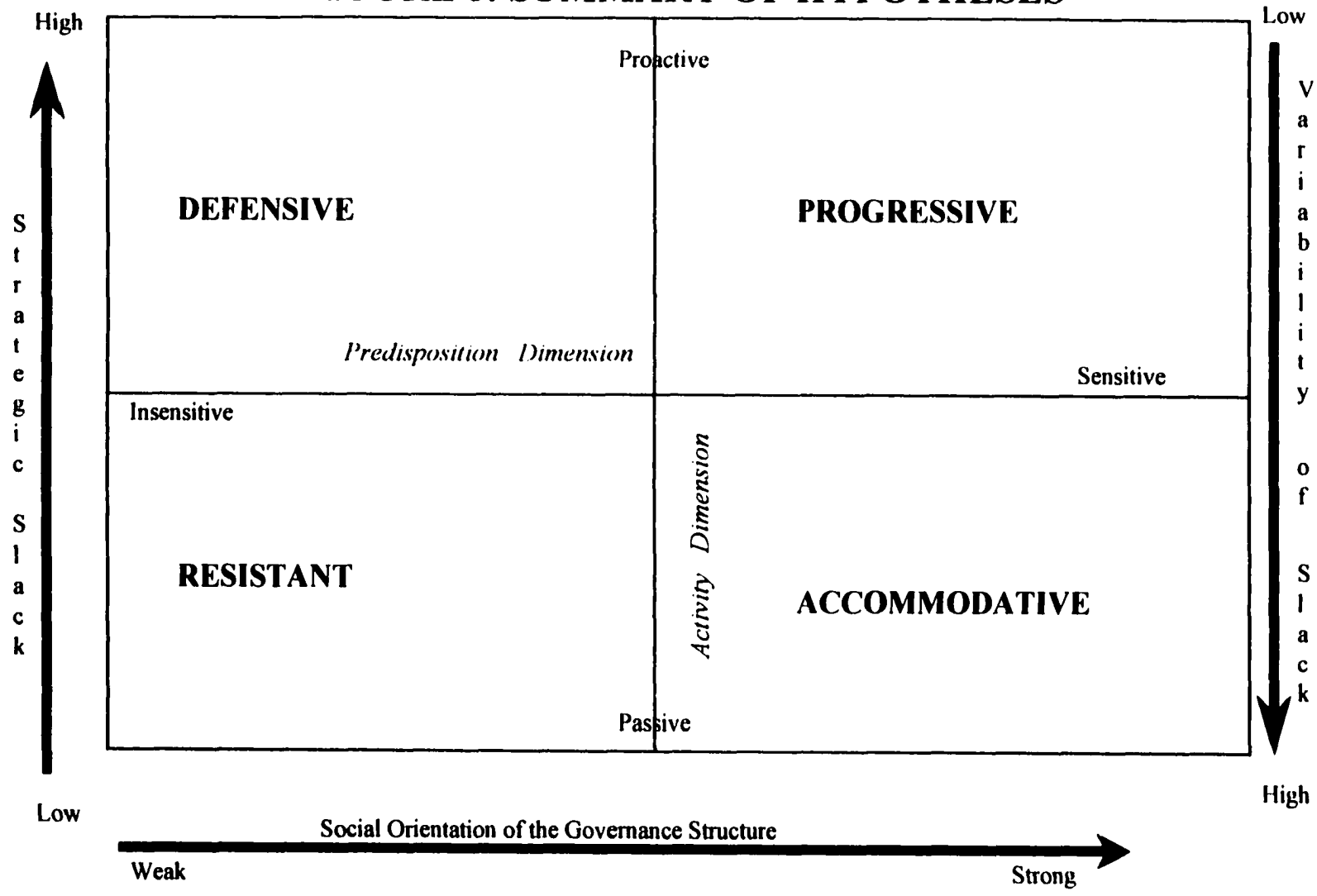
