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WITHIN THE HALLOWED WALLS: THE RELATIONSHIP BETWEEN CORPORATE STRUCTURE, CORPORATE CULTURE, AND CORPORATE CRIME

By

Marie Alexandra McKendall

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ABSTRACT

WITHIN THE HALLOWED WALLS: THE RELATIONSHIP BETWEEN CORPORATE STRUCTURE, CORPORATE CULTURE, AND CORPORATE CRIME

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The following study was conducted in order to expand the examination of corporate crime; its purpose was to determine whether internal corporate factors would be predictive of violation frequency. As such, two dimensions of corporate structure, complexity and degree of centralization, were studied in relationship to two violation types, environmental violations and employee violations. A third major internal variable, corporate ethical culture, was also tested per the two violation types.

In order to isolate the predictive value of structure and culture, the effects of four variables (firm profits, industry health, firm size, and industry concentration) which had previously been linked to corporate crime were partialled out. A series of seventeen hierarchical regressions were performed; analysis of the data confirmed the two major structural hypotheses and failed to support the cultural hypothesis.

Organizations which are more complex and more decentralized had higher numbers of environmental violations. No significant relationship was found between corporate ethical culture, as measured by ethical practices, and violation frequency.

There were also a number of significant interactions between the four covariates and complexity. Finally, there was a significant interaction between complexity and corporate culture.

This dissertation is dedicated,

with love and gratitude,

to

Brett and Amber Roberts

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INTRODUCTION

INTRODUCTION

In June of 1968 several airplanes came close to crashing as they landed during a series of Air Force test flights; examinations showed that the newly designed brakes on all of the planes had seriously malfunctioned. The remaining test flights were abruptly cancelled and an investigation was begun. Further probing revealed that all of the newly installed brakes were hideously substandard, that their manufacturer knew of these defects, and that various personnel, under orders from management, had knowingly falsified documents and test results in order to make it appear that the new brakes were safe and reliable.

The manufacturer was B.F. Goodrich. The brake contract was extremely important to the company; it was regarded as the opener of doors which had previously closed as the result of a prior unsuccessful product. Whatever it took, the company mandated that the contract would be fulfilled on time. As in house testing of the newly designed brake system began, it soon became apparent the the design was totally unsupportable; it failed round after round of qualification tests. Management's first decision was to modify the testing procedures in order to make it easier for the brake to pass them. Despite the dramatically softened testing techniques, however, the brake did not pass even one out of fourteen separate qualification rounds. BF Goodrich management then decreed that the test results be falsified; the engineers, with varying degrees of reluctance, complied with the request. The

qualification report was released to the Air Force; the brakes were delivered, installed, and put into operation. Pilots using the new brakes fought to keep their planes from crashing as they skidded up to 1500 feet before stopping (Vandivier, 1972).

In January of 1980 the Ford Motor Company became the first American corporation to be charged with and tried for reckless homicide. The issue under examination was the decision to market the Ford Pinto. The Pinto, which was introduced in 1971, represented Ford's attempt to seize a share of the rapidly growing small car market. The Pinto was a high priority; the production and design schedule was almost halved in order to bring the car to market during the 1971 season. After the tooling process was underway, but prior to actual production, Ford engineers discovered that the Pinto gas tank leaked huge amounts of fuel and was overly susceptible to explosion during moderate speed rear end collisions. The decision was made to begin production and to market the automobile without modifications or improvements. As injury claims increased, Ford conducted an internal cost benefit analysis and concluded that all proposed safety improvements were "too expensive". This blanket rejection included an $11 safety device which would have make the car less susceptible to explosion; management decided that the costs involved in installing the device outweighed the potential benefits. Legislation eventually forced a recall of the Pinto; it was conservatively estimated that 500 people who would otherwise have escaped from the accidents with minor injuries, burned to death in Ford Pintos (Dowie, 1977).

In 1957 a Richardson-Merrel subsidiary introduced a drug called Bendectin; Bendectin was prescribed to pregnant women in order to control nausea and vomiting. Although the drug was marketed in 1957, it was not

tested for teratogenicity (the causing of birth defects) until 1963. Initial in house tests performed on rabbits revealed the possibility that the drug might cause birth defects; the doctor conducting the tests recommended further experimentation. The experiments, however, were not repeated. Furthermore, an altered version of the test report, which lowered the incidence of abnormal fetuses and deleted the further experimentation recommendation, was submitted to the FDA three years later. Thus, Merrel deliberately withheld adverse test results. The FDA proceeded to clear the drug despite warnings from its own medical reviewers. Two major studies released in the early eighties revealed a statistically significant increase in birth defects in children whose mothers had taken the drug during pregnancy. Some estimate that the use of Bendectin may have produced defects in at least 140,000 children during its first twenty-three years on the market. Incidentally, Merrel is also the company which prematurely distributed Thalidomide in the United States (Dowie and Marshall, 1980).

The literature on corporate crime is peppered with case histories such as the ones above. These are stories of irresponsibility, of deceit and fraud, of apparently misplaced or forgotten values. They are accounts of seemingly ethical individuals who performed seemingly unethical acts. As such stories have broken over the years, the press has traditionally, in a highly sensational and emotional manner, attempted to speculate about the factors which could have led to such a breakdown in corporate and individual legality. Many have blamed unwieldy corporate structures which operate to destroy responsibility and accountability. Others have pointed to the "profit at all cost" mentality which permeates American industry. And still others bemoan a society at large which is slowly eroding and condoning fanatical selfishness. Whatever the reasons, and despite the purple prose, the

problem has continued and no definitive answers have been found.

PURPOSE

A decade ago, Pondy and Mitroff (1978), in a comment on organizational research, pointed out that the field of organizational behavior frequently examines behavioral dysfunctions (absenteeism, conflict, turnover, job dissatisfaction etc.). The field of organizational theory, on the other hand, is largely an empirical exploration of order and logic; it concentrates on specifying the correct match between structure and technology, structure and environment, structure and context. Pondy and Mitroff (1978:11) went on to contend that, "we should be directing our efforts to understanding massive dysfunctions at the macro level, not just explaining order and congruence. How do organizations go wrong?"

The following dissertation attempted to partially answer that question through the conceptual and empirical examination of the concept of corporate crime. It explored several specific types of legal violations and their antecedent conditions. Specific goals of this dissertation included:

1. Identification of a typology which specifies various predictors of corporate crime.
2. The assessment of the predictive utility of a comprehensive model which posits varying antecedent conditions of corporate crime.
3. The expansion of the concept of corporate crime through the inclusion of more than one type of violation.
4. An initial examination of the relationship between internal variables and corporate crime; i.e, the relationship between corporate structure and corporate crime and the relationship between corporate culture and corporate crime.

5. A contribution to the body of organization theory literature which addresses dysfunctional behavior by organizations.

CHAPTER ONE

REVIEW OF THE LITERATURE: DEFINITION AND JUSTIFICATION

1:1 THE ORGANIZATION AS A CRIMINAL AGENT

How is it possible to justify applying criminal labels and sanctions to organizational entities, when it would appear that "corporations don't commit crimes, people commit crimes" (Parisi: 1984, 41)? Are organizations criminal agents or merely collections of individuals; is it legitimate or even plausible to hold that an organization is capable of acting in a criminal manner? What is the rationale behind the notion of organizations as criminals?

There are those who would claim that "corporate crime" is a misnomer; it is a term that holds no basis in practical reality. This view was articulated by Moore (1962:7) who declared that the notion of corporate crime "leads occasionally to some judicial nonsense .... by finding the corporation, as a 'legal person'. guilty of criminal offense". There is a widely accepted view that organizations as entities are fiction and that they have no reality apart from the sum of their membership (Simon, 1964); i.e., organizations are collections of individuals who act in certain ways, but there is nothing beyond the sum of those individual actions. Since only individuals within organizations act, and not organizations per se, the most we could do is examine the individual criminal behavior of those within the organization.

As theory progressed, however, writers began to focus on the notion of organizations as "systems" which possess an "existence independent of their members" (Aldrich, 1979: 2). As such, organizations have the ability to produce and direct the actions of employees (Hall, 1977), and "organizational factors account for part of the behavior of individuals at all times in

organizations....." (Sherman, 1980: 479). As Deal and Kennedy (1983: 498) explained, "Once established, organizations take on a life of their own; they become social fictions shaped by - and capable of shaping - human interaction and perception".

Is, however, the viewing of an organization as more than the aggregate of its components sufficient justification to also label it a criminal agent? Parisi (1984) contended that there are two modern a priori theoretical justifications for the acceptance of organizational criminal liability: identification and imputation. The theory of identification is a theory of limited direct liability and holds that the acts of certain employees are actually the acts of the organization, i.e., select people do not merely function as agents of the organization, they ARE the organization. There is no doubt that these people include the Board of Directors and top management; beyond these two groups, however, the labeling of some people as agents of the organization and others as the organization itself becomes more difficult.

The second theoretical justification for organizational criminal liability is imputation, a theory of vicarious liability. This theory holds that the intentions and actions of employees are imputed to the organizational entity; employees act in substitution for the organization. Because employees cannot engage in organizational crime outside the context of the organization, the organization is therefore liable for the intentions and actions of its employees. Both of these doctrines often provide the basis for organizational criminal prosecution. In a similar vein, Goodpaster (1983) contended that organizational responsibility for criminal actions is warranted because people make decisions for and in the name of organizations.

Other theorists look to situational factors as variables which justify viewing the organization as a criminal agent. Ermann and Lundman (1982b)

claimed that organizations are not comprised of individuals; they are comprised of positions which are filled by replaceable people. These people are constrained by the positions they occupy; hence, organizational crime is more than a matter of individual criminal behavior. Zey-Ferrell et. al. (1979) argued that notions of acceptable behavior are not formed in isolation, but are the product of the influences of disparate social groups. Organizations are one "society" that creates ethics; as such they should be held responsible for those collective ethics and the resulting behavior. Geis (1985) claimed that crime should be considered as a reflection of the environment in which it operates. Clinard (1983) argued that the size, the diffusion of responsibility, the organizational structure, and the nature of organizational goals can act alone or in combination to promote criminal behavior within an organization. Schrager and Short (1978) warned that a preoccupation with the acts of individuals could lead to the underestimation of societal and organizational pressures which push individuals to commit illegal acts.

> For these reasons, corporate illegalities must be viewed as organizational behavior..... Although the law treats corporations as tangible 'persons', illegal corporate behavior cannot be explained or even adequately explored within the framework of those theories of deviance and crime that are applied to individuals involved in ordinary (and most occupational) crime. (Clinard, 1983: 17)

Finally, Waters (1978), in an interesting examination of situational influences upon behavior, suggested that instead of looking at an individual lawbreaker in an organization and stating,

> "There goes Mr. X. He was pretending to be an ethical moral man, but he was really a crook. He was a hypocrite".....there might have been another response, reversed but equally valid. People might have said: "There goes Mr. Chiles. Really an ethical, moral man, he was pretending to be a crook. He was a pawn in the system".....Rather than ask, "What was going on with those people to make them act that way?" we ask, "What was going on in that organization that made people act that way?" (Waters, 1978: 3-5)

There is another series of arguments in favor of labeling organizations as criminal actors which has it roots in pragmatic considerations. Fisse (1984: 49-51) offered nine practical reasons for accepting the notion of organizations as criminals:

1) organizational secrecy - when faced with crisis, organizational personnel often close ranks; such loyalty and fear may make it impossible to pinpoint individuals responsible for criminal actions.
2) number of suspects - the cost and time required to narrow down and identify suspects in large organizations is prohibitive.
3) organizational profit motive - many offenses produce profits and these profits often accrue to the organization, not the individual; fining the organization cancels out the illicit profits.
4) expendability of personnel - organizational liability means that organizations must share the costs of criminal acts committed on their behalf instead of passing it on to expendable personnel.
5) personnel beyond jurisdiction - for crimes of a local nature, guilty personnel may either not reside in the area or remove themselves from liability by leaving the area
6) offenses defined by reference to corporate status - many statutory offenses assume the corporation as the prime offender.
7) organizational negligence - many offenses stem from a collective attitude, oversight, pressure to conform, or organizational culture; the contribution of any one individual is small.
8) organizational intentionality - to the extent criminal activities are addressed in organizational policies, organizations can be said to possess intent. That intent will mostly be directed to

legal compliance, but there are exceptions, as when Firestone deliberately delayed implementing a recall program for an unsafe tire.

9) surrogate liability - organizations should act as surrogates when it would be too harsh to impose individual prosecution and penalties.

Schrager and Short (1978: 407, 410) also argued for the pragmatic position when they state that many treatments of white collar crime

> view the individual as a criminal agent, whether actions are taken in behalf of, outside of, or against organizations.Yet it is often impossible to determine individual responsibility for illegal actions committed in accordance with the operative goals of organizations..... While organizations cannot act independently of the people that constitute them, it does not follow that determination of the culpability of individuals shouldbe the primary focus of sociological investigations. Preoccupation with individuals can lead us to underestimate the pressures within society and organizational structures which impel those individuals to commit illegal acts.

If one is therefore not convinced by other arguments, this inability to determine individual criminal blame in the face of complex organizational structures argues for the consideration of organizations as criminal agents.

Finally, it should be noted that there is a stance which goes even further than those previously articulated. This position holds that organizations have liability apart from and beyond the actions of their members.

> While ordinarily organizations are culpable because of the illegal acts of members, an organization may be culpable without any culpable actions on the part of its members. These situations arise either out of their failure to perform duties because of ignorance, negligence, or neglect, or from the illegal consequences of legally performed acts (Reiss and Bidermann, 1980: 6).

Reiss and Bidermann went on to explain that organizations have a duty to implement measures which will prevent violations and a further duty to seek out and correct violations which might be presently occurring. The

responsibility to do these things rests with the organization; failure to fulfill these responsibilities are crimes of omission, they extend beyond the culpability for the acts of members, and they also constitute corporate crime.

In summary, theoretical positions, a consideration of the situational influences on behavior, and practical consideration all validate the vesting of criminality in corporate bodies.

1:2 DEFINITION OF CORPORATE CRIME

There are as many definitions of corporate crime as there are people writing about the phenomenon. Sutherland (1949) was the first to introduce the notion of organizations as criminals; in his pioneering works on white collar crime, he muddied the waters for decades to come by using the term "white collar crime" to refer to a wide array of illegalities, some committed by individuals and some by organizational entities. Following Sutherland's ground breaking research a number of other authors began to examine the organization as a criminal actor (Wheller, 1976; Ermann and Lundman, 1978a, 1978b; Shover, 1978; Schrager and Short, 1978). As the term "white collar crime" gained popular usage, the ambiguity escalated, until white collar crime came to mean virtually anything except street crime. Eventually, the phrase began to produce offspring; terms currently in popular usage include occupational crime, corporate crime, white collar crime, organizational crime, organizational violations, corporate deviance, corporate law breaking, corporate misconduct, and corporate illegality. Although some consensus is beginning to emerge, there is no universal agreement about what most of these terms entail.

One of the first distinctions to be addressed was the difference between behavior within an organization and behavior by the organization. Clinard

and Quinney (1973), divided white collar crime into two types. They labeled the first type "occupational crime" and defined it as offenses committed by employees for the purpose of self gain, i.e., violations committed by employees against their own organizations. The second class of violations was called "corporate crime", and is comprised of illegal actions committed by organizational officials because of perceived organizational norms, expectations, pressures, goals, and rewards; i.e., such actions are influenced by organizational structure and culture and are believed to benefit the organization as a whole. Ford's, Goodrich's and Merrel's actions are examples of corporate crime; employee theft and expense account padding are examples of occupational crime.

If we accept the notion of individual vs. organizational gain as the determining distinction between occupational and corporate deviance, the next issue needing clarification is who commits corporate crime? Is it possible for an individual to commit corporate crime? Can corporate crime occur at any level of the organization? Some theorists claimed that corporate crime cannot be the product of individual action. Waters and Chant (1982: 60) defined organizational crime as "corporate actions" which require a unity of effort; organizational crime is therefore not one person acting in isolation. Shapiro (1976: 14) claimed that corporate crime "must be enacted by collectivities or aggregates of discrete individuals, it is hardly comparable to the actions of a lone individual". Schrager and Short (1978), however, declared that corporate crime can be committed by either individuals or groups. Kramer (1984: 18) further limited the definition of perpetrator by contending that corporate crime is

> the result of deliberate decision making ..... by persons who occupy structural positions within the organization as corporate executives or managers. These decisions are organizational in that they are organizationally based - made in accordance with the operative goals

> (primarily corporate profit), standard operating procedures, and cultural norms of the organization - and are intended to benefit the corporation itself.

Clinard and Quinney (1973: 188), in their original definition of corporate crime used the phrase, "offenses committed by corporate officials". Szwajkowski (1985), on the other hand, defined the phenomenon as illegal actions committed on behalf of an organization for which no personal gains are secured; Szwajkowski further stipulated that the violator need not be in a powerful position. Most other definitions are vague on these issues, referring to actions committed by "employees".

Some writers attempted to define corporate crime according to its consequences. Schrager and Short (1978: 407) identified corporate crime as those "illegal actions taken in accordance with operative organizational goals which do serious harm, either physical or economic, to employees, consumers, or the general public". In his criticism of a similar definition, Sherman (1980: 481) contended that such viewpoints were inadequate because they failed to consider motivation; criminal acts which do no harm are excluded only because they lacked "the potential or the result" to harm. Shover (1978: 39) overcame this deficiency by incorporating intentionality and defining corporate crime as

> criminal acts committed by individuals or groups .....during the normal course of their work....., which they intend to contribute to the achievement of goals or other objectives thought to be important to the organization as a whole, some subunit within the organization, or their own particular duties.

Others sought to refine the definition of corporate crime further by referring to illegal acts of either omission or commission (Kramer, 1984; Schrager and Short, 1978). The failure to take action can constitute criminal behavior as much as an action which directly violates a law. Fisse and French (1985) penned the notion of "reactive corporate fault", which they

defined as the failure to take preventive or corrective actions in response to illegal actions. Still others have speculated about extending the notion of corporate crime to include some actions which, technically speaking, may not be illegal. Ermann and Lundman (1978b) referred to acts which are contrary to existing societal norms. Kramer (1984: 26) stated that

> Numerous social harms committed by corporations .....are perfectly legal.....This has led some criminologists to suggest that we must move beyond state or legal definitions of crime..... Most criminologists have great qualms about using any nonlegal definition of crime.

This reluctance is borne out in the literature; writers who called for an extended definition of corporate crime tended to talk about organizational morality or organizational social responsibility (Donaldson, 1982; Goodpaster, 1983). Szwajkowski (1986), while noting the lack of sharpness in the definition, proposed that we label the phenomenon "organizational misconduct", which incorporates the notion that the behavior is not limited to either corporations or occupations. The term "misconduct" also avoided the criminology issue, and may include conduct which, while not illegal, violates ethics, rules, policies, and societal norms. For now, however, most appear to want to keep the definition of corporate crime confined to illegal actions.

There has also been a controversy about whether illegal business actions warrant the label of "crime", as most of these actions are handled in the civil and administrative arenas rather than in the criminal courts. Following Sutherland's initial research, lawyers have traditionally argued that there is no such thing as white collar or corporate crime; there are only some regulatory rules which prohibit certain types of behavior; this group has further asserted that if corporate members have not been arrested or convicted in criminal courts, than no crime has taken place (Tappan, 1947; Caldwell, 1958; Orland, 1980). This view has been attacked in recent years; Clinard and Yeager (1980) and Kramer (1984) contended that we should

broaden the definition of crime beyond the criminal courts. Clinard (1983: 10) therefore defined crime as

> any act punishable by the state, regardless of whether it is punished by administrative or civil law, which it usually is, or under the criminal law..... For the most part these offenses are handled by quasi-judicial agencies..... it is expedient to rely heavily on administrative penalties.....

Reiss and Biderman (1980: 3) also called for a definition which encompassed "all behavior where penalties can be imposed, regardless of the form of the proceeding". Yeager (1986: 96) seemed to take a pragmatic and appropriate position when he declared that "researchers need not be contained by this dispute. Regardless of the label applied.....all are violations of laws that set the formal legal boundaries of corporate social responsibility."

Taking the above views into consideration, the term "corporate crime" will, except for the use of direct quotes, be used to designate the phenomenon being studied throughout the remainder of this paper. This phenomenon will be defined as: an action (of omission or commission) by any individual or group within an organization which violates a federal or state civil, administrative, or criminal law, and for which the organization is the primary beneficiary. This definition takes into account the following factors:

-corporate crime is limited to illegal actions

-corporate crime can be committed by either a group or an individual

-corporate crime can entail acts of omission or commission

-it can take place in any organization: public, private, profit, nonprofit, governmental (the term "corporate crime" will be used in this paper because the sample will be limited to corporations)

-the illegal act is punishable by administrative, civil, or criminal actions

-intent is not necessary

-the primary beneficiary is the organization, not the individual

According to the above definition, corporate crime would include actions such as environmental violations, labor/employee violations, antitrust violations,

tax and financial violations, and product and safety violations.

1:3 THE COSTS OF CORPORATE CRIME

An examination of the resulting costs of corporate crime provides ample justification for investigation of the phenomenon; the impact of illegal actions by corporations is profound. The most obvious cost is the direct financial cost of corporate crime. Although this is not an easy figure to precisely pinpoint, various Congressional estimates ranged from 40-100 billion dollars for the ten year period of 1975-1985. Senator Phillip Hart estimated that as much as $200 billion may be diverted from the United States economy solely by antitrust violations (Szwajkowski, 1985). Conklin (1977) claimed that the direct financial costs of corporate crime is about ten times greater than the combined costs of larceny, robbery, burglary, and auto theft. Half of this cost is a result of consumer fraud, illegal competitive practices, and deceptive practices; an additional ten percent is the result of securities thefts and fraud. Kramer (1984) stated that economic cost estimates of corporate crime from the U.S. Chamber of Commerce, the Department of Justice, and the U.S. Senate Judiciary Committee range from $10 to $231 billion dollars annually.

