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HUMAN RESOURCE ORIENTATION: ITS MEASUREMENT AND RELATIONSHIP TO BUSINESS FIRM PERFORMANCE

The Ohio State University Ph.D. 1981

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HUMAN RESOURCE ORIENTATION:
ITS MEASUREMENT. AND:
RELATIONSHIP TO BUSINESS FIRM
PERFORMANCE

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy in the Graduate
School of the Ohio State University

By
Nancy Knox Napier, A.B., M.I.M

* * * *

The Ohio State University

1981

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CHAPTER 1

INTRODUCTION

The research problem and its significance are covered in this chapter as are the key questions of the study, its limitations and overall research approach. Relevant literature is reviewed in Chapter 2 while the methodology is discussed in greater detail in Chapter 3. The study's findings are presented in Chapters 4 and 5; the conclusions and recommendations are covered in Chapter 6.

Research Problem and Significance of the Study

This study focused on business firms' overall orientation or attitude toward human resources. The primary objectives were (1) to examine firm human resource orientation using a relatively untested analytical approach—content analysis and (2) to investigate whether any relationship exists between firm human resource orientation and firm performance measured in financial outcomes.¹

An assumption exhibited by many firms is that a positive attitude toward or good treatment of employees in an organization should lead to a payoff or better overall performance for the company. Many firms publicly state this assumption in annual reports and advertisements (See Connecticut General's full-page Wall Street Journal advertisement, 14 August 1980, p. 15). If the assumption could be tested, it could

¹The term "human resource orientation" is used throughout rather than the plural "human resources orientation" because human resources/employees are viewed as a resource category, just as capital and technology are viewed as types of resources.
help answer a central question: How much attention does a firm need to invest in its human resources for an acceptable return? And, what forms should this attention take, such as training, positive leadership, safe and healthful work conditions, job security, praise, varied reward package, and the like?

These and related questions are critical to any firm having limited human resources, that is, how to use effectively its personnel talent and other resources in a manner which will best serve consumer needs while providing the best return (usually, the greatest profit) for the organization. This is a fundamental tenet of market economics and one which firms will increasingly face in future years as resource costs continue to grow. To judge appropriate levels of attention to human resource management, it is important to determine more effectively the linkages between this resource and firm performance.

Often in business research and practice the interest in human resources has centered on the individual worker or task group within a firm. For example, managers seek to understand, motivate, and direct the actions and performance of an employee or group of employees. The performance measure often refers to the individual's or group's output or satisfaction rather than any effect on total firm performance (Frederickson, 1966; Friedlander and Greenberg, 1971). It is acknowledged that employee satisfaction and attitude towards work role and interpersonal relations are very important subjects in themselves and can have critical implications for such issues as employee health, family relations, and participation in community life (See the U. S. Department of Health, Education and Welfare Report, Work in America, 1972; Terkel, 1972; Sheppard and Herrick, 1972; Schrank, 1978).
Nevertheless, this study concentrated more upon the firm's human resource orientation (independent variable) and the relationship of this orientation to specific business financial outcomes (dependent variable) such as (1) return on assets, equity and sales, and (2) level of assets, equity, sales and income per employee.

Another common area of human resource research has been on organizational climate (Steers, 1977; Litwin and Stringer, 1968). Climate usually refers to the perceptions employees hold about an organization or what they perceive to be the general work environment. It is frequently assumed that a positive employee-centered climate leads to such outcomes as reductions in employee turnover, manufacturing costs, and training time (Hand, Richards and Slocum, 1973; Frederickson, 1966).

Climate is in a sense similar to the idea of human resource orientation in this study. Rather than assessing the personality of a firm as viewed by the employees (Steers, 1977), this study sought to portray a firm's orientation toward employees from outside the firm (using an unobtrusive approach) and relate that to performance. In any study where the "examined" (i.e., a firm's managers) may not wish to reveal information about orientation toward employees, or more likely, may not have an overall organization impression given individual differences, alternative methods, especially unobtrusive ones, may prove fruitful (Webb, 1966).

Often used by political scientists, historians, communications and folklore researchers, and recently by corporate social responsibility
researchers, content analysis is a method to assess meaning attributed to certain words, phrases, or expressions in written or spoken communications (Pool, 1959; North, 1963; Gerbner, 1969).

Content analysis was selected in lieu of other unobtrusive means because (1) there is little physical evidence readily available that might indicate human resource orientation on a comprehensive basis for several firms and (2) direct observation would have narrowed the possibility of studying several firms. Also using unobtrusive means prevented data from being altered or made to fit what the firm representative may have viewed as a desirable response. Thus, content analysis provided an unobtrusive method for assessing readily available information about firms' apparent human resource orientations.