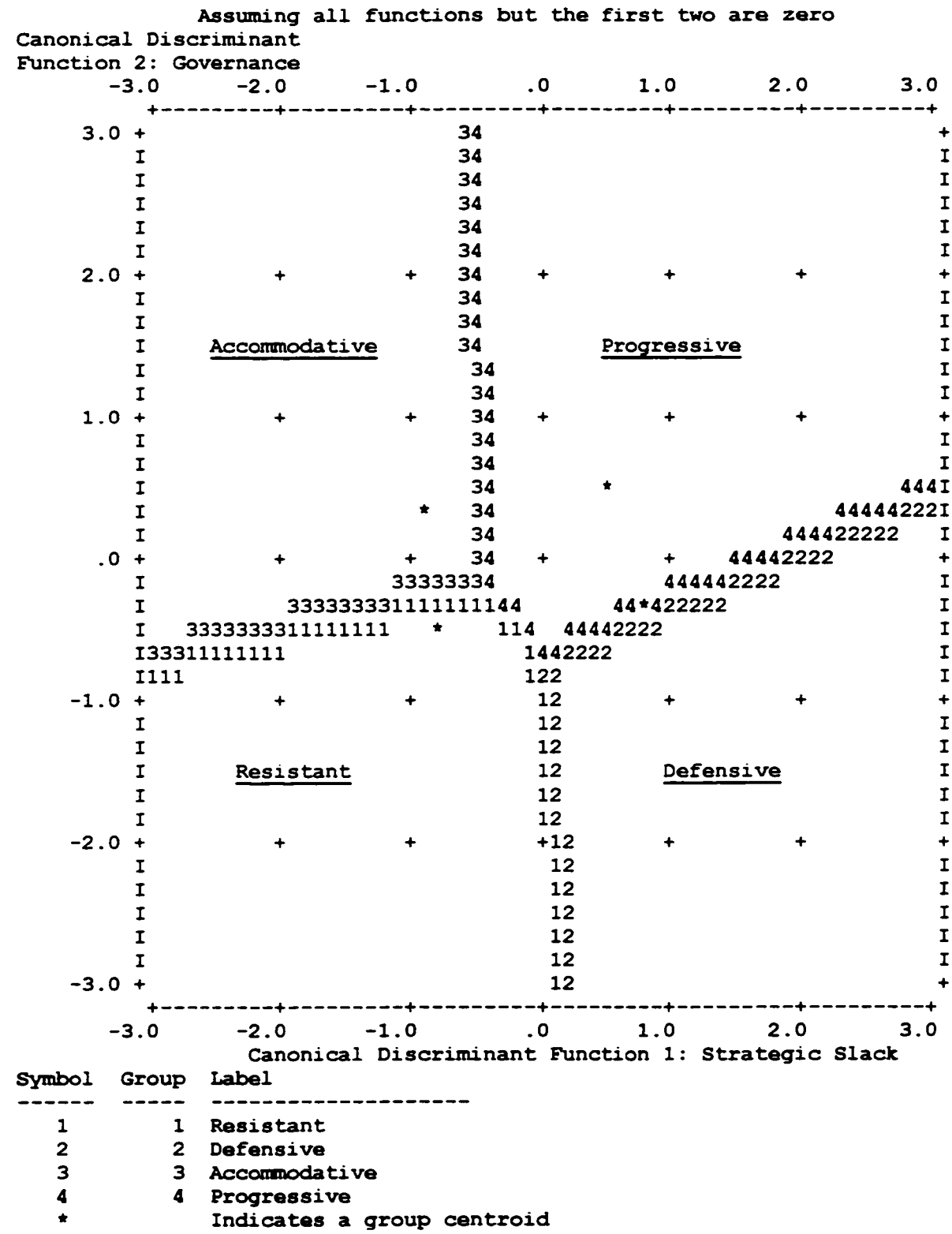