A second group of costs, commonly called physical costs, also results from corporate crime. Physical costs include the hundreds of thousands of deaths, disabilities, and injuries per year from occupationally related diseases, unsafe working conditions, industrial accidents, defective consumer products, and unsafe food and drugs (Kramer, 1984; Szwajkowski,1985). Fisse and French (1985) claimed that there are many more injuries and deaths per year as a result of corporate crime than as a result of ordinary street crime. The physical costs of corporate crime also include the short and long term effects of air, water, chemical, toxic, radiation, and noise pollution.

Excessive depletion of natural resources are another physical cost (Szwajkowski, 1985).

A final category of corporate crime costs is the damage done to the moral base of society. This damage can involve the corruption of government officials, the subversion of the public interest, the erosion of public confidence, and the undermining of social institutions (Conklin, 1977; Kramer, 1984). But perhaps an even more insidious cost of corporate crime is the gradual decline of societal morals. Although Szwajkowski noted that the social and moral costs of corporate crime have never been empirically established, he contended that

> the least obvious, but perhaps most harmful consequence of organizational misconduct is its impact on the moral climate of society. A community's citizenry takes its cues from observations of passing events. When misconduct is perceived to be the norm, or at least is accepted or tolerated by authorities, ethical thresholds tend to be adjusted accordingly.....The prevailing attitude can quickly become "if others are doing it, I will too". (Szwajkowski, 1986: 127)

The three categories of the costs of corporate crime added together produce a picture of the widespread consequences of illegal corporate action. These ramifications led Meier and Short (1982: 23) to claim that the consequences of corporate crime greatly exceed those of "homicide, robbery, forcible rape, and mass murders"; i.e, the costs of corporate crime are far greater than those of much publicized street crime.

CHAPTER TWO

REVIEW OF THE LITERATURE: CAUSES OF CORPORATE CRIME

2:1 RESEARCH ON CORPORATE CRIME

Geis (1987) broke the research on corporate crime into three stages. Following Sutherland's 1949 groundbreaking research, a spate of studies was published which dealt with white collar crime. None, except for Lane's 1953 study of New England shoe manufacturing companies dealt with corporate or institutional crime; the focus was on the individual criminal within an organization. The mid sixties to the mid seventies comprised the second stage of research; during this period interest in the phenomenon declined and the study of white collar crime went into hiatus. The third stage of corporate crime research originated in the wake of Watergate, Vietnam, and several major corporate scandals; these events caused people to lose confidence in major institutions. Interest in corporate crime was therefore revived, this time with an institutional focus.

Despite the increased interest in the study of corporate crime, it has remained largely a fragmented field, with some undertakings in organizational behavior, criminology, sociology, psychology, law, and economics. Because of this diversity, two problems have developed. First, knowledge has remained unconnected; a body of knowledge has therefore been slow to develop. Secondly, the various disciplines use multiple terminologies (Szwajkowski, 1986).

In addition to the disconnected nature of the topic, there are some stiff barriers to conducting research on corporate crime. Clinard et. al. (1979) noted the lack of experience and training of those studying corporate crime, the difficulty of gaining access to regulatory agencies, and the limited

research funds available. Kramer (1984) echoed these thoughts, mentioning the lack of research funding, problems with regulatory and criminal justice agencies, the lack of official statistics, problems with access, and absence of a theoretical framework.

Because of the above difficulties, most of the work in this area has taken the form of investigative journalism and sensational biographies. In 1979, Clinard et. al. stated that few quantitative studies had been published, and the few that had been published were very narrow in scope and dealt almost exclusively with antitrust violations. Nothing much had changed by 1986; in his review article, Szwajkowski (1986: 121) lamented the "dearth of existing research efforts, especially with regard to empirical efforts". The one major exception is the government-funded Clinard et. al. 1979 study of all known and initiated enforcement actions against 582 of the largest public owned corporations in the United States. Other than this effort, most other studies have been either case or survey opinion research.

2:2 FACTORS CAUSING CORPORATE CRIME

The literature does offer a long list of conditions which may function as possible causes of corporate crime. In an attempt to integrate the various bodies of literature, Szwajkowski (1985) proposed that three distinct yet interacting elements form the stimuli for corporate crime:

1) The environment - environmental pressure, environmental need, or environmental distress.
2) Structure - corporate structure, industrial structure, or legal structure.
3) Inner directed choice processes - individual pathology, individual intent, or proactive exploitation.

This thesis also organizes the literature into a three faceted scheme, but

classifies the causal factors into the following categories:

1) Individual Factors

-Individual choice/intent

-Individual personality traits

-Individual background and experiences

2) External factors

-Societal and industry norms

-Failures of the regulatory system

-General economic and industry health

-Industry structure/conditions

3) Internal factors

-Economic health of the firm

-Organizational culture

-Size of the firm

-Organizational structure

2:2:1 Individual Factors

The most basic hypothesized source of organizational crime is individual factors. The literature in this category is scant, for there has long been an assumption that "organizational forces rather than individual pathologies best explain corporate deviance" (Ermann and Lundman, 1980: 59). But as Vaughn (1982) pointed out, individuals come to organizations already influenced by prior affiliations with family, church, clubs, schools, unions, and other organizations. Although organizations may attempt to socialize new members, they cannot wipe out all individual differences. Therefore, when influenced by any given situation, some individuals will choose to break the law while others will not. The literature which does exist

in this area attempts to explain what makes some organizational members violate the law while others do not. One set of explanations evolves around the notion of choice, i.e., "evil deeds are done by evil people, and the idea of intent is central, irrespective of structural restraints on the activity, or the lack of them" (Szwajkowski, 1985: 561). Because there are evil people distributed throughout society, we would expect to find some of them in business organizations choosing to break the law. Another individual explanation of corporate crime involves psychological variables. Clinard (1952) contended that researchers should examine the personalities of corporate criminals to see how they differ from nonoffenders. Suggested personality traits have been willingness to break the law, low resistance to temptation, and a personal predisposition to criminal action. Trevino (1986) proposed that ego strength, field dependence, and locus of control may moderate moral judgement and moral action in organizations. Bommer et. al. (1987) speculated that an individual's moral level, personal goals, motivation mechanisms, position/status, self concept, life experiences, personality, and demographic variables might be connected to ethical/unethical behavior in a corporate setting. There has been no empirical support for the notion that any individual differences exist between organizational members who break the law and those who do not (Conklin, 1977). Therefore, most scholars do not give much credence to the notion of personal variables as an explanation for corporate criminal behavior (Geis, 1985).

2:2:2 External Factors

The above model proposes four external or environmental factors which may contribute to corporate crime.

Theorists often point to the first external factor listed previously, societal

failures, as a possible cause of corporate crime. Conklin (1977) hypothesized that a consumption oriented American society which emphasizes profits as the primary goal of business may influence corporations to behave illegally. Vaughn (1982) also contended that in order for a corporation to be respected by society, it must be a profitable firm. Membership in the Fortune 500, for instance, rests exclusively on financial achievements. Finally, Yeager (1986) speculated about culture and attitudes of the business community as a whole. Expectations of high profitability and the respect accorded to firms which demonstrate such achievement may act as an inducement for some corporations to break the law if it is perceived that such behavior will result in financial gain.

The second external factor believed to contribute to corporate crime is failure and inefficiency of the regulatory system. Clinard et. al. (1979) stated that corporate offenders commonly cited the following reasons in defense of their behavior: government regulations interfered with free enterprise, the government regulated unnecessary things which resulted in overregulation, the costs of complying with regulation cut into profits, and regulations are too complex and not understandable. Criminal organizations may see these perceived failures of the regulatory system as justification for illegal behavior, or they may believe that the law is incorrect in defining some behaviors as illegal. In a similar vein, Szwajkowski and Larwood (1986: 10) proposed that the perception of unjust treatment contributes to corporate crime; the authors used the theories of equity and self help to explain crime. Corporate crime is a "reaction to a perceived failure of the social system itself, in which supervision, ethics, rules, or even law appear to be inequitably distributed"; criminal behavior is seen as a way of balancing the books and restoring the fairness which society did not provide. If, for instance, excessive regulation

had cut into a company's profits, then price fixing might be seen as a way of restoring equity. An interactive computer survey of 346 students (89% currently employed), found partial support for the hypothesis, with the results moderated by the organizational level at which the infraction occurred.

The third external factor proposed to contribute to corporate crime is the economic health of the industry in which the firm operates. A firm which belongs to a depressed industry segment may believe that illegal behavior is one way to temporarily accrue profits and compensate for economic and market difficulties. In 87 observations of Fortune 500 firms, Staw and Szwajkowski (1975) found that antitrust violations were associated with poor industry performance. The same findings were reported by Palmer (1972) and Asch and Seneca (1976). Clinard et. al. (1979) also found that firms in poorly performing industries, regardless of individual financial position, violated the law more often; the authors did state, however, that this variable accounted for only a small portion of the variance.

The fourth external factor which may contribute to corporate crime is industry structure. There seems to be some face value evidence that crime is associated with factors peculiar to specific industries. Cressey (1976) found that high rates of recidivism were associated with particular industries. Clinard et. al. (1979) showed significant variation in violations across industries; the oil, pharmaceutical, and auto industries were the most frequent violators. Most studies addressing industry structure have examined the relationship between industry concentration and antitrust violations. Burton (1966) and Riedel (1968) found that firms in moderately concentrated industries had the greatest number of antitrust violations. Other studies have uncovered conflicting results. Posner (1970) found no relationship between the two variables and Hay and Kelley (1974) found that small numbers, high

concentration, and product homogeneity led to price fixing violations. Clinard et. al. (1979), who investigated many types of violations, also found more crime in concentrated industries. Yeager (1986) attributed the differing results to different research methods, different measures, and small sample sizes. Although most research in this area has concentrated on the degree of industry concentration, a few studies have examined other aspects of industry structure. Sonnenfeld and Lawrence (1978) studied price fixing in the folding box industry via extensive interviews with executives. Among the implicated industry structure variables were a very crowded and highly competitive market, the job order nature of the business, undifferentiated products, frequent contact with competitors, and active trade associations. Clinard et. al. (1979) reported that companies operating in industries with large average firm size violated the law more often than those in industries comprised of smaller firms.

Although there has been little research to date, several authors have speculated on other facets of industry structure/conditions which might lead to corporate crime. Conklin (1977) postulated that the following market/structural conditions might be conducive to corporate crime: seller concentration, buyer concentration, the desire to create product differentiation, entry barriers, price inelastic demand, and a slow demand growth rate. Conklin further speculated that these conditions are most likely to lead to crimes of fraudulent advertising, overbilling, antitrust actions, price fixing, and deceptive service practices. Yeager (1986) offered the following industry variables for consideration: market power, degree of labor intensity, little product innovation, inelastic demand, routine technology, undifferentiated products, high entry barriers, sealed job bidding, and active trade associations.

It is also possible that that may be criminal industry cultures. When discussing the concept of organizational culture, Goodman (1963) made reference to a constantly changing pattern of norms, dictated in part by market necessity and industry tradition. So perhaps there are not only individual organizations with criminal cultures; perhaps there are entire industries permeated with criminal norms, and corporations in these industries are more likely to display individual criminal cultures. This may be part of the explanation as to why certain industries have a greater proportion of criminal organizations and a higher recidivism rate.

To reiterate, with the exception of the few studies which examined the relationships between concentration levels and antitrust violations, and between criminal behavior and industry profitability, there has been little research which has investigated the relationship between crime and industry structure/conditions. The Clinard et. al. study (1979), which included measures of twenty-four violation types, concluded that measures of industry characteristics accounted for only a small proportion of the total variance, and were not strong predictors of corporate violations. Yeager (1986: 109) summed up the research by noting that "results to date suggest that industry conditions conducive to violations are often specific to particular offense types".

2:2:3 Internal Factors

The literature suggests that there are four internal factors which may have a bearing on corporate crime: the organization's economic health, the organization's culture, the organization's size, and the organization's structure.

Financial pressure has long been hypothesized as a major determinant

of corporate crime. As Yeager (1986) pointed out, however, it is not known whether financial pressure acts as a determinant primarily for firms under economic strain or whether generalized financial pressure induces many firms to violate the law regardless of their economic health. Several studies indicated that poor profit performance induced criminal behavior (Lane, 1953; Staw and Szwajkowski, 1975; Asch and Seneca, 1976), while one study lent support to the generalized pressure hypothesis (Clinard et. al., 1979). Finally, other studies found no relationship between profitability and criminal behavior (Perez, 1978; Szwajkowski, 1981). The most comprehensive study (Clinard et. al., 1979) indicated that firms operating in economically depressed industries and firms experiencing individual profit problems across all industries violated the law more frequently than financially healthy firms. The authors also found that firms with greater market strength are slightly less likely to engage in crime. The relationships were weak, explaining only a small amount of the variance in major violations, i.e., profitable firms also had a substantial number of violations. Financial strain did not predict minor violations, and firm growth was found to be unrelated to crime. Clinard and colleagues, whose research represents the most extensive examination of economic performance and crime, noted that measures of firm characteristics did produce significant effects, but the effects were relatively small; the authors claimed that clearly there were other factors operating to cause corporate crime. They and other theorists have hypothesized that other internal variables, such as culture and structure, are likely causes of corporate crime.

The second internal factor postulated to have an effect on corporate crime is the culture of the organization. Organizational culture is commonly defined a system of shared values, beliefs, assumptions, norms, and patterns

of behavior to which members of an organization collectively subscribe (Smircich, 1983; Gregory, 1983; Kilmann et. al., 1985; Ott, 1989). Sutherland (1949) initially argued that violation frequency could partially be explained by different organizational norms concerning law compliance. Clinard et. al. (1979: 8) maintained that "lawbreaking can become a normative pattern within certain corporations, and violation norms may be shared between corporations and their executives". Ermann and Lundman (1982b: 95) discussed the "institutionalism of deviance" and claimed that illegal behavior becomes

> part of organizational life and participants no longer think about their involvement in it. And as time passes, original participants move on and their replacements find the behavior to be a taken-for-granted aspect of their new position.

Planning and control systems are commonly postulated to cause the type of culture which promotes crime. Hosmer (1987), in a discussion of General Electric's guilty plea to charges of defrauding the government, examined GE's planning, control, and appraisal systems; he noted that the primary criteria upon which managers' performance was judged was "profitability". Stone (1975) found that goals often come to perceived as requirements. An emphasis on attaining organizational goals, regardless of cost, and an appraisal system which rewards such behavior is likely to be a contributing factor to corporate crime. The stronger the stated goals of an organization and the more rewards are based upon attainment of those goals, the greater the chance that legality will be sacrificed for achievement of goals. This might of course be different if some of the goals addressed legal/ethical behavior as a desirable outcome.

The degree of professionalism in an organization has also been

hypothesized to create a culture which is conducive to legal and ethical behavior. Donaldson (1982) contended that when an organization employs many professionals, the organization may be more ethical because professionals are more difficult for management to control and will tend to conform to professional codes of ethics rather than to company mandates or norms. On the other hand, Donaldson also noted that many of the modern professions, such as management, do not possess and are not trained to adhere to a professional code of ethics; if the new professions attain a great deal of power in an organization, the organization might become more criminal. Clinard et. al. (1979) also noted that the increasing tendency to employ specialists like lawyers and accountants, whose duties might include advising management about how much they can get away with, might in the long run contribute to corporate crime. In addition to the above, other cultural factors are proposed to be conducive to corporate crime. Stone (1975) speculated that the following cultural forces within an organization might contribute to crime: desire for profits, desire for security, fear of failure, group loyalty, feelings of omniscience, and corporate ethnocentism. Waters (1978) mentioned task group cohesiveness and strong role models as probable barriers to the discovery of corporate crime. Clinard et. al. (1979) claimed that the problem of crime might largely be the result of the separation of management and ownership. Stockholders do not control management and neither do boards of directors; consequently, management if free to shape the organization as it pleases. Clinard and Yeager (1980) asked why some corporations break the law while others do not, regardless of profit or environmental pressures; they proposed that the answer might reside in an organization's culture.

To date, little research beyond the case level has examined the

relationship between culture and corporate crime. In a 1963 study of pharmacists, Quinney found that those with a business rather than a professional orientation were more likely to violate the law. In an analysis of the Nixon administration, Ermann and Lundman (1982b) concluded that selection, training, and reward policies served to indoctrinate people with loyalty towards their organizations; this vesting procedure enabled employees to rationalize and keep secret criminal behavior occurring in the organization. In an analysis of Gulf Oil's substantial violations of the Foreign Corrupt Practices Act, Ermann and Lundman (1980) concluded that corporate environments provide executives with many essentially accurate rationalizations for crime. The authors also contended that social roles and organizational loyalty operate to keep crime from being discovered. In a 1983 interview with sixty-four retired Fortune 500 middle managers, Clinard found that the behavior and philosophy of top management was mentioned most often as the reason for unethical or illegal behavior. Fifty-three percent of the surveyed managers cited a top management which was more interested in money than in the reputation of the corporation as the primary cause of unethical behavior. Ethical and legal behavior in corporations was attributed to an orderly transition in top management, an outside CEO or president, ethical guidelines which made violations subject to dismissal, consultations with mid management about ethical problems, and mid management respect for top management wishes. Most believed that the bulk of unethical behavior could be attributed to internal failure; external factors, such as poor financial situation, unfair competitive practices, and regulatory failures were believed to have much less of an effect. Kesner et. al. (1986) found, however, that Board composition and having the same individual serve as CEO and chair did not effect the commission of illegal

acts. In a case investigation of corporate morality in three separate organizations, Jackall (1988) found widespread acceptance of dual (business and personal) ethical codes, a focus on short term qualitative measures of progress, and an ability for managers to outrun mistakes through promotions. Yeager (1986: 100) summed up the situation when he noted that it is well accepted that "organizational cultures influence members' behavior"; unfortunately, however, the relationship between corporate crime and corporate culture has seldom been studied empirically.

The third internal factor hypothesized to contribute to corporate crime is the size of the organization. Clinard and Yeager (1980: 43) argued that "the immensity, the diffusion of responsibility, and the hierarchal structure of large corporations foster conditions conducive to organizational deviance." Ermann and Lundman (1982b: 7) contended that

> the structure and operation of large organizations can produce organizationally deviant actions in at least three ways. First, the limited information and responsibility characteristic of positions within large organizations can produce a situation where no individual has been deviant, but the combinations of their work related actions produces deviance. Second,organizational elites can indirectly initiate deviantactions by establishing particular norms, rewards, and punishments for people occupying lower level positions. Third, elites at or near the top of an organization can consciously initiate a deviant action and explicitly use hierarchically linked positions to implement it.

Yeager (1986) theorized that large size may be related to corporate crime in two ways. First, large firms can more easily absorb the negative financial effects of regulation and can better afford legal counsel; the cost of breaking the law would therefore not be as much of a deterrent for large firms. Conversely, large firms have greater resources which would enable them to more easily meet regulatory requirements. There have been a few studies

which have investigated the relationship between size and corporate crime. Clinard and Yeager (1980: 299) found large corporations and those not distinguished by a "corporate culture" had more criminal violations than others. Additional studies have found size to be positively related to corporate crime (Asch and Seneca, 1976; Perez, 1978; Dalton and Kesner, 1988). Another study, however, found no definitive relationship between the size of a firm and frequency of violations (Lane, 1953). And still one other study (Yeager, 1981) found that larger size and greater resources promoted compliance with federal water pollution regulations. Finally, Clinard et. al. (1979) found support for the notion that larger firms commit more crime simply because of more extensive activity and hence greater opportunity. Their study noted that larger firms had no greater number of violations per unit size (per $100 million in sales) than did smaller firms; indeed, larger firms had fewer violations per unit size in the areas of manufacturing quality and safety violations. These conflicting results led Yeager (1986) to speculate that the relationship between size and crime may vary with the area of regulation being considered and the industry in which the corporation operates.

The fourth internal variable linked with corporate crime, and the one about which the most speculation exists, is organizational structure. Mintzberg (1979: 2) defined organizational structure as "the sum total of the ways in which an organization divides its labor into distinct tasks and then achieves coordination among them". Many authors have defined structural dimensions (Weber, 1947; Pugh et. al., 1963; Hickson et. al., 1969; Child, 1972; Ford and Slocum, 1977; Mintzberg, 1979; Daft, 1986). Although there is not universal agreement as to exactly which dimensions comprise an organization's structure, common structural dimensions include: job specialization, formalization, standardization, configuration, and degree of

centralization. It should be noted that while some authors (Pugh et. al., 1968, 1969; Evers et. al., 1976; Kimberley, 1976; Mintzberg, 1979) considered firm size a contingency variable which impacts structure, others (Aldrich, 1972; Hall, 1977) regarded size as a major structural variable.

Job specialization, according to Mintzberg (1979), is related to the number of tasks within a person's job, and the narrowness or broadness of each task. A job is specialized if it contains only a few tasks or if those tasks are narrow in scope. Job specialization is often purported to be a cause of corporate criminal behavior. Mintzberg noted that high levels of specialization often create communication, coordination, and satisfaction problems. Ermann and Lundman (1978a: 9) maintained that a high degree of job specialization is conducive to criminal behavior because

> .....it is possible for people in corporate positions to do their jobs well and still produce deviant action. This is because no one person has the responsibility, incentive, time, or skill to collect, assimilate, and use information needed to coordinate and evaluate corporate actions.

Clinard and Yeager (1980: 44) argued that specialization combines with other factors to produce an

> organizational climate that allows the abdication of a degree of personal responsibility for almost every type of decision..... it permits the corporation to function as if encumbered by blinders and may allow individuals in the corporation to remain largely unaccountable, legally as well as morally.

In a case study of the heavy electrical equipment industry, Waters (1978) found antitrust activity to be associated with specialization, decentralization, and a strict line of command. In a recent case study, Jackall (1988) cited the piecemeal and rapid pace of managerial work as a partial explanation for the erosion of corporate morality.