Key Questions of the Study

In this study it was conjectured that the orientation or attitude of a firm's management toward human resources might be reflected in the prose, pictures (photographs, drawings), statistics, and graphs of the firm's annual reports. As a public report on yearly financial and other company activities, annual reports provide one vehicle to assess the emphasis a firm places on its human resources in that communications vehicle, relative to other topics. While recognizing the purposes and audiences to which annual reports are directed, such reports might however still represent an important information source for analyzing the general impression a firm publicly conveys regarding its employees. Since sample firms did not know when their annual reports
were prepared that the researcher would use them to study impressions/attitudes toward employees and since the reports are already public record, they could not be changed to fit what a firm's management may have thought the researcher expected to find.

The principal questions which were examined in this study are noted below:

1. Is content analysis of annual reports an effective methodological approach to measure a business firm's human resource orientation?

   (a) What relationship, if any, exists between the human resource orientation of a firm as measured by content analysis versus other external sources, e.g., public documents, litigation awards, arbitration cases, and the experiences and observation of union representatives?

2. What is the relationship, if any, between a firm's human resource orientation and its financial performance?

   (b) Do firms which rate consistently traditional (lower) in their orientation perform less effectively than do firms which exhibit progressive (higher) orientations?

3. Are changes or shifts in firm orientation over time—from traditional to progressive or vice versa—reflected in changes in firm performance outcomes?

4. Are differences in performance outcomes attributable more to company size measured in terms of numbers of employees, than to human resource orientation? Also, is company size related to human resource orientation? Here, size might be viewed as a proxy for strength in the market place or availability of greater economic resources to devote to employee performance (selection, training, promotion and transfer, various reward packages, etc.)
Overall Research Approach

In the initial formulation of the research problem, the author considered examining the annual reports and related firm data of publicly-held companies of three industries in three industrialized, principally market economy countries: The United States, Great Britain and the Federal Republic of Germany. Lack of comparability on accounting and financial measures and difficulty in collecting a sufficient number of reports precluded this approach. The research methodology of this study is briefly described below; further elaboration is contained in Chapter 3.

Since a principal objective was to determine the value of the method—whether annual reports are a useful information about a firm's human resource orientation—the study was narrowed to one U. S. based industry, the electrical, electronic and appliance industry, Standard Industrial Classification 36 (SIC 36). The timeframe under consideration was 1975-1978. Ultimately, 40 companies were included in this study; a total of 160 annual reports were closely analyzed.

Additional data were obtained from other sources: face-to-face interviews with six representatives from five national unions that have dealt with or are familiar with the firms included in this study; review of firm representation in a national human resource management association; personnel manager responses to a brief mail questionnaire (N = 22 respondents or 55.0 percent), and an examination of selected litigation -- National Labor Relations Board (NLRB), Occupational Safety and Health (OSH), Fair Employment Practice decisions, and
available arbitration awards. Strike occurrence data and relevant articles published in major business periodicals and trade journals were also examined. Each of these data sources was used primarily to check or validate the unobtrusive data obtained from the annual reports through content analysis.

The electrical, electronic and appliance industry, henceforth referred to as the electrical industry, was chosen as a challenging industry for study for at least two reasons. Basic to the U.S. economy in terms of the wide range of its products, both industrial and consumer, the electrical industry includes both production and white collar workers. A comprehensive human resource orientation measure should refer to all occupational categories. Second, the SIC 36 industry group as categorized by Fortune magazine (i.e., firms with more than 50 percent of sales revenues from electrical, electronic products or appliances) included firms in a broad range of sizes. Firms' sales in 1978, for example, ranged from several billion dollars to slightly more than $100 million and from over 400,000 to less than 5,000 employees. Thus, both large and small firms (given the sample of Fortune ranked firms) could be studied using the electrical industry, and firm size could be factored into the human resource measure.

As noted, the study's timeframe was 1975-1978; this four-year span was selected for several reasons. Four years, while not extremely long, provided a time period in which to gain some insight into performance and human resource orientation trends. Also, to avoid using published firm information which may have emphasized
certain resources or other elements of a firm's business operations, information from several years was examined. For example, in annual reports firms sometimes dedicate one year's issue to technological developments and another year to employee achievements. To preclude a potentially heavier emphasis on some topic during a given year, four years of reports were used.

Another reason for selecting the four recent years for study was the probability of obtaining information from and about the sample firms. The possibility of getting data for four years was presumed greater than the chance of receiving data going back 10 years or longer.