Figure 7. Territorial Map



Symbol	Group	Label
1	1	Resistant
2	2	Defensive
3	3	Accommodative
4	4	Progressive
*		Indicates a group centroid

Figure 8. Plot of Group Centroids

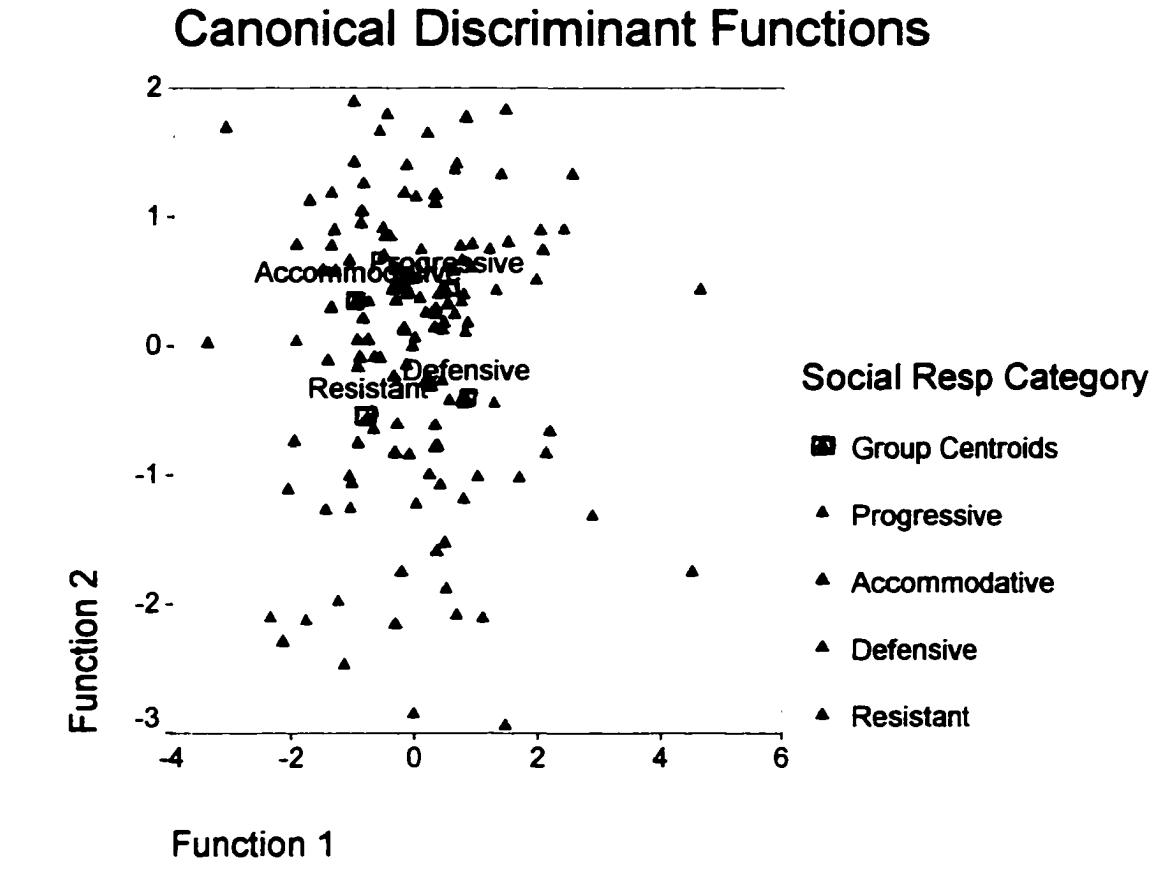


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IMAGE EVALUATION
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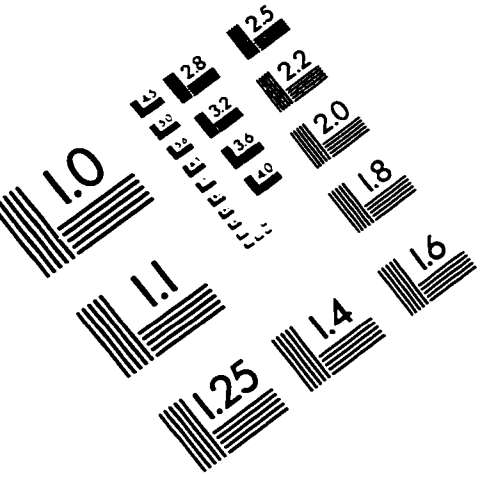