The parameter of standardization deals with the regulation of behavior via the imposition of routine procedures; to the extent behavior is prescribed and therefore predictable, the organizational structure is standardized. Formalization is closely related to standardization and involves the number of procedures which are formally written down (Pugh et. al., 1963). A highly standardized and formalized structure is usually termed a bureaucracy. There are many claims that a bureaucratic structure renders a corporation more prone to criminal behavior. (Clinard and Yeager, 1980; Bowman, 1981; Ermann and Lundman, 1982b; Donaldson, 1982; Jackall, 1983). Donaldson (1982: 109) contended that bureaucracy leads to decreased individual accountability through the proliferation of impersonal rules; "the clerk who works for a multibillion dollar corporation behaves in accordance with a system of rules - but he does not make the rules and he is not directly accountable for their consequences". Jackall (1983: 130) claimed that

> bureaucracy erodes internal and even external individual success and failure, but also in all the issues that managers face in their daily work. Bureaucracy makes its own internal rules and social context the principal moral gauges for action. Men and women in bureaucracies turn to each other for moral cues on behavior and come to fashion specific situational moralities for specific significant people in their worlds.

These authors have argued that the impersonality of a bureaucracy lures its people into abdicating moral and legal responsibility through an overdependance on the existing rule structure. A 1977 case study of a half million dollar Medicaid fraud at Revco (Vaughn, 1980, 1983) cited bureaucratic characteristics as a contributing factor to the illegal behavior. Jackall (1988) conducted intensive field study in three large organizations to learn how bureaucracy shapes moral consciousness. He blamed decreased

morality on a hierarchal structure which allows managers to distance themselves from operating details, a lack of tracking systems which trace responsibility, and the insulation of top managers from the consequences of their actions.

The structural dimension of configuration is comprised of several components: vertical span of control, lateral span of control, number of job positions, manner of segmentation (Pugh et. al., 1963), and spatial complexity (Price and Mueller, 1986). The vertical span of control entails the number of hierarchical layers present within the organization. A vertically complex firm has a greater number of hierarchical layers and therefore assumes a "tall" structure. Conversely, an organization which has a lower number of hierarchical levels is less complex and is often termed a "flat" organization. The lateral span of control entails how many major subunits, (functions, departments, divisions) are present within an organization. (Blau and Schoenherr, 1971; Ford and Slocum, 1977). The third component of configuration is the number of occupational role or job positions present in the organization. An organization which has many occupational roles, subunits, and layers of authority is termed a "complex" organization (Price and Mueller, 1986). The final component of configuration is segmentation. Segmentation, also known as depart- mentalization, deals with the decision of how to group tasks together in departmental units. Grouping employees by function is the most common and tends to result in bureaucratic organizations. Market based departmentalization entails coordinating activities by time, output, client, or geography; these methods facilitate workflow coordination (Mintzberg, 1979).

Configuration is hypothesized to contribute to corporate crime in several ways. It is commonly postulated that market based departmentalization

results in more corporate crime because each division functions as an autonomous profit center, is judged quantitatively, and therefore feels that its survival tends to rest on bottom line profit figures. Conversely, however, it is possible that market based decentralization could result in less corporate crime because it more clearly defines accountability throughout the organization.

Complexity is another aspect of configuration which is hypothesized to contribute to corporate crime. Stone (1976: 89) contended that corporate crime is generally due to defective organizational procedures, particularly inadequate information flows; "people at the top are protected by the natural screening of bad news which exists in every organization. For a variety of reasons, the bad news never lands on the desk of someone who has both the authority and the inclination to do something about it". Jackall (1988) also mentioned that diffused hierarchical structures allow top managers to distance themselves from operating decisions. Donaldson (1982) and Clinard and Yeager (1980) claimed that a diffused and fragmented organizational structure impedes communication between various segments and creates conditions conductive to organizational crime. Donaldson further contended that peer pressure to engage in illegal behavior increases as the isolation between hierarchical strata increases. Braithwaite (1985: 44-45) mentioned two mechanisms through which a complex hierarchical structure can contribute to corporate crime:

> There are many reasons why bad news does not get to the top.....the problem is that people lower down have an interest in keeping the lid on their failures.....top management gets a fragmented picture which they never find time to put together. In addition, there is the more conspiratorial type of communication blockage orchestrated from above. Here, more senior managers intentionally rupture line reporting actively to prevent low level employees from passing up their

concern over illegalities.

A tall structure might therefore result in illegal behavior because communication becomes more contained as there are more layers which information must traverse in order to reach top management. Similarly, an organization with many departments, divisions, and operating sites would also operate to fragment and contain communication. These inadequate information flows could lead to deliberate lawbreaking because illegalities are easier to contain and cover up. The fragmented communication could also lead to unintentional violations of the law because people don't have enough of the right information to make high quality decisions.

The final structural component is the degree of centralization present within an organization. An organization is totally centralized when all decision making power rests with one person; as that power is dispersed among more people, the organization becomes decentralized. Centralization and decentralization are not absolutes, but rather two ends of a continuum; most organizations fall somewhere in between the two extremes. Most authors speculate that crime increases as a firm becomes more decentralized. Clinard et. al. (1979: 7) stated that decentralization "allows the abdication of personal responsibility for almost every type of decision.....under these conditions, almost any type of corporate criminality.....is possible". Donaldson (1982) held that as the complexity of the decision and the number of people making decisions increases, the consistency of decision making decreases. Zey-Ferrell et. al. (1979: 558) contended that as firms become "larger and more decentralized under absentee ownership, performance is measured quantitatively and not through broader, more human criteria." Kurtz (1969: 193), however, disagreed; he argued that when a firm is centralized

> the logic of the organization is essentially conservative. Thus there is a standardization and consistency of behavior. Increasingly there is a tendency for individual responsibility to give way to corporate responsibility, and the individual denies he is responsible for what the corporation does.

In summarizing all of the literature addressing corporate crime and corporate structure, there appears to be two major mechanisms through which complex, specialized, decentralized, bureaucratic structures can lead to criminal behavior. First of all, such structures can lead to criminal violations by default. Information, communication, and decision making becomes so fragmented that no one has sight of the overall picture and people may simply not have enough of the correct information to make quality decisions. Secondly, these decentralized bureaucratic structures can disperse accountability and responsibility and therefore create a "mask" behind which criminal behavior can more easily occur and be concealed.

There have been no empirical studies beyond the case or opinion survey level which have investigated the relationship between corporate crime and corporate structure. Consequently, there are many assertions about corporate structures which cause corporate criminal behavior, but little empirical evidence to back those claims.

2:3 THEORIES OF CORPORATE CRIME

As detailed above, there is a great deal of verbiage about what causes corporate crime. Most of it is, at this point, merely speculation not backed by any empirical investigation. Corporate crime is also largely an atheoretical body of literature. Efforts at theorizing are few; most of what exists is just a superficially defended and untested list of possible causes. A few authors, however, have attempted to integrate the various hypotheses into a

comprehensive theory of corporate crime.

Sutherland's (1949: 234) original theory of white collar crime is based on the notions of differential association and social disorganization. The concept of differential association addressed the process through which a person became initiated into criminal activity and purported that

> criminal behavior is learned in association with those who define such behavior favorably and in isolation from those who define it unfavorably, and that a person in an appropriate situation engages in such criminal behavior if, and only if, the weight of the favorable definitions exceeds the weight of the unfavorable definitions.....

Social disorganization, on the other hand, addresses crime from a societal point of view. Social disorganization "may appear in the form of lack of standards or conflict of standards" (Sutherland, 1949: 254). Empirical verification of Sutherland's theory is lacking, although some survey research (Clinard, 1983) seems to indicate that managers learn to engage in criminal behavior by observing the behavior of top management.

Following Sutherland's original theory, Saxon (1978) was one of the few to offer any theoretical bases for corporate crime; she proposed three possible theoretical explanations for the behavior.

1) Control theory - Criminality is sociopathic behavior, and violations are committed because they represent the path of least resistance. Crime is therefore the norm in organizations.
2) Learning theory - This theory is based upon operant conditioning; one learns what is and is not rewarded, and behaves accordingly. Szwajkowski (1986) contended that we should therefore expect criminal behavior to increase under adverse economic conditions.
3) Conflict theory - This theory holds that all individuals and organizations are

at times criminal. It further contends that there is a power elite in society which defines what is/is not labeled criminal, and this labeling occurs to the detriment of the weak. In commenting on this theory, Szwajkowski (1986) stated that since those labeled as offenders would tend to be the disadvantaged, large and powerful organizations would not be considered criminal.

Kriesberg (1976) took a different theoretical approach. He offered the following three corporate lawbreaking decision making models; his intent was to define criminal responsibility by identifying which corporate decision makers were capable of preventing criminal violations.

The Rational Actor Model holds that the corporate entity itself is the decision maker, and that all decisions by the entity are rational. Market structure, competition, and corporate structures which minimize people involvement would be factors hypothesized to contribute to corporate crime.

The Organizational Process Model sees the corporation as a group of loosely allied decision making units, each of which exercises autonomy over a narrow range of activities. Most units make decisions according to appropriate and available standard operating procedures. This model is most applicable to older, formalized, standardized bureaucracies. Crime tends to rise from routine operations, and includes such things as pollution violations, adulteration, and illegal sales techniques.

Finally, the Bureaucratic Politics Model maintains that decision making is the result of a bargaining game, which involves multiplicity and parochialism and often results in conflict and compromise. This model focuses on the personalities and motives of individual decision makers, who make conscious choices to act or not act in a criminal manner. This model is particularly applicable to functional organizations in noncompetitive

environments. It hypothesizes that crime is especially likely to occur when authority is new or decisions are sensitive or controversial, as in price fixing and bribery situations.

Vaughn (1982) developed a theory of corporate crime which speculated that corporate crime is the result a combination of motivation and opportunity. Vaughn (1982: 1393) contended that external and environmental factors such as profitability, societal norms and government create a tension for corporations to act unlawfully. Internal organizational structure and processes, on the other hand, create the opportunity for organizations to act unlawfully by "providing many settings where unlawful behavior can occur and by isolating and masking organizational behavior".

Finally, Coleman (1987), in a similar vein, developed a theory of white collar crime which speculated that white collar crime is a result of individual motivation coupled with opportunity; Vaughn and Coleman differ somewhat on which variables create motivation and which create opportunity. According to Coleman, criminal motivation originates in learned competitive norms, compliance, and obedience. The individual criminal actor then neutralizes his/her criminal behavior through rationalization, transfer of responsibility, and denial. Once criminal motivation is present, an actual offense will depend upon the opportunities for criminal behavior encountered by the individual. Factors which shape the distribution of opportunity include the law, enforcement agencies, industry concentration, the presence of organizational sets, a firm's profitability, a decentralized multidivisional corporate structure, and the occupation in which the individual holds membership.

2:4 MODEL OF CORPORATE CRIME

As can be seen from the preceding literature review, there is a long list of proposed precursors of corporate crime. The only factors heretofore investigated have been the firm's economic health, the industry's economic health, the industry's structure, and the firm's size. These four factors have to date been able to explain only a small proportion of the variance in the frequency of criminal violations by corporations. It is proposed here that the organization's internal structure and processes also act as precursors of corporate crime. It is further proposed that these internal factors can either act alone or in combination with external variables to produce criminal violations by organizations. Accordingly, a predictive comprehensive model of corporate crime, which incorporates these internal variables, has been developed; this model is depicted on page 42.

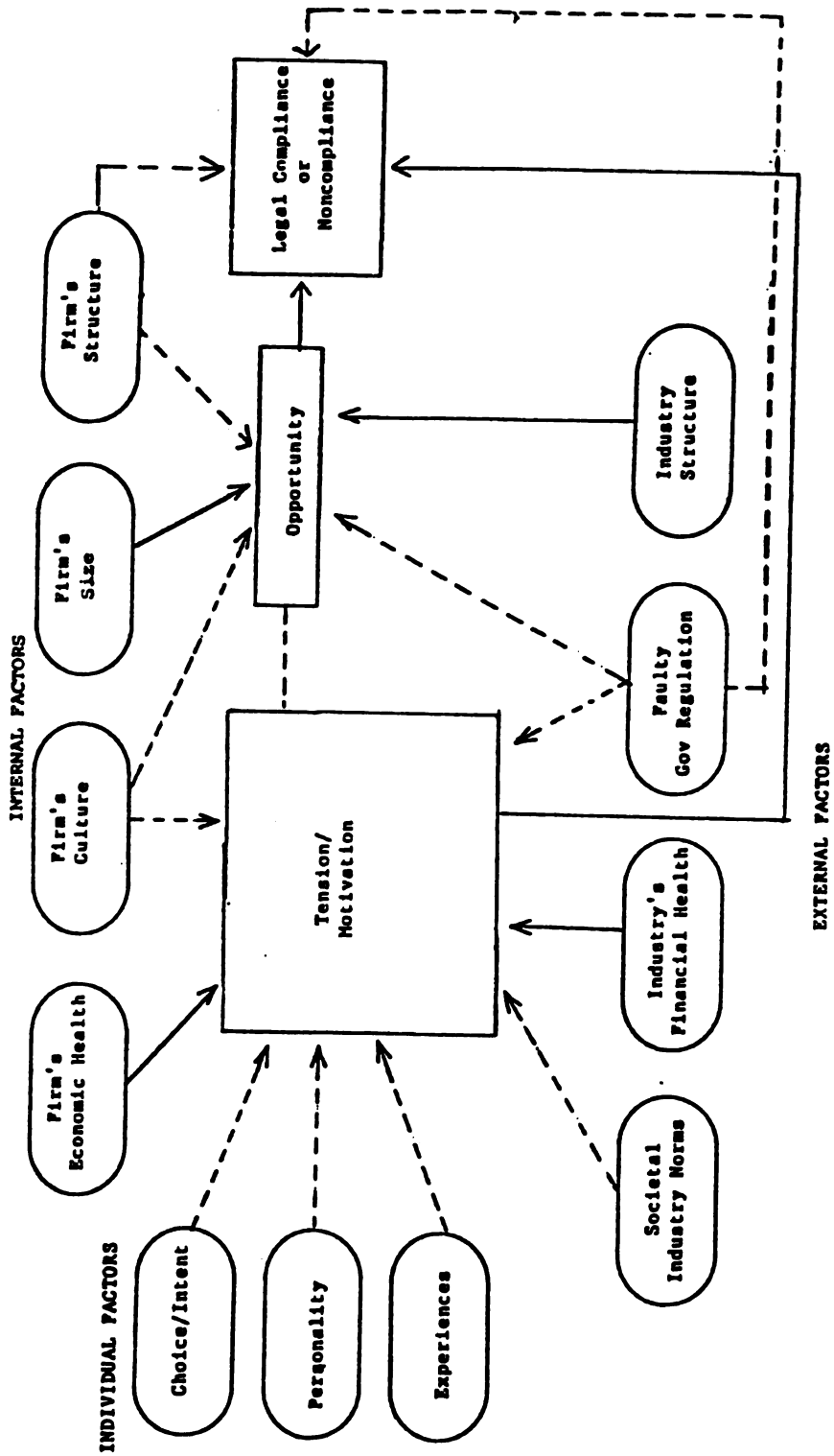

Figure 1: Model of Corporate Crime
Note: The solid lines represent tested relationships; the dotted lines represent untested relationships

The theories developed by Vaughn (1982) and Coleman (1987) postulated that in order for corporate crime to occur, there must be both a motivating tension for the organization to behave criminally and there must also be an opportunity to engage in criminal behavior. This model agrees that the predictive variables do result in these two conditions, but this model also presumes that theoretically a firm can violate the law solely on the basis of opportunity, without overt motivation/tension being present. Most violations will, however, result from a combination of motivation and opportunity.

Some of the predictive variables create a condition of tension, some create the opportunity for criminal behavior, and a few contribute to both conditions. Factors which create the motivation to engage in corporate crime include choice/intent, personality traits, personal background and experiences, societal and industry norms, the industry's economic health, and the firm's financial health. Factors which shape the distribution of opportunity to engage in corporate crime include the industry's structure, the firm's size, and the firm's structure. Factors which contribute to both motivation and opportunity include the firm's culture and faulty government regulation. As detailed in the literature review, the model divides these predictive variables into three broad categories: individual, external, and internal.

The individual variables, which include choice, personality traits, and background experiences are believed to help create the motivation to engage in criminal behavior. Although many scholars do not believe that individual factors are related to corporate crime, there are a number of theorists (Clinard, 1952; Vaughn, 1982; Trevino, 1986; Bommer et. al., 1987) who believe these variables need to be better investigated. Although selection

procedures might slightly impact the distribution of individual variables, it is assumed that these variables are fairly randomly distributed throughout corporations.

The four external variables, societal/industry norms, faulty government regulation, the industry's financial health, and the industry's structure are also divided in their effects. Two create the motivation for criminal behavior, one creates the opportunity, and one does both.

1) Societal/Industry Norms: It is commonly hypothesized that a society and a business sector which prizes financial performance above all else inevitably creates the tension to maximize financial profits, by both legal and illegal means (Conklin, 1977; Vaughn, 1982; Yeager, 1986).

2) Faulty Government Regulation: Substandard government regulation is hypothesized to create both the motivation and the opportunity to engage in corporate crime. Firms are motivated to commit illegal acts when they feel the government is treating them unfairly in the regulatory arena (Clinard et. al., 1979; Szwajkowski and Larwood, 1986). Understaffed and underbudgeted regulatory agencies lower the probability of detection and thereby also create the opportunity for corporate crime . Faulty government regulation can also lead to unintentional corporate crime. Government regulations can be too complex and comprehensive for a firm to totally be aware of and understand all legal requirements (Clinard et. al., 1979) Government regulations can also conflict with each other, in which case it might be impossible for a firm not to violate the law.

3) Industry Financial Health: There are several studies which indicate that

a firm operating in a finanically depressed industry is more likely to engage in criminal behavior (Palmer, 1972; Staw and Szwajkowski, 1975; Asch and Seneca, 1976; Clinard et. al., 1979). It is believed that poor industry performance induces firms within the industry to succumb to pressure to maximize profits in any possible way.

4) Industry Structure: Industry structure has also been found to be mildly related to corporate crime (Hay and Kelley, 1974; Clinard et. al., 1979). It is believed to create the opportunity to engage in criminal behavior primarily through the opportunities for collusion a concentrated industry distribution creates.

The four internal variables, the firm's economic health, the firm's culture, the firm's structure, and the firm's size are also varied in their effects - one creates the motivation for criminal behavior, two create the opportunity for criminal behavior, and one does both.

1) Economic Health: Studies have shown that firms with poor profit performance are more frequent violators of the law (Staw and Szwajkowski, 1975; Asch and Seneca, 1976; Clinard et al, 1979). The firm's economic health is postulated to create the motivation for criminal behavior; firms suffering financially will feel pressure to break the law in efforts to avoid expenditures and accrue illegal profits.

2) Firm's Culture: The effect of the firm's culture on corporate crime has also not been studied empirically, but is believed to contribute to illegal behavior (Sutherland, 1949; Stone, 1975; Waters, 1978; Clinard et. al., 1979; Clinard and Yeager, 1980; Vaughn, 1982). It is proposed that a firm's culture can provide both the motivation and the opportunity for corporate crime. Firm's whose norms include a tolerance for illegal behavior create a tension to engage in

accepted/expected criminal behavior and such cultures also create the opportunity for criminal behavior to flourish because it remains unpunished.

3) Firm's Size: There have been a number of studies which have found a positive relationship between size and corporate crime (Asch and Seneca, 1976; Perez, 1978; Dalton and Kesner, 1988; Clinard et. al., 1979). It is hypothesized that large size can create the opportunity for a firm to more readily engage in criminal behavior in several ways. First, large corporations have greater resources with which to legally defend themselves. Secondly, large firms are involved in more activity and simply encounter more opportunities to engage in criminal actions. Finally, large firms tend to have bureaucratic structures which widely disperse information, accountability, and decision making.

4) Firm's Structure: The firm's structure has not been empirically investigated, but is postulated to create the opportunity to engage in corporate crime; formal, complex, and decentralized structures provide many settings where communication is contained, accountability is lessened, and illegal behavior can be isolated and masked (Waters, 1978; Sonnenfeld and Lawrence, 1978; Ermann and Lundman, 1978a; Clinard et. al., 1979; Clinard and Yeager, 1980; Vaughn, 1982; Donaldson, 1982; Jackall, 1983). A firm's structure can also lead to corporate crime by default; the structure could become so complex and fragmented through specialization, configuration and decentralization that people are not aware that certain actions and decisions are illegal (Ermann and Lundman, 1978a; Clinard and Yeager, 1980).

The model would predict that some degree of criminal motivation will always be present in all firms through individual factors, faulty government regulation, and societal norms. Firms experiencing additional tension in the

form of poor profits, poor industry performance and criminal cultures will of course feel greater motivation to engage in corporate crime.

As the model depicts, motivation alone is not enough; before criminal behavior can take place, motivation must be coupled with opportunity. The viability of each firm's relevant regulatory agencies, the size, structure and culture of an individual firm, and the structure of the industry in which the firm operates will determine the degree of criminal opportunity for each firm.

Although most criminal violations by corporations are probably the result of motivation coupled with opportunity, there are instances in which opportunity alone can create criminal behavior; this can be viewed as "criminal behavior by default". Unwieldy corporate structures which constrain information and fragment decision making and excessive, complex government regulations can lead to unintentional violations of the law by corporations.

2:5 CONCLUSION

To date, two major external variables (industry economic health/munificence, degree of industry concentration) have been empirically examined as potential causes of corporate crime. Two major internal variables (firm's economic health, firm size) have been empirically assessed as contributing factors to corporate crime. With the exception of one minor study (composition of Board) , no one has empirically studied the relationship between either corporate structure or corporate culture and corporate crime in any way other than case and survey opinion research. This is true even of the massive Clinard et. al. (1979) study, which concentrated exclusively on external factors and found only weak support for the predictive powers of external variables. Interestingly, however, internal variables are often the most frequently hypothesized causes of crime. A reasonable explanation for

this lack of internal investigation is advanced by Vaughn (1982: 1388):

> Organizational characteristics have frequently been hypothesized to encourage unlawful organizational behavior. The factors examined have included firm longevity, product diversification, financial performance, geographic expansion, market power, and size. What these characteristics have in common is that they are researchable - this information is publicly available through corporate financial statements and mandatory agency filing requirements. But, other organizational characteristics - processes and structure that are internal and, therefore, more elusive for research purposes - play an important role in the unlawful conduct of business firms and may complicate the findings concerning those factors that have been studied.

Corporate crime is a complex and a highly emotional issue. But if the area is going to move forward, it is time to go beyond speculation and sensationalism. Empirical research may not provide all the answers, but it does represent one largely unexplored avenue.

CHAPTER THREE

HYPOTHESES

This study was primarily concerned with assessing those parts of the previously introduced model which concerned relationships between corporate structure and corporate crime and between corporate culture and corporate crime. The following sections will explain how the specific hypotheses were derived for each relationship.

3:1 CORPORATE STRUCTURE AND CORPORATE CRIME

3:1:1 Conceptual Framework

As noted earlier, there is a great deal of speculation, but no empirical evidence, that different types of corporate structures predispose a corporation to criminal behavior. The dimensions most commonly speculated to be related to corporate crime are specialization, formalization, standardization, configuration, and centralization, with centralization and configuration being perhaps the most frequently cited.

Investigating all of these dimensions for any given organization would be a prohibitive task, and quite impossible for a large sample of corporations. Fortunately, most of these dimensions covary closely. This research will investigate the relationship between corporate crime and those structural dimensions which are expected to demonstrate measurable variability across the sample.

Pugh et. al. (1968), in a study of fifty-two diverse organizations found specialization, standardization, and formalization to be strongly correlated with each other. The same results were found by Child (1972) in an analysis

of eighty-two British organizations crossing six different industries. High correlations between these three structural dimensions have also been found by other researchers (Hage and Aiken, 1967; Blau and Schoenberr, 1971; Hinnings and Lee; 1971). An organization which employs many specialists also appears to have more routines and documentation. In addition, most other studies examining structural dimensions have come to the same conclusions about the effects of size on organization structure. Studies have almost uniformly found that larger organizations are very specialized, standardized and formalized (Pugh et. al., 1968, 1969; Hickson et. al., 1969; Hinnings and Lee, 1971; Child, 1972; Hsu and Marsh, 1983). Since, as indicated below, the sample for this study consists of the largest manufacturing firms in the United States, it is expected that all will have very high degrees of standardization, formalization, and specialization; i.e., the sample should not show much variation on these three dimensions of structure. This presumption will be verified via a question on the structure measurement instrument.

The literature on the structural dimension of configuration is mixed. Rumelt found in 1974 that the vast majority of large corporations segment or departmentalize primarily on a market or product basis, rather than a functional basis. Because the sample used in this study consists of the largest publicly held manufacturing firms, they would not be expected to show much variation on the method of segmentation. There is, however, some disagreement as to how size affects the other components of configuration. One group of studies has found that size leads to greater structural complexity (Pugh et. al., 1968; Blau and Schoenherr, 1971; Meyer, 1972; Child, 1972). Others, however, have found that it is task scope rather

than size which determines structural complexity (Dewar and Simet, 1976; Dewar and Hage, 1978). These authors concluded that "given organizations of the same size, those with broader task scopes should have more levels". If the latter finding is valid, it can be expected that a sample of large firms will show some variation in complexity.

The structural dimension about which the most disagreement exists is degree of centralization; there is no consensus as to whether large organizations tend to be centralized or decentralized. In a 1983 review, Hsu and Marsh (1983) summarized the three views of the relationship between large bureaucratic structure and centralization. One set of studies found that bureaucracies tend to be centralized (Hage, 1965; Hage and Aiken, 1967). Another set of studies have found that other bureaucratic dimensions are unrelated to the degree of centralization (Pugh et. al., 1968; Hsu and Marsh, 1983). Finally, Child (1972, 1973) found that large bureaucracies tend to be decentralized.

In conclusion, although large corporations have consistently demonstrated similar levels of standardization, specialization, and formalization, they have not demonstrated similar levels of centralization or complexity. Because of this demonstrated variance, and because these two structural dimensions are most frequently speculated to lead to corporate crime, degree of centralization and complexity were chosen as the primary independent variables in this study.

3:1:2 Configuration/Complexity

There are many definitions of configuration and complexity in the literature and the two terms tend to be used interchangeably. Pugh et al

(1968) claimed that configuration consisted of lateral and vertical spans of control, criteria for segmentation, and the number of positions in different segments. Hickson et. al. (1969) maintained that configuration was comprised of the chief executive's span of control, subordinate-supervisor ratio, and the vertical span of an organization. Blau and Schoenherr (1971: 302) defined complexity as "the number of structural components that are formally distinguished", and declared that the relevant dimensions were division of labor, number of major subunits, number of hierarchical units, and number of local levels. Ford and Slocum (1977: 562) defined complexity as "the degree or extent of differentiation within a given system, where differentiation may be horizontal, vertical, spatial, or personal in nature". Dewar and Hage (1978) distinguished between the two terms and defined structural differentiation as the number of job titles, departments, and levels within an organization; these same authors defined complexity as the number of different occupations, level of training, and extent of professional activity within an organization. Hsu and Marsh (1983) conceptualized complexity as consisting of horizontal and vertical differentiation, functional specialization, and knowledge complexity. Price and Mueller (1986) summarized the complexity literature and defined complexity as the degree of structural differentiation present in an organization; they noted that an organization becomes more complex as its number of occupational roles, subunits, levels of authority and operating sites increase. Price and Mueller proposed that there are three dimensions to complexity: horizontal complexity, vertical complexity, and spatial complexity.

In summarizing the literature, it would appear that the term "configuration" entails method of segmentation/departmentalization and

degree of differentiation with the firm. The degree of differentiation is one component of configuration and will result in a structure which can range from simple to complex. A complex organization has a high degree of vertical, horizontal, and spatial differentiation. For purposes of clarity, the term "complexity" will be used to denote the structural component being measured throughout the rest of this paper. For the purposes of this study, complexity consisted of the degree of vertical, horizontal, and spatial differentiation; it did not include the method of segmentation/departmentalization.

To reiterate, a high degree of complexity is often hypothesized to lead to corporate crime because it restricts the flow of information, thereby making concealment easier; those with the authority to do something about violations are in ignorance of the illegal behavior. A complex organization can also lead to unintentional corporate crime because those who make decisions may not have enough information to make a quality decision.

3:1:3 Centralization

Pugh et. al. (1963) defined centralization as the location of the locus of decision making authority. Hage and Aiken's (1967) definition encompassed the distribution of power among social positions. Hickson et. al. (1969) investigated at what levels of the organization decisions were made. Holdaway et. al. (1975) defined centralization as the distribution of decision making authority. Mintzberg (1979) discussed where decision making power rests. Daft (1986) referenced which hierarchical levels make decisions. In short, centralization entails how widely or narrowly decision making power is dispersed throughout an organization. The more the decision making power

is concentrated near the apex of the organization, the more centralized the organization is. The more decision making power is dispersed downward through various levels of the organization, the more decentralized an organization is.

Although the corporate crime literature addresses centralization of decision making as a global concept, the corporate structure literature has increasingly addressed centralization as a dimensional concept by examining the locus of decision making authority for different types of decisions. For example, if the underlying decentralization-crime concept is correct, it would seem that the more financial decisions are decentralized within a given organization, the more the company will violate financial laws, regardless of how centralized or decentralized other areas of decision making might be within the same corporation. In accordance with the corporate crime literature, this study hypothesizes that there will be a link between overall decentralization of decision making within a corporation and criminal behavior by that corporation. In addition, this study is interested in investigating whether a dimensional approach to centralization will generate stronger results. Accordingly, as explained in the next chapter and reflected in the hypotheses, this study will use both a global measure of centralization and a dimensional one.

To reiterate, it is commonly postulated that the more decentralized a firm is, the more likely it is to engage in criminal behavior. This study further hypothesizes that the more a certain area of decision making is decentralized the more that area of the organization will violate related laws. This increased criminality is due to the ignorance which results from fragmented decision making and, secondly, the easy concealment of deliberately illegal

behavior brought about by a dispersion of responsibility and accountability.

3:1:4 Hypotheses: Corporate Structure and Corporate Crime

H1: The greater the degree of organizational structural complexity, the more an organization will violate the law.

H2: The greater the overall degree of decentralization of decision making, the more an organization will violate the law.

H2A: The greater the degree of decentralization in employee decisions, the more the company will violate discrimination, and wage and hour laws.

H2B: The greater the degree of decentralization in planning decisions, the more the company will violate environmental laws.

H2C: The greater the degree of decentralization in financial decisions, the more the company will violate environmental laws.

3:2 CORPORATE CULTURE

3:2:1 Conceptual Framework

Organizational culture is usually conceptualized as the common assumptions, meanings, beliefs, norms, communications, and values which members of an organization share (Schein, 1981; Gregory, 1983; Deal and Kennedy, 1983; Sathe, 1985). In a review of the literature, Smircich (1983) noted that researchers have typically defined culture in one of three ways. First, culture has been viewed as a background variable which in part explains or influences important organizational outcomes, such as effectiveness. Secondly, culture is sometimes conceptualized as a pattern of norms and beliefs which bind the organization and can be manipulated by

symbolic devices. Culture is a strategic tool; as such, it conveys identity, facilitates commitment, enhances system stability, and guides/shapes behavior. Finally, culture is defined as a system of shared knowledge, rules, and beliefs. In addition, theorists have noted that the content and strength of culture varies among firms (Deal and Kennedy, 1983; Sathe, 1985).

In a 1989 review of the literature, Ott maintained that there is widespread agreement that organizational culture has four primary functions. First, culture provides shared patterns of interpretations/perceptions, so that members know how they are expected to act and think. Secondly, culture provides shared patterns of affect, so that members know what they are expected to value and feel. Thirdly, culture defines and maintains the boundaries of the organization. Finally, culture functions as a control mechanism which prescribes and prohibits certain behavior. Culture is therefore often postulated to be a powerful cause of organizational members' behavior (Gregory, 1983; Deal and Kennedy, 1983; Kilmann et. al., 1985; Ott, 1989).

The last ten years have seen a rapid escalation in concern over what theorists have labeled the "moral" or "ethical" culture of organizations. Many authors have advanced the notion of building integrity into a corporation's culture. Waters and Bird (1987: 21) spoke of the "management of the moral dimension of culture" and visualized it as an indirect process which would create relevant moral precedent throughout the organization. Buchholz (1989) talked of making a corporation moral by developing a culture which stresses the importance of ethical behavior. In 1988 The Business Roundtable issued a series of guidelines which would strengthen the ethical culture of a company. Victor and Cullen (1988) spoke of an organization's

ethical work climate, which they defined as the organization's normative system which serves as a guide for employee actions and affects a broad range of decisions. These authors and a host of others have recently offered a plethora of recommendations advising practitioners as to how they can create a culture which will make their organizations more ethical.

Most authors seem to regard legal behavior by corporations as a part of corporate ethical behavior. Laczniak (1983: 24) stated that the law "specifies the lowest common denominator of acceptable behavior". In a similar vein, Carroll (1987: 3) maintained that law is regarded as "an embodiment of minimal ethics". Drake and Drake (1988) linked the two by explaining that the law represents the least a corporation must do, while ethics represents the best a corporation can do. Bommer et. al. (1987: 269) claimed that the law is the formal embodiment of society's values. Although the two are not exactly the same, "the legal dimension is an important determinant in many ethical decisions". If we accept the notion of law representing the bottom rungs in the spectrum of ethical behavior, we can legitimately expect that corporations with pervasive and highly developed ethical cultures will have a more solid foundation and fewer legal violations.

One of the most commonly advocated techniques to create a moral culture is a corporate code of ethics. Beliefs and values are central to an organization's culture; "in the language of organizational culture, ethical codes and moral codes are the composite systems of beliefs, values, and moral judgements" (Ott, 1989: 40). Ethicists have made recommendations concerning content, construction, and dissemination of ethical codes. Codes can contain general precepts or they can address and mandate/forbid specific practices. There is general agreement that while a well developed

section addressing moral values and principles should be included in a code of ethics, effective codes must also contain clearly stated provisions which deal with the legalities and ethical concerns of business (Laczniak, 1983; Sanderson and Varner, 1984; Feinberg and Serlen, 1988; Drake and Drake, 1988). Codes can also contain specific punishment for violations. Most authors agree that codes which contain specific sanctions and enforcement provisions, and are supported by investigative efforts, are more likely to be effective. (Laczniak, 1983; Sanderson and Varner, 1984; Molander, 1987; Weller, 1988; Feinberg and Serlen, 1988; Buchholz, 1989). Other common recommendations concerning ethical codes is that all levels of employees participate in their construction, and that they be reviewed and updated periodically (Feinberg and Serlen, 1988; Drake and Drake, 1988). Finally, Gross and Shichman (1987) maintained that in order to grow a strong organizational culture, norms and values must be continuously communicated through both visual and aural media; authors agree that in order to create an effective culture, the ethics code must be regularly publicized and communicated (Laczniak, 1983; Molander, 1987; Weller, 1988).

Authors also argue that top management must become ethical/legal advocates; the expectation of ethical and legal behavior should be continuously reinforced through specific references by top management in the form of policy statements and speeches (Laczniak, 1983; Waters and Bird, 1987). Several authors pointed out that it is especially important for top management to address the conflict between profits and moral constraints so that employees become aware that conflicts are not "automatically resolved in favor of the former" (Molander, 1987: 625; Waters and Bird, 1987).

Many ethicists also advocated constant communication around the topics of corporate legal and moral obligations. Ethics training programs, workshops, discussion groups should be used to make discussions about ethics commonplace in corporations (Eckner, 1983; Waters and Bird, 1987; Drake and Drake, 1988; Buchholz, 1989).

Other ethical practices commonly advocated include mechanisms for reporting ethical/legal violations, social audits, and the incorporation of ethics into selection, performance appraisal, discipline, and job analysis procedures (Laczniak, 1983; Molander, 1987; Goddard, 1988; Buchholz, 1989).

To date, there is scant evidence that any of these recommended practices will indeed create a more ethical culture or result in a higher level of legal and ethical behavior by corporations. A 1977 survey by Brenner and Molander did indicate that executives rationalize their own unethical/illegal actions by referring to similar actions of others in the organization and by citing the lack of formal company policy addressing such matters. A simulated decision making study found support for the notion that a company's stated policy did result in more frequent ethical behavior (Hegarty and Sims, 1979). Finally, based upon interviews with mangers, Waters and Bird (1987: 18) contended that managers often feel stress and confusion because of a "general absence of institutionalized structures which accord a public character to moral concerns:. They further noted that ethical compliance is a non-topic in corporations, so managers often feel left on their own. Beyond these surveys, there is no concrete evidence to support either the notion that an ethical culture can be created or that it will make any measurable difference. This study attempted to fill that hole by determining if the various recommended corporate ethical practices do indeed result in less

corporate crime.

3:2:2 Hypotheses: Corporate Culture and Corporate Crime

H3: The more ethical/legal concerns and awareness are incorporated into a firm's culture, the less criminal violations the firm will have.

H3A:: Companies which have well developed ethical codes will have fewer legal violations.

H3B: The more a company visually and aurally communicates about ethics, the fewer legal violations the company will have.

H3C: The more a company formally trains its employees in ethics, the fewer legal violations the company will have.

H3D: The more a company formally includes ethics in its selection, discipline, performance appraisal, job description, and other organizational processes, the fewer legal violations the company will have.

3:3 INTERACTIONS

The literature does not explicitly hypothesize any interactive effects between the various predictors; Vaughn (1982: 1389) summed up the situation when she stated that "combinations of factors that do or do not result in unlawful behavior cannot yet be unraveled". Several of the more prominent authors in this field, however, state that they believe corporate crime to be a multidimensional and complex construct (Clinard et. al., 1979; Clinard and Yeager, 1980). This study will test for first order interactions among the seven independent variables: firm profits, industry health, industry concentration, firm size, complexity, centralization, and culture; any findings will be discussed post hoc and may point out future hypotheses which would warrant examination.

CHAPTER FOUR

RESEARCH DESIGN

4:1 THE SAMPLE

The names of companies which were included in the study were drawn from Ward's Business Directory, which provides an annual listing of the largest 1000 public corporations in the United States. All companies on the 1988 list had 1986 annual sales of $322,000,000 or more.

The sample was comprised of all companies from the listing which met the following three criteria:

1) Only companies whose primary SIC code fell within the 2000-3999 classifications (manufacturing output) were included in the sample. Firms in other SIC codes (extraction and construction, wholesale and retail trade, financial, transportation etc.) were deemed too unlike manufacturing companies in terms of regulatory environment and market structure/conditions to be included. Companies in these industries, for instance, tend to be monitored by specialized governmental agencies. Furthermore, companies in nonmanufacturing SIC codes are not vulnerable to the same types of violations as manufacturing companies. Service industries, for example, cannot be charged with violations involving physical products or the manufacturing process.
2) In order to be part of the sample, at least 50% of the company's business had to be conducted under the name of the parent company or under the name of one subsidiary. There are several reasons for this. First of all, the governmental agencies publish violations under the name of the offending company, not the name of the parent. Attempting

to identify and catalog violations for thousands of subsidiaries is beyond the scope of this study. Secondly, if a company owns many subsidiaries, it cannot be assumed that the parent company will be able to intelligently comment on the different structures and cultures which may be present within each independent subsidiary. Thus, holding companies and those companies which are so diversified that no one unit accounts for a majority of the company's sales were excluded.

3) Ownership of the company had to have remained relatively constant since 1983, i.e., the company could not have been taken private or acquired by another company. Financial data ceases to become publicly available when a company assumes private ownership, and vast structural changes often occur after an acquisition.

The use of the above three parameters resulted in a total sample of 365 publicly held manufacturing firms.

Each company in the sample was searched for litigated or administratively adjudicated incidents against the firm during the 1983-1987 time period. In addition, data on the firm's profits, firm's size, industry concentration, and industry financial health was gathered for each firm in the sample. Finally, each company received a a questionnaire designed to elicit information on corporate structure and a second questionnaire which gathered information on corporate ethical culture.

A total of 214 firms responded to the structure questionnaire; this resulted in an initial response rate of 58.6%. Three of the returned questionnaires were eliminated because the respondents removed the identification number; one other questionnaire was eliminated because about

40% of the questionnaire was left blank. Therefore, the final response rate was 210 firms, or 57.5%.

A total of 129 firms responded to the ethics/culture questionnaire, for an initial response rate of 35.3%. Four of the returned questionnaires were eliminated because respondents removed the identification number; the final response rate was 124 firms, or 34%.

The number of firms responding to both questionnaires was 82, or 22.5%

4:2 THE INDEPENDENT VARIABLE: CORPORATE STRUCTURE

Centralization and degree of complexity were the primary dimensions of structure which were included in this study.

4:2:1 Definition of Centralization

Centralization entails how widely or narrowly decision making power is dispersed throughout an organization. The more the decision making power is concentrated near the apex of the organization, the more centralized the organization is. The more decision making power is dispersed downward through various levels of the organization, the more decentralized an organization is (Pugh et. al., 1963; Holdaway et. al., 1975; Hage and Aiken, 1967; Mintzberg, 1979; Daft, 1986). To reiterate, it is commonly postulated that the more decentralized a firm is, the more likely it is to engage in criminal behavior due to the fragmenting of decision making and the accompanying dispersion of responsibility and accountability.

4:2:2 Measurement of Centralization:

Centralization has commonly been measured in two ways, either globally or by dimension. The global approach tries to tap into an overall perception of how widely dispersed decision making power is in a given organization. The dimensional approach attempts to define the locus of decision making authority for different types of decisions. Price and Mueller (1986) noted that most current research on centralization utilizes a dimensional rather than a global approach. This thesis also used a dimensional measurement approach.

A dimensional concept of centralization was first developed by the Aston Group in their study of fifty-two diverse organizations (Pugh et. al., 1968). These researchers used two major constructs: overall centralization and autonomy of the organization to make decisions. In addition, this research used a dimensional subscale of: decisions affecting the whole organization, decisions affecting subunits, and decisions affecting the individual. Another dimensional subscale consisted of: finance decisions, costs decisions, time decisions, quality decisions, labor relations decisions, and output volume decisions. Other researchers developed different dimensions of centralization. Chandler (1962) spoke of strategic vs. tactical decisions. Becker and Gordon (1966) conceptualized centralization as consisting of decisions involving work activities, resources allocation, and coordination. Hage and Aiken (1967) broke centralization into decisions involving resource distribution or policy formation and decisions involving the performance of tasks. Price and Mueller (1986) noted that there is little standardization or research regarding dimensions of centralization. Because there is no agreement upon the dimensions of centralization, this research

used a dimensional schema which borrowed from, but did not exactly replicate any of the existing typologies. The dimensions used were:

-Planning and Policy Decisions

-Financial and Resource Allocation Decisions

-Product Decisions

-Marketing and Sales Decisions

-Operations and Work Activities Decisions

-Employee Decisions

These dimensions were chosen for two reasons. First of all, they represented all of the major functional areas in which manufacturing corporations are usually engaged; they therefore resulted in a comprehensive list of decisions. Secondly, these dimensions best lined up with the Clinard et. al. (1979) classifications of corporate crime. This allowed tests between not only overall crime rate and overall degree of centralization, but also between different violation categories and different dimensions of centralization. If the underlying theory is correct, for instance, decentralization in operations and product decisions should result in more manufacturing violations, decentralization in employee decisions should result in more employee violations, etc.

The most commonly used dimensional measure of centralization is the Aston Group's instrument, which asks key informants to indicate which hierarchical level has the power to make each of thirty seven different decisions, even if that decision is later subject to routine ratification. Other studies which used the exact same instruments or adaptations of the instrument include Hinnings and Lee (1971), Child (1972, 1973), Donaldson and Warner (1974), Greenwood and Hinings (1976), and Evans and

McQuillan (1977). Studies which used similar instruments include Blau (1968), Blau and Schoenberr (1971), Meyer (1972), Moch (1976), Meyer and Brown (1977), and Moch and Morse (1977). A similar measure was also used and validated by Holdaway et al (1975) in a study of centralization in universities; these authors used the same format, but varied the decisions to reflect the educational rather than the manufacturing environment.