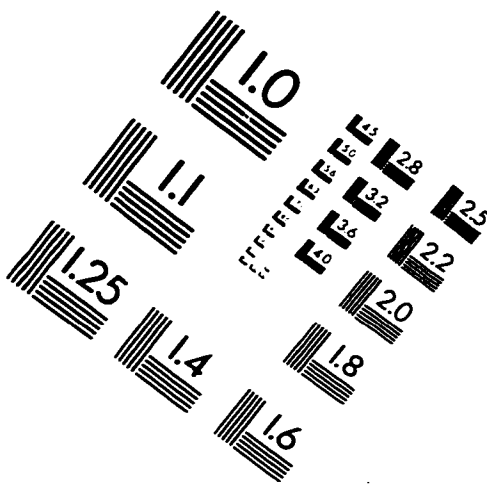

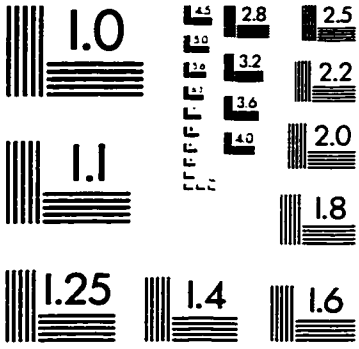

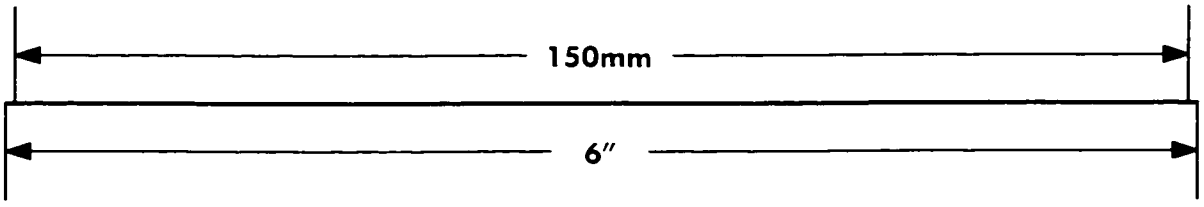

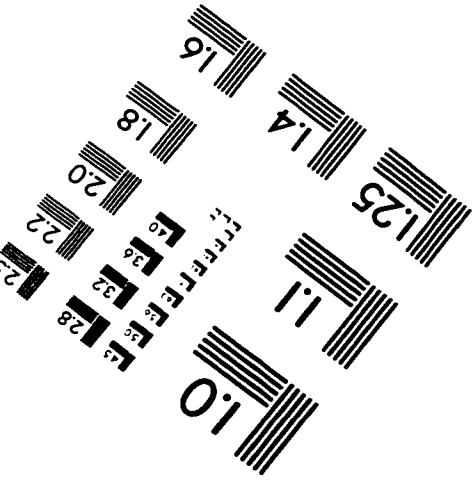

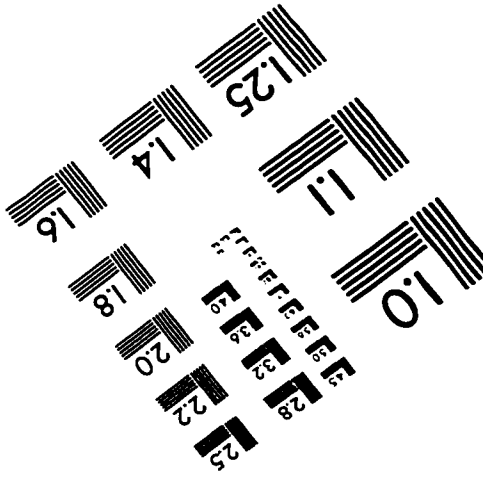

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