The instrument developed for this research was entitled "Decision Making in Successful American Corporations", and included measures of both centralization and complexity. The centralization portion of the instrument spanned questions 1-46, and asked respondents to assess the level at which forty-six different decisions are made in their company. It borrowed heavily from the Pugh et. al. (1968) instrument, incorporating twenty-five of their original thirty-seven decisions. The format chosen almost exactly replicated the Pugh et. al. (1986) instrument. The only major difference between the format of this instrument and the Aston Group's instrument was the number of hierarchal levels presented. The Aston Group used six levels; this instrument used seven. It incorporated a level of "Staff: Professional and Technical Employees"; it was felt that this level was necessary because staff and professional specialists have become more of a factor within organizations during the past several decades.

4:2:3 Scoring of Centralization Measure

Each decision received a score from zero to six (employee=0; staff=1; lower management=2; middle management=3; top management=4; CEO=5; board=6). Since there were forty-seven decisions, the possible score of a given corporation theoretically ranged from 0 to 276. The lower the total

score, the more decentralized the organization.

It was also possible to obtain separate centralization subscores in each of the functional areas. "Employee Decisions", for instance contained ten different decisions, scores on this section could theoretically range from 0 to 60. Once again, the lower the subscore, the more decentralized the functional area. The functional area scoring ranges broke down as follows:

-Policy and Planning Decisions: 0 to 54

-Financial Decisions: 0 to 54

-Marketing/Selling Decisions: 0 to 36

-Product Decisions: 0 to 30

-Operations/Work Activity Decisions: 0 to 48

-Employee Decisions: 0 to 60

4:2:4 Definition of Complexity:

As noted earlier, there is some disagreement about the definition of complexity and the dimensions of complexity. This study used the definition offered by Price and Mueller (1986) in their review of organizational measuring instruments. The authors reviewed all previous research and defined complexity as the degree of structural differentiation present in an organization. Price and Mueller proposed that there are three dimensions to complexity: horizontal complexity, vertical complexity, and spatial complexity. A complex organization has a high degree of vertical, horizontal, and spatial differentiation, i.e., the organization becomes more complex as it number of subunits, levels of authority, and number of operating sites increases.

To reiterate, a high degree of complexity is often hypothesized to lead to corporate crime because it restricts the flow of information, and those with the

authority to do something about violations are in ignorance of the illegal behavior.

4:2:5 Measurement of Complexity:

Vertical complexity is commonly measured through the use of organizational charts; it involves a count of the number of levels between the CEO and the lowest employee in the longest chain of the hierarchy (Pugh et al, 1969; Hickson et al, 1969; Blau and Schoenherr, 1971). Other studies have used interviews or surveys to determine the number of levels in the organization's structure (Dewar and Hage, 1978).

Horizontal complexity is measured in several different ways. A common measure is the number of departments/divisions in the organization; a department/division is usually defined as a major work unit consisting of at least four or five employees (Blau and Schoenherr,1971; Aiken and Hage, 1971; Meyer, 1972; Hsu and Marsh, 1983). Some studies have measured horizontal complexity by counting the number of people reporting to the CEO (Pugh et. al., 1968; Hickson et. al., 1969). Measures of horizontal complexity have commonly been obtained through questionnaires, the use of organization charts, and through interviews with top management.

Although few studies have included a measure of spatial complexity, it is commonly defined as the number of operating sites (Blau and Schoenherr, 1971; Ford and Slocum, 1976; Price and Mueller, 1986).

As stated earlier, this study considered vertical, horizontal, and spatial complexity. A request for organization charts was sent to each of the companies in the sample; the response rate, however, was less than 10%. Organizational complexity was therefore measured via questions 49-52 on

the decision making questionnaire. Annual reports and 10ks usually contained information on this dimension (the number of divisions, locations etc.); all complexity information reported on the questionnaire was verified whenever possible.

Vertical complexity was measured in terms of the number of management levels in the longest chain between the CEO and a direct production employee; question 51 on the decision making instrument was used to assess vertical complexity. This question was taken directly from the Edmonton Organization Survey, an instrument developed by Hinings (1988), one of the original Aston researchers.

Horizontal complexity was measured as the number of people reporting to the CEO plus the number of departments or divisions in the organization, depending on whether the organization was segmented along functional or product lines; questions 49 and 50 were used to assess horizontal complexity. Question 49 asked for a count of departments/divisions in the organization; question 50 asked for the number of people reporting to the CEO.

Spatial complexity was measured as the number of operating sites; an operating site was defined as any United States facility in which production takes place. Question 52 assessed spatial complexity.

4:2:6: Scoring of Complexity Measure

A score was recorded for each of the dimensions of complexity: vertical (#of levels), horizontal (#of divisions/departments + number reporting to CEO), and spatial (# of production sites). The scores for the three dimensions of complexity were added to obtain a total complexity score for an

organization.

4:2:7 Formalization/Standardization/ Specialization

As mentioned previously, research has shown these three dimensions of organizational structure to be highly correlated. In addition, research has shown that large corporations exhibit high degrees of all three structural dimensions. Because it was not expected that this sample would show much variability in formalization, standardization, and specialization, these structural dimensions were not chosen as independent variables. The assumption that the sample corporations would all show high degrees of formalization/standardization/specialization was assessed via question 53. This question was adapted from measures of formalization used by Inkson et. al. (1970) and Hinnings (1988). The question listed ten types of documents and asked respondents to indicate which of these documents were available in written form in the organization. The total possible score ranged from 0 to 10, with one point being scored for every type of document available in written form.

4:3:8 Data Collection:

The questionnaire was sent to key informants at the vice presidential level for all corporations in the sample; the names of these people were obtained through annual reports. Structure research has typically used interviews with CEOs and Presidents (Pugh et. al., 1968; Holdaway, 1975); this research used the vice presidential level for two reasons: vice presidents were assumed to be more accessible and to have a better picture of internal organizational processes. This thought was echoed by Price and Mueller

(1986), who recommended using second tier executives as key informants for centralization research. It was their contention that CEOs and Presidents lack comprehensive knowledge of internal organizational processes since their primary concern is external affairs. In addition, this study used questionnaires instead of interviews; interviews were simply not possible with such a large sample.

A follow up postcard was sent to nonrespondents two weeks after the initial mailing. A follow up questionnaire was sent to all those still not responding four weeks after the initial mailing.

A total of 210 usable questionnaires were received. The average number of years respondents had worked for their organizations was 19.5 years; the titles of the respondents were as follows:

-President/CEO	7.14%
-Division/Sector President	2.86%
-Group President/Vice President	7.14%
-Executive Vice President	9.52%
-Senior Vice President	11.43%
-Vice President	38.57%
-Director	6.19%
-Controller	5.24%
-Manager	6.19%
-Other/Didn't Indicate	5.71%

4:3 THE INDEPENDENT VARIABLE: CORPORATE CULTURE

4:31 Definition of Corporate Culture:

In addition to the relationship between corporate structure and corporate crime, this study also examined the relationship between corporate crime and the ethical culture of an organization. Victor and Cullen (1988: 101) defined the ethical work climate of an organization as "the prevailing perceptions of typical organizational practices and procedures that have

ethical content" and recommended that these practices be used to "characterize norms at the organizational level of analysis". Corporate culture was therefore defined, for the purposes of this study, in terms of the ethical emphasis and awareness within a corporation.

4:3:2 Measurement of Corporate Culture:

A questionnaire entitled "The Role of Ethics in Business" was developed to measure the presence and degree of ethical practices in a corporation. The instrument was based upon an ethical practices questionnaire which was developed by The Center for Business Ethics at Bentley College. The 47 item questionnaire included the following categories:

-The presence and content of ethical codes (does a code exist, how specific is it, who had input into it, etc.)

-Aural and visual communication about ethics (what vehicles does the company use to discuss ethics, how often do employees talk about ethics, how often do they see the code, etc.)

-Ethics training (does the company offer ethics training, how often, who must attend, etc.)

-The incorporation of ethics into organizational processes (is ethics specifically a part of job descriptions, performance appraisals, discipline processes, etc.)

4:3:3 Scoring of Culture Measure:

The total ethical practices score for a given corporation could range from 0 to 65. The higher the score, the more a corporation incorporated ethical practices into its structure and processes.

Ranges of scores on the ethical practices dimensions are as follows:

-The presence and content of ethical codes: 0 to 13

-Ethics communications: 0 to 20

-Ethics training: 0 to 19

-The incorporation of ethics into organizational processes: 0 to 12

4:3:4 Data Collection

The ethical practices questionnaire was sent to a key informant in each of the sample corporations; the recipients were members of either the human resources/labor relations or legal departments. Their names were drawn from annual reports and the membership directory of the American Society for Personnel Administration. A follow up was sent to nonrepsondents three weeks after the initial mailing.

A total of 125 usable questionnaires were received. The average tenure of respondents with their organizations was 14. 2 years. Titles of the respondents were as follows:

Vice President - Human Resources	24.2%
Vice President	4.0%
Vice President and General Counsel	7.3%
Human Resource Director	19.4%
Human Resource Manager	16.9%
General Counsel	7.3%
Human Resource Representative	4.8%
Ethics Manager	6.5%
Other/Didn't Indicate	8.9%

4:4 SECONDARY INDEPENDENT VARIABLES

It would have been an impossible task to consider all the hypothesized causes of corporate crime. Consequently, this study included and controlled

for those variables which have been empirically demonstrated to be linked to corporate crime by previous studies. The variables which were treated as covariates were:

-firm profits

-the industry's financial health

-organizational size

-the degree of concentration in the industry

4:4:1 Firm's Profits

A firm's financial health is commonly measured by return on assets, a ratio used to indicate profitability (Chasteen et al, 1987). The number is calculated by dividing a firm's net income by total assets; the resulting number can be positive or negative. Since the return on assets can be influenced by the industry in which the firm operates, the firm's profitability was calculated as the difference between the firm's mean return on assets for 1983-1987 minus the industry's mean return on assets for 1983-1987. This indicated how much above or below the industry average each individual firm's return on assets is. Firm financial data was obtained mostly through annual reports. For those firms which did not send an annual report, the data was gathered from the NAARS data base, which reprints annual reports.

The mean return on assets for the sample corporations was 6.0%; the mean difference between firm profits and industry profits was -1.1%.

4:4:2 Financial Health of Industry

Financial health of the industry was based upon four digit SIC codes and was determined by the five year average return on assets. This data was

gathered from Dun and Bradstreet's Industry Norms and Key Business Ratios. The mean return on assets for the sample industries was 7.4%.

4:4:3 Firm Size

Firm size was measured as the average of the number of employees in each firm during the years 1983-1987. This data was obtained from annual reports and from Standard and Poor's Register of Corporations. In his 1976 review of size and structure, Kimberly noted that 65 of the 80 articles reviewed used number of employees as the measure of size.

The mean size of the sample corporations was 31,629 employees.

4:4:4 Degree of Industry Concentration

The degree of concentration in an industry was measured by a figure known as the Herfindahl-Hirshman index. This figure is obtained by squaring and summing the market share of the fifty largest firms in an industry. These figures are published by the Bureau of the Census in the "Census of Manufacturers", which is conducted every five years. Theoretically this number can range from 1 to 10,000; there is considerable variation between the different SIC Codes. Unfortunately, the 1987 census data will not be made available until sometime in 1990; it was therefore necessary to use the 1982 data. This was not a problem, however, as correlation analysis has shown that concentration ratios are stable over time (Shepherd, 1985).

4:5 THE DEPENDENT VARIABLE: CORPORATE CRIME

A total of 4,221 violations served as the dependent variable in this study. The following sections detail how this data was obtained and

measured.

4:5:1 Violation Categories

Most authors speak of "corporate crime" in a rather generic fashion, without denoting particular violations. The first step in operationalizing corporate crime was to consider the different types of possible violations; several classification schemes appeared in the literature (Ermann and Lundman (1978b); Clinard et al, 1979; Reiss and Biderman, 1980).

Because of its relative straightforwardness, and because it best coincided with the dimensional operationalization of decentralization of decision making, this study utilized the Clinard et. al. (1979) typology, which classified violations into the following seven categories:

1) Administrative Violations
   - -failure to obey agency or court orders
   - -refusal to produce information
   - -failure to report information
   - -failure to register with the agency

2) Environmental violations
   - -air and water pollution
   - -toxic and chemical pollution
   - -solid and hazardous waste pollution
   - -noise pollution
   - -failure to install control systems

3) Financial violations
   - -illegal payments (bribes, political contributions, foreign payments, payments to retailers/wholesalers etc.)
   - -security related violations (false proxy information, misuse of nonpublic material information)
   - -fraud
   - -tax violations
   - -accounting practice violations

4) Labor violations
   -discrimination
   -wrongful discharge
   -occupational safety and health hazards
   -unfair labor practices
   -wage and hour violations

5) Manufacturing violations
   -product safety violations
   -food and drug violations
   -motor vehicle defects or noncompliance with safety standards
   -misbranding, mispackaging, mislabeling
   -lack of effectiveness of product

6) Unfair trade practices:
   -antitrust violations (monopolization, misrepresentation, price discrimination, credit violations, restraining trade)
   -vertical combinations
   -horizontal combinations

7) Other violations (anything which does not fit into above five)

Most studies on corporate crime have included only antitrust violations. When choosing the violations to be included in this study, two criteria were developed. First, the violation category had be uniformly administered by the same agency/agencies. Manufacturing violations, for instance, are monitored by three separate agencies, each having control over different industry segments. Differences in the agencies themselves might therefore introduce contamination into the measurement. Secondly, the violation category had to be applicable to all firms. Many labor relations violations, for instance, apply only to unionized firms. Thirdly, it was decided that the violation categories chosen would represent some of the more frequently violated laws. Following these three criteria, this study concentrated on all environmental violations and some employee violations. Clinard et al (1979) found that data from the government agencies which handle these two categories of violations accounted for 40.2% of all violations.

4:5:1:1 Environmental Violations

Environmental violations are under the jurisdiction of the Environmental Protection Agency and the United States Coast Guard.

The EPA has four major functions. The agency administers federal environmental laws, sets standards, ensures compliance, and performs supportive research. (Steiner and Steiner, 1988) The agency oversees the following major areas of legislation: air quality, water quality, solid and toxic waste disposal, toxic chemicals, radiation, and noise pollution. This study included all enforcement actions under the jurisdiction of the EPA.

The United States Coast Guard is a branch of the armed forces and is responsible for maritime law enforcement. Among its responsibilities is the control and prevention of water pollution. (Federal Regulatory Directory, 1986). The agency monitors dumping and spills from vessels and also monitors the release of pollutants into the water from land based. companies. This study included only violations committed by land based companies, as spills apply almost exclusively to chemical and petroleum companies.

4:5:1:2 Employee Violations:

Employee violations are under the jurisdiction of the Equal Employment Opportunity Commission, the National Labor Relations Board, the Occupational Safety and Health Administration, and the Employment Standards Administration (U.S. Department of Labor). The Equal Employment Opportunity Commission investigates, conciliates, and litigates employee discrimination charges. The National Labor Relations Board acts on cases involving illegal union organization actions and unfair labor practices. The Occupational Safety and Health Administration develops and

enforces standards which deal with job safety and employee health. The Employment Standards Administration monitors compliance with Executive Order 11246 and enforces wage and hour laws (Federal Regulatory Directory, 1986).

This study did not include all possible types of employee violations. NLRB decisions were excluded because many apply to unionized firms only. OSHA decisions were excluded because twenty-five states have their own programs and the national agency no longer enforces in these states. Consequently, this study considered two types of employee violations: discrimination violations, and wage and hour violations. These two categories were chosen because they apply equally to all firms and are overseen by national rather than state programs.

4:5:2 Data Sources/Data Collection

The corporate crime literature abounds with laments on how difficult it is to collect corporate crime data. There are, according to Clinard et. al. (1979) four recognized sources of violation data.

The first and primary source of violation data is the government regulatory agencies. The 1985 Directory of Federal Regulatory Agencies, published by Congressional Quarterly, Inc., lists 103 federal agencies which attempt to secure corporate compliance to federal laws. Many of these agencies are very specialized; there are, for instance, 14 agencies which deal exclusively with agriculture. The Directory defines 13 agencies as the "major" regulatory agencies. (1985: ix).

Agencies exist at both the Federal and State levels, although in some areas enforcement is carried out only at the Federal level. State agencies

usually oversee the violations of the small corporations, while most enforcement actions against large corporations are handled by federal agencies; federal law preempts state law (Clinard et. al., 1979).

Although government agencies are the most obvious source of violation data, there are several major problems involved in using agency data. Clinard et. al. (1979) pointed out that the major obstacle to the study of corporate crime is the fact that no centralized crime data bank exists. Each agency collects and stores its own violation data; each agency must therefore be contacted separately. Furthermore, many of the agencies still store their information manually. The agency data therefore varies in accessibility, there is no guarantee of a complete data set, data are often set up by case file number rather than company name, much data is available only in district or regional offices, computer costs are high, agency time to fulfill requests is limited, and some data cannot be made public. In their review of data sources on white collar lawbreaking, Reiss and Biderman (1980: 59) noted that many of the agencies are "adverse to expending the effort required to meet requests fully and accurately". Not much has changed since 1980. In his (1986:132) "state of the art" report, Szwajkowski maintained that "structured archives of data on the incidence of organizational misconduct do not exist.....a compiled sample of observations of even one type of misconduct is not an easy task to accomplish". Szwajkowski went on to note that the agency data is relatively inaccessible and fragmented, that much is uncollected, that there are no uniform standards or procedures for collection, and that the data are almost never available in computer form.

The second source of violation data is the Law Service Reports, which are published in annual volumes by Commerce Clearinghouse and the Bureau of

National Affairs. These books give decisions in specialized areas such as pollution, discrimination, safety and health violations, antitrust actions, and labor relations. The information in them is extensive but not complete; critical pieces of information are often left out. They often cover only those cases which went to trial (Clinard et. al., 1979). Most studies done on corporate crime (Staw and Szwajkowski, 1975; Szwajkowski, 1981; Kesner et. al., 1986) have relied exclusively on data garnered from the Law Service Reports.

The third source of crime data is a corporation's annual financial report (10-K), which is prepared for the SEC and includes a legal proceedings section. There is a great deal of disparity in the amount of information companies provide, many companies do not answer requests for the reports, and privately held companies are not required to file 10-Ks (Clinard et. al., 1979). These forms can be requested directly from a company or obtained through various data bases which provide copies of 10-Ks for a fee.

The fourth and final source of violation data is a computer search of major newspapers (NY Times, Wall Street Journal) and trade journals for abstracts of legal actions taken against corporations (Clinard et. al., 1979). This is expensive and usually will pick up only major actions against large corporations.

This study used information from government agencies, annual reports/10ks, and law service reports. Cooperation was secured from the Environmental Protection Agency and the United States Coast Guard Environmental Division, the two agencies in charge of environmental violations. Both furnished extensive printouts of all violations which took place during the 1983-1987 time period. The EPA initiated enforcement

action for 3,621 violations; the Coast Guard provided data on 510 violations. The Equal Employment Opportunity Commission claimed that it is prohibited from releasing data on Title VII Civil Rights Act discrimination charges unless the cases go to court. The Employment Standards Administration said their data is archived and not readily available; the agency further said there was no central office where dockets were available.

Appropriate law service reports were therefore manually searched for employee violations. This search generated 95 discrimination violations and no wage and hour violations. It must be noted, however, that these violations all involve only those cases that went to trial, since that is the only type of case reported by the law services. The law service reports which were utilized in this study were:

-Wage and Hour Cases (Bureau of National Affairs)

-Fair Employment Practice Cases (Bureau of National Affairs)

Letters were also be sent to each corporation in the sample requesting annual reports and 10ks. 10ks proved to be especially useful in providing details about environmental cases which went to court. The rate of reply was 94%; these reports were therefore also used as a data source.

As the various sources were searched, the following data sheet was used to record the relevant information.

Figure 2: Violation Data Sheet

Name of Firm _____

Primary Industry _____ Violation Category _____

Case Number_____ Source _____

Present Status of Case

_____Convicted _____ Settled _____ Dismissed

_____Under Appeal to _____

_____Pending by _____

Date Action Initiated _____ Initiating Agency _____

Violation _____

_____

_____

Length of Violation _____

Date of Violation _____

Sanction _____

Actual Sanction _____ Proposed Sanction _____

Date of Decision_____

Agency/Court _____

Severity of Alleged Violation:

Serious _____ Moderate _____ Minor _____

Agency Defined _____ Researcher Defined _____

_____

_____

4:5:3 Enforcement Actions

4:5:3:1 Enforcement Outcomes:

Each regulatory agency contains a policing function, generally known as the enforcement division or office. Enforcement officials investigate all alleged violations under the agency's jurisdiction; the results of investigations are referred to the Commission, a small group which controls each agency (Clinard et. al., 1979). If the case is not dropped, the Commission then makes a decision to pursue one of three avenues: referral to the Department of Justice for criminal prosecution, civil prosecution, or administrative action. It is also possible that an agency will decide to use a combination of the available avenues (Bequai, 1978).

Most violations are handled administratively. Unless the case has resulted in a warning letter or a consent agreement, an agency employee, typically an administrative law judge, hears the case and issues an opinion; the opinion can be appealed to the Commission and then to a U.S. Court of Appeals. The agency can also decide to use its own attorneys to pursue the case in the civil courts. The final option is to refer for prosecution in the criminal courts; this is the least used of the three options (Clinard et. al., 1979; Schudson et. al., 1984). There are six possible enforcement outcomes available through these three options: warnings, recall, orders, injunctions, monetary fines, and criminal prosecution of officers Following is a brief description of each possible action (Clinard and Yeager, 1980):

1) Warning: A warning is a letter issued by a regulatory agency and is often the first avenue an agency uses to attempt to induce compliance. Warnings frequently give notice of violation and request either compliance or corrective action.

2) Recall: Recalls of a product are frequently used by the National Highway Traffic Safety Administration, the Consumer Products Safety Commission, and the Food and Drug Administration. Recalls can be voluntary, noncompliance (issued when a company is not carrying out a voluntary recall acceptably), agency ordered, or court ordered. The Clinard et. al. (1979:113) study labeled even voluntary recalls as violations; conversations with agency enforcement personnel revealed that "voluntary" recalls were seldom entirely the result of a company's own volition, and, as the authors noted, "a violation has taken place, regardless of who discovered it".

3) Order: There are two general categories of orders: unilateral and consent orders. A unilateral order is a command which is directly imposed, generally from a civil court. A consent order is an agreement between the corporation and an agency or court, whereby the company agrees to stop violating the law, but does not admit guilt. Consent agreements are understandings reached with agencies; consent decrees are agreements ratified by a civil court. Orders are either remedial (clean up pollution, use corrective advertising, recall a product etc.) or geared towards future effect (install pollution equipment, take affirmative action, cease and desist etc.).

4) Injunction: An injunction is a judicial order issued by a civil court and is designed to bring a quick halt to an illegal action. Examples of injunctions include production halts, plant shutdowns, distribution halts, and proposed acquisition halts.

5) Monetary Penalties: Fines can be imposed by agencies, civil courts, or criminal courts. Fines are often used in conjunction with other

penalties.

6) Criminal Prosecution of Officers: Officers involved in corporate crime can be fined, imprisioned, given suspended sentences, suspended from corporate activity, or placed on probation.

This study included 4,221 enforcement actions taken against the sample corporations in any of the three areas: administrative (3,762 violations) civil (455 violations), or criminal (4 violations). Of the 3,991 completed actions,, there were 1,985 notices of violation/warnings, 1,766 agency orders/complaints, and 240 court orders/convictions.

4:5:3:2: Enforcement Stages:

There are five possible stages of a corporate legal violation: undiscovered, dismissed, pending, settled, and convicted.

The first outcome, undiscovered, arises because many legal violations are simply never found or reported; therefore, the measure of the independent variable will always be biased downward. There is no practical way to overcome this problem. This study, like all others, therefore considered only discovered corporate crime.

Dismissed means the enforcement body chose not to continue enforcement proceedings. Pending means no decision has as yet been made. Settlement indicates an agreement has been reached between the company and a court or agency, but there was not necessarily an admission of guilt. A conviction is a finding of guilt.

There is, of course, a lag between discovery of the violation and the enforcement action. Although there are variations across agencies, it generally takes about four months to process a criminal case, two years to

complete civil cases, and four months to handle administrative actions. Minor violations generally involve one month handling time, moderate violations take six months, and serious violations take thirteen months. The overall average time from discovery to completion for all violations across all major agencies is 6.7 months (Clinard et. al., 1979).

Because of the above mentioned time lag, a substantial number of cases, especially those involving court action, were pending or on appeal at the point of data collection. Many of the pending cases will be tied up in the civil and criminal courts for many months or even years, and, due to the lag in reporting, data on many of the cases which were completed in 1988-1990 is not yet available. Since some of these cases will eventually be dismissed; this will cause an upward bias in the measure of the dependent variable. The evidence, indicates, however, that not many cases are eventually dismissed. In a study which included five types of violations, Szwajkowski (1981) included dismissed cases in his violations count; of 318 completed cases, 24 had been dismissed, which is only 7.5%. If it is therefore assumed that of all pending cases, less than 8% will eventually be dismissed, eliminating the 92% which will be completed is a much more serious threat to accuracy than including the 8% which will be dismissed.

Settled cases are by far the most frequent outcome of enforcement actions. Thomas (1980) noted that regulatory agencies are focused toward compliance rather than sanction; their goals are to end undesirable illegal practices. Negotiation is therefore usually the first route tried in order to bring a company into compliance. Corporations will generally settle a case when it is known that the agency has enough evidence to secure harsher sanctions (Clinard and Yeager, 1980). For these reasons, settled cases were included

in this study whether or not there was a formal admission of guilt.

Convicted, as used in this study, means that the corporation has had a penalty imposed for violating the law either by a regulatory agency, a civil court, or a criminal court. Convicted does not imply that a judicial trial has always taken place.

This study included all violations which were pending, settled, and convicted; cases which are known to have been dismissed were not included. This follows the precedent set by the massive Clinard et. al. (1979) study, which included all initiated and completed actions against corporations during a specified time period. Of the 4,221 violations which constitute the dependent variable, 3,991 had been settled or convicted and 230 were pending.

It should be noted, however, that the time of detection or the time of an enforcement action does not always correspond with the occurrence of the violation. As Reiss and Biderman (1980) explained, this results in a problem with bounding events in time. Many violations are not point-in-time events, but vary in their duration. They can be very short, episodic, or continue over a long period of time. For example, conspiracy can exist over a period of years. How should beginning and ending states be defined? Many violations have no specific identifiable starting point, particularly those that result from an organizational routine or norm. Agencies tend to treat detection as the beginning of the violation and the point of compliance or penalty as the end. This results in a count of detections, not a count of violations. For the purposes of this study, every effort was made to discern the actual time when the violation began or took place. When this was not possible, the point of detection was used as the time of the event.

4:5:3:3 Severity Classifications

After deciding which outcomes and stages were to be included, it had to be decided whether to categorize the violations according to their severity. A severity typology makes inherent sense; a violation which resulted in the loss of a human life should be given more weight than one which was, for example, a violation of recordkeeping requirements. Since most studies in corporate crime have not been empirical, there were few existing models from which to draw. There were two potential methods through which a severity scale can be developed.

The first possibility was to base severity on the penalty imposed. There were several problems inherent in this approach. First of all, not all agencies have the same power to impose fines. An antitrust violation, for instance can incur a fine of $1M, while OSHA does not usually exceed $10,000. The NLRB can't issue outright fines, but is limited to injunctions and remedial actions (Clinard et. al., 1979). Another problem is that penalties may not be imposed across corporations in an equal manner; Hochstedler (1984) found that perceived status of the corporation influenced the amount of fines levied for wrongdoing.

These considerations have led some authors to suggest the use of subjective criteria to assess seriousness. Clinard et. al. (1979) and Rice and Biderman (1980) have suggested complex schemes involving multiple criteria (repetition, knowledge, loss, intent/negligence, harm caused, number of victims etc.) to assess the seriousness of a violation. While these schemes present interesting possibilities, a major problem with using them, as Clinard et. al. (1979) found, is that often the information necessary to assess seriousness is not available.

A final possibility was to avoid these problems by simply using a binary dependent measure (1=violation, 0=no violation), as has been done in most studies (Staw and Swajkowski, 1975; Szwajkowski, 1981; Kesner et. al., 1986).

The data for this study was mixed in terms of clarity about severity of the action. Many of the Environmental Protection Agency's civil and criminal cases, for instance, were detailed enough to warrant assessing seriousness. All of the administrative cases, however, were merely a listing which contained no details at all, and an assessment of seriousness would be difficult. The only indication of seriousness from the printouts which were provided by the United States Coast Guard was the size of the penalty, and according to a spokesperson for the agency, "the penalty depends as much on the mood of the judge as anything else". Because the vast number of the environmental violations were administrative and because there was no detailed information which would allow an assessment of seriousness attached to these violation records, this study used the binary violation/no violation notation to record violations; the dependent variable was therefore the total number of environmental violations and the total number of employee violations for each firm.

4:5:4: Cases of Violation

The number of cases of violation did not correspond exactly with the number of individual enforcement actions brought against corporations by government officials. This discrepancy was due primarily to three factors: multiple charges, multiple cases, and multiple defendants.

Multiple charges resulted when the same incident gave rise to different

violations or when different occurrences in the same incident gave rise to multiple violations. In the case of one incident giving rise to several violations, only one case was recorded; the violation case was recorded in terms of the initial charge. In the case of different occurrences in the same incident giving rise to multiple violations, each violation was recorded separately. For instance, a company could dump pollutants into the water and then falsify records to conceal the act. Finally, as Reiss and Biderman (1980) noted, the processing of a violation can result in additional violations (i.e., failure to obey a court order, obstructing justice etc). This was an especially common occurrence within the category of environmental violations. In these situations, two violations were recorded; the initial violation was counted and the additional violation was recorded as an additional case.

Multiple cases resulted when the same incident showed more than once because it was being processed by different levels or systems at the same time. For instance, an incident can be processed through both federal and state courts at the same time or concurrently in administrative, civil, and criminal arenas. In this situation, only one case was entered; it was recorded in terms of the highest involved legal body, with a criminal court classified as the highest, followed by a civil court, and finally a regulatory agency.

Multiple defendants resulted when a single enforcement action involved more than one firm. A price fixing conspiracy, for instance, by definition must involve more than one company. During the 1983-1987 time period, the EPA often charged a group of companies with the pollution of a body of water or a section of land. In these situation, all firms involved had a case recorded

against them.

CHAPTER FIVE

ANALYSIS AND RESULTS

5:1 THE MAJOR RESEARCH VARIABLES

The dependent variable for this study was corporate crime, which was subdivided into environmental and employee violations, Y_{ev} and Y_{wv}. The major independent variables were: firm profitability (X_{fp}), industry financial health (X_{ih}), firm size (X_{fs}), degree of industry concentration (X_{ic}), degree of complexity (X_{cx}), degree of centralization (X_{cz}), and corporate ethical culture (x_{cl}). Centralization was further divided into six dimensions; culture was subdivided into four dimensions.

Table 1: Summary of Major Variables:

Variable	N	Mean	Standard Deviation	Range
Firm Profits	251	-1.1	6.2	-17.2 to 47.2
Industry Health	252	7.4	4.0	0- to 22.8
Firm Size	252	31,629	61,857	700 to 700,800
Industry Concentration	252	771.8	687.1	20 to 4000
Firm Complexity	208	65.9	52.5	11 to 276
Firm Centralization	210	157.0	17.0	115 to 197
Firm Culture	125	22.7	13.4	0 to 53
Violations per Firm	253	16.7	32.7	0 to 279

Table 2: Summary of Dependent Variable:

	Environmental Violations	Employee Violations
Number	4,131	90
Administrative	3,762	0
Civil	455	90
Criminal	4	0
Completed	3,946	45
Pending	185	45

5:2 STATISTICAL PROCEDURES

The following steps were followed when conducting the statistical analysis of the data:

1) Diagnostic tests were conducted for normality, nonlinearity homoescedasticity, multicollinearity, and influential cases.
2) The assumption that all the sample firms were highly specialized, standardized, and formalized was tested.
3) A series of seventeen hierarchical regressions was performed to isolate the effects of structure and culture on crime; firm profits, industry health, firm size, and industry concentration were treated as covariates.
4) Tests were conducted to determine whether firms which indicated that their structure and /or culture had changed during the 1983-1987 time period had any significant effects on the regression outcomes.
5) A series of regressions was performed incorporating various cross products to test for first and second order interactions.

5:3 DIAGNOSTIC TESTS

The diagnostic tests for nonlinearity (partial residuals plot), homoescedasticity (residuals plot), and multicollinearity (variance inflation and condition numbers) revealed no problems with the data. The tests for normality (residuals plot and Kolmogorov /Smirnov test) revealed a slight violation of the assumption due to three outliers. These outliers were left in; the test for influential cases did not justify removing them from the data set and the F tests indicated the data were robust. The test for influential cases (Cook's D) revealed one influential case; that firm was removed from the analyses.

5:4 STANDARDIZATION/FORMALIZATION/SPECIALIZATION

As previously explained, there are five commonly accepted dimensions of organizational structure: complexity, centralization, standardization, specialization, and formalization. Because this study considered only two of the five dimensions, it was advisable to account for the other three. It is commonly accepted that standardization, specialization, and formalization are highly correlated with each other and with large firm size. It was therefore expected that the firms in the sample would demonstrate a high degree of standardization, specialization, and formalization; this assumption was tested via Question 53 on the Decision Making questionnaire. The possible score for each firm ranged from 0 to 10; the higher the score, the more standardized, specialized, and formalized the firm. The mean score for all firms was 8.78; the standard deviation was 1.6, and the variance was 2.4. A histogram showed that only 30 firms had a score of less than 7.75, 20 had a score of less than 6.75, and 11 firms had a score of less than 5.75 (see Table 3). It

was therefore concluded that the sample firms were high in these three structural dimensions and did not demonstrate much variance in standardization, formalization, and specialization.

Table 3: Standardization/Formalization/Specialization (XSS)

MOMENTS

N	206	SUM WGTS	206
MEAN	8.78155	SUM	1809
STD DEV	1.55103	VARIANCE	2.40571
SKEWNESS	-1.37249	KURTOSIS	1.70901
USS	16379	CSS	493.17
CV	17.6624	STD.MEAN	0.108066
T:MEAN=0	81.2613	PROB>ITI	0.0001
SGN RANK	10660.5	PROB>ISI	0.0001
NUM^=O	206		
D: NORMAL	0.264523	PROB>D	<.01

QUANTILES (DEF=4)

100%	MAX	10	99%	10	
75%	Q3	10	95%	10	
50%	MED	9	90%	10	
25%	Q1	8	10%	6.7	
0%	MIN	2	5%	6	
			1%	4	
RANGE		8			
Q3-Q1		2			
MODE		10			

EXTREMES

LOWEST	HIGHEST
2	10
4	10
4	10
5	10
5	10

MISSING VALUE

COUNT	47
% COUNT/NOBS	18.58

HISTOGRAM

```
                                        #
9.75+**********************************  99
    .
    .  **************                   37
    .
    .  ***********                      30
    .
    .  *******                          20
    .
5.75+****                               11
    .
    .  **                                6
    .
    .  *                                 2
    .
    .
    .
1.75+ *                                  1
      ----+----+----+----+----+----+--
```

*MAY REPRESENT UP TO 3 CASES

5:5 TESTS OF THE HYPOTHESES

The primary statistical technique which was used to test the hypotheses was a series of hierarchical multiple regressions. Hierarchical regression allows the researcher to control the order of entry of the independent variables, thus permitting the assessment of each independent variable's contribution to the prediction (Tabachnick and Fidell, 1989) The goal of this study was to isolate the relationships between corporate structure and corporate crime and between corporate culture and corporate crime. The four variables which had previously been empirically linked to corporate crime (firm profits, industry health, firm size, and industry concentration) were therefore treated as covariates during the analysis.

This study contained three major hypotheses and six subhypotheses. Seventeen hierarchical regressions were performed; six tested the major hypotheses and eleven tested the subhypotheses. Each of the major hypotheses was tested separately against environmental violations and against employee violations. This was done because it is not yet known whether corporate crime is a single variable explainable by one set of predictors or whether it is multidimensional, with each of the violation types having different predictors. Table 4 summarizes the results of the tests of the major hypotheses.

Table 4: Summary of Analysis of Major Hypotheses

IV	DV	Covariates	Total R^2	Incremental Change in R^2
Complexity	Environmental Violations	Firm profits, Industry health Firm size, Industry concentration	35.3%	8.22%
Complexity	Employee Violations	Firm profits Industry health Firm size, Industry concentration	18.5%	not significant
Centralization	Environmental Violations	Firm profits Industry health Firm size, Industry concentration	30.3%	3.48%
Centralization	Employee Violations	Firm profits Industry health Firm size, Industry concentration	18.8%	not significant
Culture	Environmental Violations	Firm profits, Industry health, Firm size, Industry concentration	25.3%	not significant
Culture	Employee Violations	Firm profits, Industry health, Firm size, Industry concentration	29.8%	not significant

5:5:1 Complexity and Crime

H1: The greater the degree of organizational structural complexity, the more an organization will violate the law.

This hypotheses was supported for environmental violations, but was not supported for employee violations.

When testing complexity against environmental violations (see Table 5), the four covariates and complexity produced an R^2 of .3422 (p=.01). Industry health, firm size, and complexity were all significant at the p=.01 level; firm profits and industry concentration were not significant. Complexity, which was entered last, generated an incremental change in R^2 of .0822 and was significant at p=.01.

When testing complexity against employee violations (see Table 6), the four covariates and complexity produced an R^2 of .1846 (p=.01). Firm size and industry concentration were significant at p=.01; firm profits, industry health, and complexity were not significant.

Table 5: Complexity and Environmental Violations:

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	43816.14617226	8763.22923445
ERROR	201	84219.07121904	419.00035432
CORRECTED TOTAL	206	128035.21739130	

MODEL F = 20.91
PR > F = 0.0001
R-SQUARE = 0.342219
C.V. = 132.4949
ROOT MSE= 20.46949815
YEV MEAN = 15.44927536

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	1146.12086227	2.74	0.0997	0.0090
XIH	1	9504.41229505	22.68	0.0001	0.0742
XIC	1	17.13395999	0.04	0.8400	0.0001
XFS	1	22625.54399469	54.00	0.0001	0.1767
XCX	1	10522.93506027	25.11	0.0001	0.0822

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	16.82585480	4.36	0.0001	3.86018315
XFP	-0.23580691	-0.99	0.3251	0.23902209
XIH	-1.75840016	-4.62	0.0001	0.38085762
XIC	-0.00326298	-1.53	0.1265	0.00212658
XFS	0.00011790	4.79	0.0001	0.00002461
XCX	0.14831838	5.01	0.0001	0.02959605

Table 6: Complexity and Employee Violations:

DEPENDENT VARIABLE: YWV EMPLOYEE VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	64.57941473	12.91588295
ERROR	201	285.14039203	1.41860892
CORRECTED TOTAL	206	349.71980676	

MODEL F = 9.10
PR > F= 0.0001
R-SQUARE = 0.184660
C.V. = 297.0459
ROOT MSE= 1.19105370
YWV MEAN = 0.40096618

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	0.29548603	0.21	0.6486	0.0008
XIH	1	1.61386654	1.14	0.2874	0.0046
XIC	1	8.92690666	6.29	0.0129	0.0255
XFS	1	53.69814289	37.85	0.0001	0.1536
XCX	1	0.04501262	0.03	0.8588	0.0001

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	0.12985963	0.58	0.5638	0.22461154
XFP	-0.01886746	-1.36	0.1764	0.01390792
XIH	-0.01052754	-0.48	0.6353	0.02216087
XIC	9.90615E-05	0.80	0.4243	0.00012374
XFS	8.20330E-06	5.73	0.0001	0.00000143
XCX	-0.00030676	-0.18	0.8588	0.00172210

5:5:2 Centralization and Crime

H2: The greater the overall degree of decentralization of decision making, the more an organization will violate the law.

This hypotheses was supported for environmental violations, but was not supported for employee violations.

When testing centralization against environmental violations (see Table 7), the four covariates and centralization produced an R^2 of .3003 (p=.01). Industry health, firm size, and centralization were all significant at the p=.01 level; firm profits and industry concentration were not significant. Centralization, which was entered last, generated an incremental change in R^2 of .0348 and was significant at p=.01.

When testing centralization against employee violations (see Table 8), the four covariates and centralization produced an R^2 of .1912 (p=.01). Firm size, and industry concentration were each significant at the p=.01 level; firm profits, industry health and centralization were not significant.

5:5:2:1 Centralization Dimensions and Crime

H2A: The greater the degree of decentralization in employee decisions, the more the company will violate employee laws.

H2B: The greater the degree of decentralization in planning decisions the more the company will violate environmental laws.

H2C: The greater the degree of decentralization in financial decisions, the more the company will violate environmental laws.

When testing different dimensions of centralization against violations

(see Tables 9,10,11), none of the subhypotheses were supported. Although all the regression equations were significant at p=.01 (R^2 = .1879, .2632, .2677, respectively), centralization of employee decisions, planning decisions, or financial decisions was not significant in the respective equations.

Table 7: Centralization and Environmental Violations:

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	38514.76747226	7702.95349445
ERROR	202	89728.22772004	444.19914713
CORRECTED TOTAL	207	128242.99519231	

MODEL F = 17.34
PR > F = 0.0001
R-SQUARE = .300326
C.V. = 137.0370
ROOT MSE= 21.07603253
YEV MEAN = 15.37980769

SOURCE	DF	TYPE I SS	F VALUE	PR>F	INCREMENTAL CHANGE IN R^2
XFP	1	1171.78728288	2.64	0.1059	0.0091
XIH	1	9584.99725047	21.58	0.0001	0.0747
XIC	1	26.57662159	0.06	0.8070	0.0002
XFS	1	23261.43337667	52.37	0.0001	0.1814
XCZ	1	4469.97294066	10.06	0.0017	0.0349

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR>|T|	STD ERROR OF ESTIMATE
INTERCEPT	69.10598076	4.70	0.0001	14.71905730
XFP	-0.15006171	-0.61	0.5433	0.24645531
XIH	-1.63256674	-4.22	0.0001	0.38657065
XIC	-0.00258900	-1.17	0.2420	0.00220620
XFS	0.00014948	6.14	0.0001	0.00002435
XCZ	-0.28552914	-3.17	0.0017	0.09000919

Table 8: Centralization and Employee Violations:

DEPENDENT VARIABLE: YWV EMPLOYEE VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	66.94619619	13.38923924
ERROR	202	283.13072689	1.40163726
CORRECTED TOTAL	207	350.07692308	

MODEL F = 9.55
PR > F = .0001
R-SQUARE = 0.191233
C.V. = 293.1581
ROOT MSE= 1.18390762
YWV MEAN = 0.40384615

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	0.26772415	0.19	0.6625	0.0008
XIH	1	1.70796239	1.22	0.2710	0.0049
XIC	1	9.09067969	6.49	0.0116	0.0260
XFS	1	55.87413578	39.86	0.0001	0.1596
XCZ	1	0.00569418	0.00	0.9492	0.0000

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
NTERCEPT	0.15428623	0.19	0.8522	0.82681615
XFP	-0.01922290	-1.39	0.1665	0.01384418
XIH	-0.00973809	-0.45	0.6543	0.02171490
XIC	0.00010710	0.86	0.3885	0.00012393
XFS	8.30527E-06	6.07	0.0001	0.00000137
XCZ	-0.00032227	-0.06	0.9492	0.00505610

Table 9: Employee Decision Centralization and Employee Violations:

DEPENDENT VARIABLE: YWV EMPLOYEE VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	65.81495828	13.16299166
ERROR	203	284.42427617	1.40110481
CORRECTED TOTAL	208	350.23923445	

MODEL F = 9.39
PR > F = 0.0001
R-SQUARE = 0.187914
C.V. = 294.5115
ROOT MSE= 1.18368273
YWV MEAN = 0.40191388

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	0.25711217	0.18	0.6688	0.0007
XIH	1	1.74212107	1.24	0.2661	0.0050
XIC	1	8.84064710	6.31	0.0128	0.0252
XFS	1	53.87666644	38.45	0.0001	0.1538
XZE	1	1.09841150	0.78	0.3770	0.0031

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	0.64011435	1.03	0.3054	0.62298680
XFP	-0.01826072	-1.32	0.1881	0.01382614
XIH	-0.01116987	-0.52	0.6068	0.02166737
XIC	0.00010901	0.88	0.3777	0.00012332
XFS	7.75144E-06	5.65	0.0001	0.00000137
XZE	-0.01773710	-0.89	0.3770	0.02003252

Table 10: Planning Decision Centralization and Environmental Violations:

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	33806.07579903	6761.21515981
ERROR	203	94615.08209571	466.08414825
CORRECTED TOTAL	208	128421.15789474	

MODEL F = 14.51
PR > F = .0001
R-SQUARE = 0.263244
C.V. = 140.9590
ROOT MSE= 21.58898210
YEV MEAN = 15.31578947

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	1194.26345012	2.56	0.1110	0.0093
XIH	1	9655.27514310	20.72	0.0001	0.0752
XIC	1	19.04214223	0.04	0.8400	0.0001
XFS	1	22544.35506979	48.37	0.0001	0.1756
XZP	1	393.13999378	0.84	0.3595	0.0031

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	37.53110214	2.50	0.0133	15.01959576
XFP	-0.18172140	-0.72	0.4719	0.25212925
XIH	-1.64320772	-4.14	0.0001	0.39721306
XIC	-0.00355811	-1.59	0.1137	0.00223995
XFS	0.00016272	6.74	0.0001	0.00002413
XZP	-0.35687952	-0.92	0.3595	0.38857976

Table 11: Financial Decision Centralization and Environmental Violations:

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	34377.76977558	6875.55395512
ERROR	203	94043.38811916	463.26792177
CORRECTED TOTAL	208	128421.15789474	

MODEL F = 14.84
PR > F = 0.0001
R-SQUARE = 0.267696
C.V. = 140.5325
ROOT MSE= 21.52365958
YEV MEAN = 15.31578947

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	1194.26345012	2.58	0.1099	0.0093
XIH	1	9655.27514310	20.84	0.0001	0.0752
XIC	1	19.04214223	0.04	0.8395	0.0001
XFS	1	22544.35506979	48.66	0.0001	0.1756
XZF	1	964.83397033	2.08	0.1505	0.0075

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	43.15299126	3.16	0.0018	13.67101308
XFP	-0.19363334	-0.77	0.4415	0.25111081
XIH	-1.62980827	-4.13	0.0001	0.39431808
XIC	-0.00334777	-1.49	0.1367	0.00224056
XFS	0.00015971	6.60	0.0001	0.00002419
XZF	-0.54221298	-1.44	0.1505	0.37571604

5:5:3 Culture and Crime

H3: The more legal/ethical concerns are incorporated into a corporation's culture, the less criminal violations the firm will have:

This hypothesis was not supported for either of the violation types. When testing culture against environmental violations (see Table 12), the four covariates and culture produced an R^2 of .2529 (p=.01). Industry health and firm size were both significant at p=.01; firm profits, industry concentration, and culture were not significant.

When testing culture against employee violations (see Table 13), the four covariates and culture produced an R^2 of .2980 (p=.01). Industry concentration and firm size were both significant at p=.01; industry health was significant at p=.05; firm profits and culture were not significant.

Table 12: Culture and Environmental Violations:

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	32606.86778568	6521.37355714
ERROR	118	96303.73705303	816.13336486
CORRECTED TOTAL	123	128910.60483871	

MODEL F = 7.99
PR > F = 0.0001
R-SQUARE = 0.252942
C.V. = 162.7211
ROOT MSE= 28.56804797
YEV MEAN = 17.55645161

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	648.76428393	0.79	0.3744	0.0050
XIH	1	16874.20390152	20.68	0.0001	0.1309
XIC	1	19.06868949	0.02	0.8788	0.0001
XFS	1	14449.09847457	17.70	0.0001	0.1121
XCL	1	615.73243616	0.75	0.3868	0.0048

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	42.65738857	4.87	0.0001	8.75110080
XFP	-0.46144128	-1.13	0.2603	0.40794978
XIH	-3.03727614	-4.33	0.0001	0.70162995
XIC	-0.00635259	-1.57	0.1203	0.00405905
XFS	0.00014921	4.27	0.0001	0.00003498
XCL	-0.17832070	-0.87	0.3868	0.20529876

Table 13: Culture and Employee Violations:

DEPENDENT VARIABLE: YWV EMPLOYEE VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	75.98689327	15.19737865
ERROR	118	179.00504221	1.51699188
CORRECTED TOTAL	123	254.99193548	

MODEL F = 10.02
PR > F = 0.0001
R-SQUARE = 0.297997
C.V. = 250.3707
ROOT MSE= 1.23166224
YWV MEAN = 0.49193548

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	0.03334336	0.02	0.8824	0.0001
XIH	1	7.14209150	4.71	0.0320	0.0280
XIC	1	12.03296508	7.93	0.0057	0.0472
XFS	1	53.58266123	35.32	0.0001	0.2101
XCL	1	3.19583210	2.11	0.1493	0.0125

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	-0.03526611	-0.09	0.9257	0.37728866
XFP	-0.01878292	-1.07	0.2877	0.01758805
XIH	-0.03278180	-1.08	0.2807	0.03024957
XIC	0.00019234	1.10	0.2740	0.00017500
XFS	7.80683E-06	5.18	0.0001	0.00000151
XCL	0.01284688	1.45	0.1493	0.00885110

5:5:3:1 Cultural Dimensions and Crime

H3A: Companies which have well developed ethical codes will have fewer legal violations

H3B: The more a company visually and aurally communicates about ethics, the fewer legal violations the company will have.

H3C: The more a company formally trains its employees in ethics, the fewer legal violations the company will have.

H3D: The more a company formally includes ethics in its selection, discipline, performance appraisal, job description and other organizational processes, the fewer legal violations the company will have.

Eight hierarchical regressions were run to test these four cultural subhypotheses. Each of the four subhypotheses was tested against both environmental violations and employee violations (see Tables 14-21). None of the subhypotheses were supported at p=.05; hypothesis 3D was supported at p=.10 for environmental violations. Although all the regression equations were significant at p=.01, ethics codes, ethics communication, and ethics training were not significant for either of the violation types. Incorporating ethics into organizational processes was significant at p=.10 for environmental violations; R^2 = .2696 and incremental change in R^2 = .0215 (see Table 20) Incorporating ethics into organizational processes was not significant for employee violations.

Table 14: Ethical Codes and Environmental Violations:

DEPENDENT VARIABLE: EV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	33066.97093665	6613.39418733
ERROR	118	95843.63390205	812.23418561
CORRECTED TOTAL	123	128910.60483871	

MODEL F = 8.14
PR > F = 0.0001
R-SQUARE = 0.256511
C.V. = 162.3319
ROOT MSE= 28.44972255
YEV MEAN = 17.55645161

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	648.76428393	0.80	0.3733	0.0050
XIH	1	16874.20390152	20.78	0.0001	0.1309
XIC	1	19.06868949	0.02	0.8785	0.0001
XFS	1	14449.09847457	17.79	0.0001	0.1121
XLE	1	1075.83558714	1.32	0.2521	0.0083

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	44.58656197	4.98	0.0001	8.95136381
XFP	-0.53214682	-1.28	0.2028	0.41553895
XIH	-3.14286016	-4.41	0.0001	0.71252423
XIC	-0.00614241	-1.53	0.1276	0.00400266
XFS	0.00014782	4.37	0.0001	0.00003386
XLE	-0.78788439	-1.15	0.2521	0.68458941

Table 15: Ethical Codes and Employee Violations:

DEPENDENT VARIABLE: YWV EMPLOYEE VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	75.14853776	15.02970755
ERROR	118	179.84339772	1.52409659
CORRECTED TOTAL	123	254.99193548	

MODEL F = 9.86
PR > F = 0.0001
R-SQUARE = 0.294709
C.V. = 250.9563
ROOT MSE= 1.23454307
YWV MEAN = 0.49193548

SOURCE	DF	TYPE I SS	F VALUE	PR>F	INCREMENTAL CHANGE IN R^2
XFP	1	0.03334336	0.02	0.8827	0.0001
XIH	1	7.14209150	4.69	0.0324	0.0280
XIC	1	12.03296508	7.90	0.0058	0.0472
XFS	1	53.58266123	35.16	0.0001	0.2101
XLE	1	2.35747660	1.55	0.2161	0.0092

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR>|T|	STD ERROR OF ESTIMATE
INTERCEPT	-0.00565069	-0.01	0.9884	0.38775269
XFP	-0.01644304	-0.91	0.3628	0.01800020
XIH	-0.02993188	-0.97	0.3341	0.03086493
XIC	0.00001696	0.96	0.3375	0.00017339
XFS	8.11442E-06	5.53	0.0001	0.00000147
XLE	0.03688190	1.24	0.2161	0.02965485

Table 16: Ethical Communications and Environmental Violations:

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	32068.88738736	6413.77747747
ERROR	118	96841.71745135	820.69252077
CORRECTED TOTAL	123	128910.60483871	

MODEL F = 7.82
PR > F = 0.0001
R-SQUARE = 0.248768
C.V. = 163.1750
ROOT MSE= 28.64773151
YEV MEAN = 17.55645161

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	648.76428393	0.79	0.3758	0.0050
XIH	1	16874.20390152	20.56	0.0001	0.1309
XIC	1	19.06868949	0.02	0.8791	0.0001
XFS	1	14449.09847457	17.61	0.0001	0.1121
XLC	1	77.75203784	0.09	0.7588	0.0006

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	36.46683645	4.40	0.0001	8.28997012
XFP	-0.41603026	-1.02	0.3091	0.40730343
XIH	-2.92871571	-4.17	0.0001	0.70199667
XIC	-0.00549959	-1.35	0.1804	0.00408132
XFS	0.00013622	3.89	0.0002	0.00003502
XLC	0.19290285	0.31	0.7588	0.62671919

Table 17: Ethical Communications and Employee Violations:

DEPENDENT VARIABLE: YWV EMPLOYEE VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	75.33256041	15.06651208
ERROR	118	179.65937508	1.52253708
CORRECTED TOTAL	123	254.99193548	

MODEL F = 9.90
PR > F = 0.0001
R-SQUARE = 0.295431
C.V. = 250.8279
ROOT MSE= 1.23391129
YWV MEAN = 0.49193548

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	0.03334336	0.02	0.8826	0.0001
XIH	1	7.14209150	4.69	0.0323	0.0280
XIC	1	12.03296508	7.90	0.0058	0.0472
XFS	1	53.58266123	35.19	0.0001	0.2101
XLC	1	2.54149924	1.67	0.1989	0.0100

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	0.04718360	0.13	0.8951	0.35706449
XFP	-0.02029200	-1.16	0.2497	0.01754332
XIH	-0.03412335	-1.13	0.2614	0.03023631
XIC	0.00019089	1.09	0.2797	0.00017579
XFS	7.89166E-06	5.23	0.0001	0.00000151
XLC	0.03487609	1.29	0.1989	0.02699397

Table 18: Ethics Training and Environmental Violations:

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	32356.72744177	6471.34548835
ERROR	118	96553.87739694	818.25319828
CORRECTED TOTAL	123	128910.60483871	

MODEL F = 7.91
PR > F = 0.0001
R-SQUARE = 0.251001
C.V. = 162.9323
ROOT MSE= 28.60512538
YEV MEAN = 17.55645161

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	648.76428393	0.79	0.3750	0.0050
XIH	1	16874.20390152	20.62	0.0001	0.1309
XIC	1	19.06868949	0.02	0.8789	0.0001
XFS	1	14449.09847457	17.66	0.0001	0.1121
XLT	1	365.59209225	0.45	0.5052	0.0028

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	39.45584203	5.46	0.0001	7.22136397
XFP	-0.42079275	-1.04	0.3022	0.40608193
XIH	-2.94335555	-4.23	0.0001	0.69619916
XIC	-0.00615242	-1.52	0.1314	0.00404986
XFS	0.00014598	4.22	0.0001	0.00003457
XLT	-0.31606394	-0.67	0.5052	0.47284675

Table 19: Ethics Training and Employee Violations:

DEPENDENT VARIABLE: YWV EMPLOYEE VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	74.10668062	14.82133612
ERROR	118	180.88525487	1.53292589
CORRECTED TOTAL	123	254.99193548	

MODEL F = 9.67
PR > F = 0.0001
R-SQUARE = 0.290624
C.V. = 251.6822
ROOT MSE= 1.23811384
YWV MEAN = 0.49193548

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	0.03334336	0.02	0.8830	0.0001
XIH	1	7.14209150	4.66	0.0329	0.0280
XIC	1	12.03296508	7.85	0.0059	0.0472
XFS	1	53.58266123	34.95	0.0001	0.2101
XLT	1	1.31561945	0.86	0.3561	0.0052

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	0.21408512	0.68	0.4947	0.31256184
XFP	-0.02168477	-1.23	0.2198	0.01757642
XIH	-0.03941573	-1.31	0.1934	0.03013354
XIC	0.00017291	0.99	0.3260	0.00017529
XFS	8.11643E-06	5.42	0.0001	0.00000150
XLT	0.01896015	0.93	0.3561	0.02046620

Table 20: Ethics Processes and Environmental Violations:

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	34757.67058329	6951.53411666
ERROR	118	94152.93425542	797.90622250
CORRECTED TOTAL	123	128910.60483871	

MODEL F = 8.71
PR > F = 0.0001
R-SQUARE = 0.269626
C.V. = 160.8938
ROOT MSE= 28.24723389
YEV MEAN = 17.55645161

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	648.76428393	0.81	0.3690	0.0050
XIH	1	16874.20390152	21.15	0.0001	0.1309
XIC	1	19.06868949	0.02	0.8774	0.0001
XFS	1	14449.09847457	18.11	0.0001	0.1121
XLP	1	2766.53523378	3.47	0.0651	0.0215

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	49.95617778	5.34	0.0001	9.35354556
XFP	-0.52232736	-1.29	0.1991	0.40452043
XIH	-3.21925484	-4.59	0.0001	0.70186726
XIC	-0.00655238	-1.65	0.1020	0.00397599
XFS	0.00015166	4.54	0.0001	0.00003344
XLP	-2.07411932	-1.86	0.0651	1.11388809

Table 21: Ethics Processes and Employee Violations:

DEPENDENT VARIABLE: YWV EMPLOYEE VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	5	75.61072744	15.12214549
ERROR	118	179.38120804	1.52017973
CORRECTED TOTAL	123	254.99193548	

MODEL F = 9.95
PR > F = 0.0001
R-SQUARE = 0.296522
C.V. = 250.6336
ROOT MSE= 1.23295569
YWV MEAN = 0.49193548

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	0.03334336	0.02	0.8825	0.0001
XIH	1	7.14209150	4.70	0.0322	0.0280
XIC	1	12.03296508	7.92	0.0057	0.0472
XFS	1	53.58266123	35.25	0.0001	0.2101
XLP	1	2.81966628	1.85	0.1758	0.0111

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	-0.07760680	-0.19	0.8496	0.40827032
XFP	-0.01838130	-1.04	0.3000	0.01765680
XIH	-0.03029931	-0.99	0.3247	0.03063561
XIC	0.00017402	1.00	0.3181	0.00017355
XFS	8.11453E-06	5.56	0.0001	0.00000146
XLP	0.06621624	1.36	0.1758	0.04861979

5:6 INDICATOR VARIABLES

This study measured violations over a five year period, but used a point in time measure for corporate structure and corporate culture. Three items on the questionnaires asked respondents to indicate whether their complexity (X_a), degree of centralization (X_b), or ethical practices (X_c) had changed significantly during the previous six years. These were treated as binary variables; a score of 1 was recorded if respondents indicated there had been a major change during the preceding years; a score of 0 was recorded if respondents indicated relative stability. Three hierarchical regressions were then performed in order to determine if X_a, X_b, or X_c had a significant effect after all other variables had been entered into the equation. The equations used environmental violations as the dependent variable (see Tables 22, 23, 24); employee violations was not used since it had not tested significantly against either complexity, centralization, or culture.

Results showed that the indicator variables had no significant effect.

Table 22: Indicator Variable: Complexity and Environmental Violations:

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	6	34663.11417089	5777.18569515
ERROR	193	68912.80582911	357.06117010
CORRECTED TOTAL	199	103575.92000000	

MODEL F = 16.18
PR > F = 0.0001
R-SQUARE = 0.334664
C.V. = 130.4977
ROOT MSE= 18.89606229
YEV MEAN = 14.48000000

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	570.12218302	1.60	0.2079	0.0055
XIH	1	6342.70897012	17.76	0.0001	0.0612
XIC	1	62.85100439	0.18	0.6753	0.0006
XFS	1	19793.36906255	55.43	0.0001	0.1911
XCX	1	7591.07083920	21.26	0.0001	0.0733
XA	1	302.99211161	0.85	0.3581	0.0029

PARAMETER		ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT		15.74250078 B	4.27	0.0001	3.68414351
XFP		-0.20809405	-0.92	0.3575	0.22562139
XIH		-1.43691653	-3.98	0.0001	0.36103353
XIC		-0.02290344	-1.45	0.1481	0.00199928
XFS		0.00011243	4.88	0.0001	0.00002302
XCX		0.13303407	4.65	0.0001	0.02863567
XA	0	-2.57006377 B	-0.92	0.3581	2.78997010
	1	0.00000000 B			

Table 23: Indicator Variable: Centralization and Environmental Violations:

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	6	38101.33763450	6350.22293908
ERROR	192	86460.30055645	450.31406540
CORRECTED TOTAL	198	124561.63819095	

MODEL F = 14.10
PR > F = 0.0001
R-SQUARE = 0.305883
C.V. = 137.8231
ROOT MSE= 21.22060474
YEV MEAN = 15.39698492

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	1195.81091979	2.66	0.1048	0.0096
XIH	1	8798.80899992	19.54	0.0001	0.0706
XIC	1	52.38092107	0.12	0.7334	0.0004
XFS	1	22983.62201235	51.04	0.0001	0.1845
XCZ	1	4333.18970795	9.62	0.0022	0.0348
XB	1	737.52507342	1.64	0.2022	0.0059

PARAMETER		ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT		67.17184892 B	4.38	0.0001	15.33827799
XFP		-0.10687947	-0.42	0.6715	0.25159364
XIH		-1.53163471	-3.84	0.0002	0.39920913
XIC		-0.00244566	-1.09	0.2766	0.00224149
XFS		0.00015036	6.10	0.0001	0.00002466
XCZ		-0.26363191	-2.78	0.0060	0.09494254
XB	0	-4.01828447 B	-1.28	0.2022	3.13985824
	1	0.00000000 B			

Table 24: Indicator Variable: Culture and Environmental Violations

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	6	10253.21672515	1708.86945419
ERROR	98	32895.69756057	335.67038327
CORRECTED TOTAL	104	43148.91428571	

MODEL F = 5.09
PR > F = 0.0001
R-SQUARE = 0.237624
C.V. = 123.5541
ROOT MSE= 18.32130954
YEV MEAN = 14.82857143

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	170.31528571	0.51	0.4780	0.0039
XIH	1	5399.86513927	16.09	0.0001	0.1251
XIC	1	14.30242030	0.04	0.8369	0.0003
XFS	1	4630.08755128	13.79	0.0003	0.1073
XCL	1	37.22872904	0.11	0.7398	0.0009
XC	1	1.41759955	0.00	0.9483	0.0000

PARAMETER		ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT		23.73896511 B	3.07	0.0027	7.72217736
XFP		-0.28100858	-1.00	0.3211	0.28179862
XIH		-1.68046089	-3.43	0.0009	0.49043893
XIC		-0.00141948	-0.52	0.6039	0.00272697
XFS		0.00011135	3.20	0.0018	0.00003479
XCL		0.04475087	0.29	0.7742	0.15556840
XC	0	-0.27302066 B	-0.06	0.9483	4.20121816
	1	0.00000000 B			

5:7 INTERACTIONS

After the hypotheses had been tested, a number of exploratory regressions were run to look for first and second order interactions involving complexity, centralization, and culture. All these equations used environmental violations as the dependent variable. Employee violations were not used since it had been insignificant in all previous equations.

5:7:1 Interactions Between Complexity and Covariates

The first equation looked for interactions between the four covariates and the structural dimension of complexity. The main effects were entered first, followed by the four interaction terms. R^2 was .4321; three of the first order interactions were significant (see Table 25). Significant interactions were industry health and complexity (incremental change in R^2 = .0617; p=.01), industry concentration and complexity (incremental change in R^2 = .0164; p=.05), and firm profits and complexity (incremental change in R^2 = .0118; p= .05).

5:7:2 Interactions Between Centralization and Covariates

The second regression examined first order interactions between centralization and the four covariates. The main effects were entered first, followed by the four first order interaction terms. R2 was .3099, but none of the interactions was significant (See Table 26)

5:7:3 Interactions Between Culture and Covariates

The third regression examined first order interactions between culture and the four covariates. R2 was .2837; once again, none of the interactions was significant (see Table 27)

Table 25: Interactions Between Complexity and Covariates Using Environmental Violations

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	9	55331.96387480	6147.99598609
ERROR	197	72703.25351650	369.05204831
CORRECTED TOTAL	206	128035.21739130	

MODEL F = 16.66
PR > F = 0.0001
R-SQUARE = 0.432162
C.V. = 124.3471
ROOT MSE= 19.21072743
YEV MEAN = 15.44927536

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	1146.12086227	3.11	0.0796	0.0090
XIH	1	9504.41229505	25.75	0.0001	0.0742
XIC	1	17.13395999	0.05	0.8296	0.0001
XFS	1	22625.54399469	61.31	0.0001	0.1767
XCX	1	10522.93506027	28.51	0.0001	0.0822
IFP*CX	1	1514.63167247	4.10	0.0441	0.0118
IIH*CX	1	7900.55539212	21.41	0.0001	0.0617
IIC*CX	1	2100.62845819	5.69	0.0180	0.0164
IFS*CX	1	0.00217975	0.00	0.9981	0.0000

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > | T |	STD ERROR OF ESTIMATE
INTERCEPT	-4.47965837	-0.83	0.4053	5.37148353
XFP	-0.15988976	-0.46	0.6472	0.34882186
XIH	0.45621045	0.81	0.4187	0.56299338
XIC	0.00204083	0.66	0.5105	0.00309559
XFS	0.00012622	2.77	0.0061	0.00004554
XCX	0.50130434	6.98	0.0001	0.07187096
IFP*CX	-0.00280758	-0.42	0.6768	0.00672512
IIH*CX	-0.03719884	-4.73	0.0001	0.00786628
IIC*CX	-8.49850E-05	-2.22	0.0278	0.00003835
IFS*CX	-6.66993E-10	-0.00	0.9981	0.00000027

Table 26: Interactions Between Centralization and Covariates Using Environmental Violations

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	9	39747.15473729	4416.35052637
ERROR	198	88495.84045502	446.94868917
CORRECTED TOTAL	207	128242.99519231	

MODEL F = 9.88
PR > F = 0.0001
R-SQUARE = 0.309936
C.V. = 137.4605
ROOT MSE= 21.14116102
YEV MEAN = 15.37980769

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	1171.78728288	2.62	0.1070	0.0091
XIH	1	9584.99725047	21.45	0.0001	0.0747
XIC	1	26.57662159	0.06	0.8076	0.0002
XFS	1	23261.43337667	52.04	0.0001	0.1814
XCZ	1	4469.97294066	10.00	0.0018	0.0349
IFP*CZ	1	2.44681126	0.01	0.9411	0.0000
IIH*CZ	1	871.64687735	1.95	0.1641	0.0068
IIC*CZ	1	342.88162575	0.77	0.3822	0.0027
IFS*CZ	1	15.41195067	0.03	0.8529	0.0001

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > | T |	STD ERROR OF ESTIMATE
INTERCEPT	118.78472776	3.53	0.0005	33.65280179
XFP	-0.63011799	-0.32	0.7494	1.96980244
XIH	-6.54067381	-1.88	0.0618	3.48191471
XIC	-0.01913620	-1.00	0.3172	0.01908541
XFS	9.72034E-05	0.33	0.7396	0.00029199
CXZ	-0.59364955	-2.85	0.0049	0.20850107
IFP*CZ	0.00270059	0.23	0.8155	0.01155899
IIH*CZ	0.03040324	1.42	0.1573	0.02141547
IIC*CZ	0.00010139	0.87	0.3840	0.00011621
IFS*CZ	3.73247E-07	0.19	0.8529	0.00000201

Table 27: Interactions Between Culture and Covariates Using Environmental Violations

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	9	36571.92587609	4063.54731957
ERROR	114	92338.67896262	809.98841195
CORRECTED TOTAL	123	128910.60483871	

MODEL F = 5.02
PR > F = 0.0001
R-SQUARE = 0.283700
C.V. = 162.1073
ROOT MSE= 28.46029536
YEV MEAN = 17.55645161

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	648.76428393	0.80	0.3727	0.0050
XIH	1	16874.20390152	20.83	0.0001	0.1309
XIC	1	19.06868949	0.02	0.8783	0.0001
XFS	1	14449.09847457	17.84	0.0001	0.1121
XCL	1	615.73243616	0.76	0.3851	0.0048
IFP*CL	1	962.05911251	1.19	0.2781	0.0075
IIH*CL	1	1210.09569015	1.49	0.2241	0.0094
IIC*CL	1	47.54571979	0.06	0.8090	0.0004
IFS*CL	1	1745.35756796	2.15	0.1449	0.0135

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > | T |	STD ERROR OF ESTIMATE
INTERCEPT	49.35758939	3.65	0.0004	13.51756063
XFP	-0.33865796	-0.65	0.5188	0.52320488
XIH	-4.28007327	-3.20	0.0018	1.33864509
XIC	-0.00980545	-1.42	0.1571	0.00688463
XFS	0.00032165	2.60	0.0104	0.00012352
XCL	-0.54805951	-1.03	0.3030	0.52970141
IFP*CL	-0.00379878	-0.11	0.9109	0.03387190
IIH*CL	0.05825541	1.05	0.2938	0.05523713
IIC*CL	0.00023056	0.72	0.4751	0.00032175
IIH*CL	-5.53726E-06	-1.47	0.1449	0.00000377

5:7:4 Interaction Between Centralization and Complexity

The next regression examined the interaction between the two structural dimensions of centralization and complexity. The four covariates were entered first, followed by the two structural variables, followed by the first order interaction term. R^2 was .3782; the interaction term was not significant (See Table 28).

5:7:5 Interaction Between Complexity and Culture

The next regression tested for an interaction between complexity and corporate culture It should be noted that N dropped substantially since only 82 firms had answered both the structure and culture questionnaires. The four covariates were entered, followed by complexity and culture, followed by the interaction term. R^2 was .4349; the interaction term was significant at p=.05 and generated an incremental change in R^2 of .0316 (See Table 29).

5:7:6 Interaction Between Centralization and Culture

The next equation tested for an interaction between centralization and corporate culture. Once again, N dropped substantially. The four covariates were entered, followed by centralization and culture, followed by the interaction term. R^2 was .3753, but the interaction term was not significant (See Table 30).

5:7:7 Interaction Between Complexity, Centralization, and Culture

The final regression examined a second order interaction comprised of complexity, centralization and culture. The four covariates were entered first, followed by complexity, centralization, and culture, followed by the three first order interactions, followed by the second order interaction . R^2 was .4691; the second order interaction was not significant (See Table 31).

Table 28: Interaction Between Complexity and Centralization Using Environmental Violations

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	7	48355.11296586	6907.87328084
ERROR	198	79498.34334482	401.50678457
CORRECTED TOTAL	205	127853.45631068	

MODEL F = 17.20
PR > F = 0.0001
R-SQUARE = 0.378207
C.V. = 129.1537
ROOT MSE= 20.03763421
YEV MEAN = 15.51456311

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	1123.59164678	2.80	0.0959	0.0088
XIH	1	9430.74559954	23.49	0.0001	0.0738
XIC	1	24.26290641	0.06	0.8061	0.0002
XFS	1	23344.65418652	58.14	0.0001	0.1826
XCX	1	10817.86353235	26.94	0.0001	0.0846
XCZ	1	2864.44272617	7.13	0.0082	0.0224
ICX*CZ	1	749.55236809	1.87	0.1734	0.0059

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	31.50466226	1.46	0.1446	21.50970494
XFP	-0.23541833	-1.00	0.3194	0.23582615
XIH	-1.78906433	-4.78	0.0001	0.37401349
XIC	-0.00257316	-1.22	0.2232	0.00210594
XFS	0.00010547	4.25	0.0001	0.00002481
XCX	0.46884405	1.94	0.0539	0.24179246
XCZ	-0.09009535	-0.67	0.5035	0.13443683
ICX*CZ	-0.00210545	-1.37	0.1734	0.00154095

Table 29: Interaction Between Complexity and Culture Using Environmental Violations:

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	7	22882.75220471	3268.96460067
ERROR	73	29732.13668418	407.28954362
CORRECTED TOTAL	80	52614.88888889	

MODEL F = 8.03
PR > F = 0.0001
R-SQUARE = 0.434910
C.V. = 107.9006
ROOT MSE= 20.18141580
YEV MEAN = 18.70370370

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	443.96425386	1.09	0.2999	0.0084
XIH	1	6831.61392652	16.77	0.0001	0.1298
XIC	1	730.85692159	1.79	0.1845	0.0139
XFS	1	10814.54772453	26.55	0.0001	0.2055
XCX	1	2386.97830405	5.86	0.0180	0.0454
XCL	1	11.76685628	0.03	0.8655	0.0000
ICX*CL	1	1663.02421789	4.08	0.0470	0.0316

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	8.62604962	0.80	0.4239	10.72634355
XFP	-0.07894494	-0.24	0.8123	0.33132696
XIH	-2.10069046	-3.43	0.0010	0.61239101
XIC	-0.00018825	-0.05	0.9588	0.00363440
XFS	9.96472E-05	3.51	0.0008	0.00002840
XCX	0.28186646	2.90	0.0050	0.09735037
XCL	0.45841141	1.56	0.1236	0.29424483
ICX*CL	-0.00624784	-2.02	0.0470	0.00309195

Table 30: Interaction Between Centralization and Culture Using Environmental Violations

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	7	19859.93629456	2837.13375637
ERROR	74	33064.55151032	446.81826365
CORRECTED TOTAL	81	52924.48780488	

MODEL F = 6.35
PR > F = 0.0001
R-SQUARE = 0.375250
C.V. = 114.3352
ROOT MSE= 21.13807616
YEV MEAN = 18.48780488

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	526.14855305	1.18	0.2814	0.0099
XIH	1	6994.86599127	15.65	0.0002	0.1322
XIC	1	708.93787794	1.59	0.2118	0.0134
XFS	1	10817.88983758	24.21	0.0001	0.2044
XCZ	1	97.41447352	0.22	0.6419	0.0018
XCL	1	2.47185419	0.01	0.9409	0.0000
ICZ*CL	1	712.20770701	1.59	0.2107	0.0135

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > | T |	STD ERROR OF ESTIMATE
INTERCEPT	-13.65409635	-0.28	0.7822	49.20357029
XFP	-0.38159720	-1.02	0.3120	0.37488590
XIH	-2.44069146	-3.73	0.0004	0.65433488
XIC	-0.00266470	-0.72	0.4720	0.00368571
XFS	0.00012669	4.47	0.0001	0.00002834
XCZ	0.28988609	0.90	0.3697	0.32121529
XCL	2.17608422	1.26	0.2104	1.72224360
ICZ*CL	-0.01410212	-1.26	0.2107	0.01116983

Table 31: Interaction (Complexity x Centralization x Culture) Using Environmental Violations

DEPENDENT VARIABLE: YEV ENVIRONMENTAL VIOLATIONS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE
MODEL	11	24685.53748972	2244.13977179
ERROR	69	27929.35139916	404.77320868
CORRECTED TOTAL	80	52614.88888889	

MODEL F = 5.54
PR > F = 0.0001
R-SQUARE = 0.469174
C.V. = 107.5668
ROOT MSE= 20.11897633
YEV MEAN = 18.70370370

SOURCE	DF	TYPE I SS	F VALUE	PR > F	INCREMENTAL CHANGE IN R^2
XFP	1	443.96425386	1.10	0.2986	0.0084
XIH	1	6831.61392652	16.88	0.0001	0.1298
XIC	1	730.85692159	1.81	0.1834	0.0139
XFS	1	10814.54772453	26.72	0.0001	0.2055
XCX	1	2386.97830405	5.90	0.0178	0.0454
XCZ	1	76.22983568	0.19	0.6657	0.0014
XCL	1	19.20987659	0.05	0.8282	0.0004
ICX*CZ	1	600.19274105	1.48	0.2275	0.0114
ICX*CL	1	1423.10638995	3.52	0.0650	0.0270
ICZ*CL	1	1150.28651676	2.84	0.0964	0.0219
ICX*CZ*CL	1	208.55099916	0.52	0.4753	0.0040

PARAMETER	ESTIMATE	TEST FOR HO: PARAMETER=0	PR > | T |	STD ERROR OF ESTIMATE
INTERCEPT	27.95960887	0.32	0.7494	87.19456466
XFP	-0.15786524	-0.42	0.6739	0.37355402
XIH	-2.28978767	-3.35	0.0013	0.68341635
XIC	-0.00075340	-0.20	0.8396	0.00370803
XFS	0.00010532	3.51	0.0008	0.00002999
XCX	-0.78259428	-0.74	0.4604	1.05431576
XCZ	-0.10383971	-0.19	0.8517	0.55338284
XCL	1.55356077	0.53	0.5998	2.94735880
ICX*CZ	0.00678993	1.03	0.3084	0.00661691
ICX*CL	0.01714427	0.52	0.6061	0.03309199
ICZ*CL	-0.00738133	-0.40	0.6925	0.01858768
ICX*CZ*CL	-0.00015121	-0.72	0.4753	0.00021066

CHAPTER SIX

SUMMARY AND CONCLUSIONS

6:1 SUMMARY OF RESEARCH RESULTS

The purpose of this study was to expand the examination of corporate crime by determining whether internal corporate factors would be predictive of violation frequency. As such, two dimensions of corporate structure, complexity and decentralization, were studied in relationship to two violation types, environmental violations and employee violations. A third major internal variable, corporate ethical culture, was also tested per the two violation types. In order to isolate the predictive value of structure and culture, the effects of four variables (firm size, industry health, firm size, and industry concentration) which had previously been linked to corporate crime were partialed out. Analysis of the data confirmed the two major structural hypotheses and failed to support the cultural hypothesis.

Corporate structure is a significant predictor of corporate crime above and beyond the effects of firm size. Organizations which are more complex and more decentralized had higher numbers of environmental violations. Firm size and industry health were also significantly related to environmental violations; industry concentration and firm profitability were not.

No significant relationship was found between corporate ethical culture, as measured by ethical practices, and either type of violation. No significant relationship was found between any of the dimensions of corporate ethical culture (codes, communication, training, processes) and either type of violation.

None of the hypotheses were supported with regard to employee violations, but, as will be discussed in a later section, the failure to find

significance is most likely the result of a problem with the data.

When analyzing the twelve possible first order interactions between each of the three variables and the four covariates, three of the interactions involving complexity tested significantly; none of the interactions involving either centralization or culture were significant. When examining possible interactions between the three internal variables, the interaction between complexity and culture was significant.

6:2 LIMITATIONS

The most serious limitation of this study concerned the dependent variable, employee violations. The EEOC refused to release data on any violations other than those which had terminated in a court trial. This resulted in a tremendous restriction of range on the dependent variable. The EEOC did indicate that it receives about 65,000 violations each year, and less than 2% ever proceed to a court trial. Assuming that the sample corporations are fairly representative, this means that the employee violations dependent variable in this study represented only a very small fraction of true employee violations. Tabachnick and Fidell (1989) noted that a restriction of range on the dependent variable will deflate correlations; the pronounced range restriction in this study is most likely the reason why no relationship was found between employee violations and structure or culture.

Of course, it may be possible that no results involving employee violations were found because employee violations and environmental violations are different constructs and therefore have different sets of predictors. Unfortunately, because of the data problems, this study is unable to draw any conclusions as to whether the lack of results is due to the range restriction on employee violations or due to the possibility that corporate

crime is a multidimensional construct.

A second limitation of this study concerned those variables which used or incorporated industry level measures: firm profits, industry health and industry concentration. Many of the sample firms are highly diversified and have substantial operations in more than one industry; in such cases, however, only the primary industry was reflected in each variable measurement. As a result, these measures did not accurately reflect all operations of some of the firms.

6:3 DISCUSSION/IMPLICATIONS

6:3:1 Corporate Structure and Corporate Crime

This study verified a long and commonly held assumption that certain types of corporate structure predispose an organization to more frequent violations. Firms which are more complex and firms which are more decentralized had higher violation frequency; complexity explained 8% of the variance and centralization explained 3.4% of the variance in violation frequency over a five year period.

While the degree of overall decentralization of decision making was found to be predictive of corporate crime, different types of decisions were not found to have any significant relationship to violations. The explanation for this probably lies with the types of violations measured. It is difficult to pinpoint exactly where decisions about the environment are made. Environmental violations are probably impacted by planning decisions, financial and resource allocation decisions, product decisions, and operations decisions. It may therefore be that because these decisions are so dispersed, overall decentralization is the best predicator of environmental violations. Decentralization of employee decisions should have been related

to employee violations, but, as explained previously, there was a major problem with the measurement of employee violations. Further research on some of the more obvious pairings (financial decisions and financial violations, marketing decisions and deceptive advertising etc.) should shed more light on this question.

The confirmation of the relationship between corporate structure and corporate crime poses difficult considerations. The manner in which corporations are structured has real consequences for both the firm and the society in which it operates. Although some authors have mentioned forced divestigure and downsizing as a solution to corporate crime, it is not likely that giant corporations will voluntarily scale back operations and it is probably fairly unrealistic to expect the government to enact such drastic measures. The task therefore becomes one of finding ways to mitigate or circumvent the problems posed by complexity and decentralization. Complex and decentralized structures breed environments in which accountability is lost and decision making becomes fragmented. Monitoring systems, appraisal systems with specific criteria attached, centralization of certain decisions, improved communication networks, liaison and linking communication roles are all possibilities which warrant investigation.

6:3:2 Corporate Culture and Corporate Crime

The failure to find any significant relationship between a corporation's ethical emphasis/practices and number of violations warrants discussion. There are four possible explanations for these results.

First of all, it may be that ethical emphasis and practices are, for the most part, genuinely unrelated to corporate crime. Although many authors have maintained that ethical practices will produce a more moral corporate

culture, others do not see any reason to automatically assume that such practices will produce a behavioral outcome. These authors feel that attempting to "implant" an ethical culture within an organization is a fairly useless endeavor, and can, in some instances, be detrimental. Magnet (1986) held that the goal of a strong corporate culture capable of shaping individuals' behavior can be dangerous because it fosters the notion that individual employees are not responsible for their actions. Molander (1987) argued that ethical codes are not effective for a number of reasons. He contended that people know right from wrong, and are indifferent to codes; establishing rules doesn't automatically guarantee compliance. Furthermore, codes often do more harm than good because if something isn't specifically covered in a code, it is considered fair game. Finally, Molander (1987: 630) criticized a society in which status and reward is "accorded more to the successful than to those who played the game honestly and fairly"; codes, training, and talk are not likely to make much of a difference when the behavior they advocate is not ultimately recognized or rewarded.

Another reason why significant results did not emerge may have something to do with the types of violations studied. It may be ethical practices will have an impact on more "blatant" violations about which exists a common perception of right vs wrong. Examples of such violations might be bribery/kickbacks, illegal contributions, tax evasion etc.

Thirdly, it may be that corporate culture is related to corporate crime, but ethical practices/emphasis is not the optimal way to operationalize culture. Ott (1989: 101) pointed out that basic assumptions can differ from stated beliefs and values.

> Beliefs and values are what people will admit to. Basic

> underlying assumptions are what people actually believe and feel and what determine their patterns of behavior.....If organizational culture is defined as basic assumptions, and if significant differences sometimes exist between espoused values and values in use, then methods using questionnaires and inventories will yield misleading results.

In a similar vein, Drake and Drake (1988) noted that there is often a gap between stated values and operating behavior. Perhaps creating a moral culture entails more than codes, training, and speeches; it may be more of a question of behavior, of modeling, and of consequences. Supporting this notion is the fact the incorporating ethics into organizational processes through selection systems, performance appraisals, discipline practices, and audits just missed testing significantly (p=.06). This suggests that perhaps corporate ethical culture needs to be operationalized in a manner which would reflect actual behavior/decisions and their consequences, which may be more important than codes, talk, and training.

Finally, as will be discussed below, it may be that ethical practices do have an impact on violation frequency only in very limited circumstances.

6:3:3 Interactions

Exploratory research revealed that there are interactions among the various predictors of corporate crime which warrant further investigation. In particular, complexity interacted in a variety of ways with external factors to predict violation frequency. Analysis showed that the strongest interaction occurred between complexity and industry health. Complex firms in poorly performing industries were more criminal; this interaction explained an additional 6.17% of the variance in environmental violations. In addition, complexity also interacted significantly with firm profits and industry

concentration. Complexity is obviously a very signficant predictor of violation frequency; it was involved, either through main effects or interactions, in explaining over 20% of the variance in environmental violations.

Of special interest is the significant interaction between complexity and culture. Although ethical practices were not significant on their own in predicting violation frequency, they did interact significantly with complexity. It appears that ethical practices involving codes, communication, training, and other processes will make a difference in some types of organizations. When organizations get complex, members may genuinely not be sure what behavior is expected, rewarded, or condoned; in such circumstances, espoused ethics may function as guidelines.

6:4 FUTURE RESEARCH

Corporate crime is a field still in its infancy; a great deal of research remains to be done.

One of the first and most pressing deficiencies which needs to be corrected is the number of violation categories which have been studied. Every major study, with the single exception of Clinard et al (1979), has utilized only antitrust violations as the dependent variable. Until we begin to broaden our analysis by incorporating other types of violations, we will not know whether the concept of corporate crime is a unitary one explainable by the one set of predictors or a multidimensional concept, with each violation type requiring different and/or more complex theories and models.

Secondly, more research needs to be done on predictors other than size, profitability and industry concentration. Admittedly, these sets of data are easy to get, and, as studies have demonstrated, these factors do indeed moderately predict some types of violations. That still, however, leaves a

great deal of unexplained variance; some of that explanation undoubtedly concerns internal corporate structure and processes. This study revealed that two dimensions of corporate structure, complexity and centralization, have predictive utility. More attention needs to be devoted to these and other internal variables as predictors of corporate crime. Complexity and centralization need to be studied in reference to other violations. Additional dimensions of corporate structure need to be examined. It may be possible to operationalize corporate culture in different ways or test it against different violations.

Finally, it appears that corporate crime may be more complex than previously thought; investigation of possible interactions between both internal and external factors is warranted.

6:5 CONCLUSIONS

The introductory section of this dissertation identified five reasons for conducting this study. Those goals were realized; the research conducted identified a typology of corporate crime predictors, assessed the utility of a model of corporate crime, studied a different violation category, examined the relationship between internal variables and corporate crime, and made a contribution to the body of literature which addresses dysfunctional behavior by organizations.

This study therfore contributed to the knowledge base concerning illegal behavior by corporations; it is important to note, however, that we are only beginning to understand the combinations of factors which predispose corporations to commit illegal actions. When corporations, whether by design or by default, engage in wrongdoing, the costs are staggering. Given the enormous amount of power and resources typically vested in the hands of

large corporations, it is crucial that this line of inquiry continue.

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