In determining a particular time period to select, the post-1974 period was chosen for several reasons. First, the dramatic economic upheaval just prior to 1975 altered economic conditions significantly. To avoid pre-versus post-1974 (i.e., oil embargo, inflation leaps) comparison problems, the researcher chose post-1974 as the time period for study. Also, the 1975-1978 period reflected a time of difficult economic dealings for firms (low level of sales in 1975-76) and improving positions (1977-1978).

Another major reason for selecting the post-1974 period was change in the data composition of annual reports. In 1974, the U.S. Securities and Exchange Commission (SEC) began requiring publicly-held firms' annual reports to provide, in a specific format and pattern, certain financial and other information. For example, the 1974 decision required each annual report to contain the following information:

- A president's and/or chairman's letter describing, in general, the firm's business, product(s) or service and future direction.
• Listing of all members of the board of directors

• Listing of all senior management officers and respective titles (no requirement, however, that titles reveal the operational function of the officer. In other words, a title could be senior vice president with no other information about the person's responsibilities).

• A 5-year summary of selected financial information and statistics (e.g., net sales, total assets, net income).

In effect, the 1974 ruling standardized financial information which is made available by publicly-held firms, and to some extent other data, while still allowing latitude in terms of report content, breadth, and depth of courage.

Limitations of the Study

The study's exploratory nature forced the researcher to recognize several limitations of such a study. First, the lack of an established theoretical base for the use of content analysis necessitated using other related research areas a framework for analyzing human resource orientation. These other research areas (e.g., climate, job satisfaction, etc.,) are very useful but their findings are derived from more conventional means such as a survey questionnaires, interviews, and case studies. As a result this study is the first to rely upon content analysis of annual reports to judge human resource orientation. The study represents a start but clearly is not the final statement on the value of content analysis or unobtrusive measures in general in measuring human resource orientation. The concept needs to be tested across several industry classifications (other manufacturing as well as banking, insurance, public
utilities, retail, etc.) to determine variations in the utility of this approach across industries.

Second, because the study's method involved unobtrusive measures in an effort to analyze a firm from a broad external perspective, the link between revealed or apparent human resource orientation and actual human resource orientation may be tentative. The measures in the current study were proxies of concepts or attributes that might be better measured using more direct or alternative means. Successive studies will seek to gain more direct access to firm management orientation in specific plants or divisions.

A third limitation is partially related to the previous one. The study sought to portray a firm from an external, comprehensive standpoint. As a result, it was difficult to generate specific data about (1) types of human resources affected (i.e., blue collar, white collar, management and professional), (2) specific company human resource activities, and (3) the performance of individual divisions or plants of a firm. The study could not separate actions and performance by division or by geographic area since division or plant results are usually included in the overall results of the corporation.

Similarly, in an effort to generate a composite financial performance measure, the study may have been overly ambitious in combining individual performance measures. Future studies will need to focus on better specification of both the performance and orientation variables.
CHAPTER 2

REVIEW OF THE LITERATURE

The first part of this chapter examines research on methods to develop a measure of human resource orientation, with particular emphasis on content analysis and other relatively unobtrusive methods. Reasons for using an unobtrusive method and research that has used similar methods are included. The second part of the chapter considers research on the overall theoretical relationship between firm performance and concepts similar to the idea of human resource orientation, as well as research on the specific variables and components of this study.

Content Analysis

As an exploratory project, this study was conceived as an initial attempt to review readily available published information about firms and to determine, if possible, their human resource orientation from this material. In contrast to other research studies that survey the subject under examination such as firm management or employees through the use of interviews and questionnaires, this study used an observation method which emphasizes unobtrusive data gathering. The assumption was that there may be valuable data about firms firm sources "outside" the firm.
Content analysis, a method of reviewing written, visual or other information to determine attitudes about some object, was chosen as a potentially useful method to judge a business firm's human resource orientation. It was developed and refined in the first half of the 20th century and became particularly popular during and following World War II (Berelson, 1952; Pool, 1959; Gerbner, 1969). It enjoyed a wave of interest through the early 1970s when it gained increased attention in business research, particularly corporate social responsibility research (Seider, 1974; Beresford, 1977; Bowman and Haire, 1975; Fry and Hock, 1976; Abbott and Monsen, 1979).

Usually content analysis is used to measure unobtrusively a subject's attitude about some object (Webb, 1966; Osgood, 1959; Holsti, 1963), find general topical themes in a piece of work (Macoby, 1963), and assess the changes in symbols or language used in international political communications (Axelrod, 1976; Holsti, 1963; Zinnes, 1963). The most avid users of content analysis have been in disciplines such as political science, history, literature and journalism.

Two principal types of content analysis are available for general research application: one focuses on quantitative analysis, the other on the qualitative aspects of a communication. Berelson (1952) was one of the initial proponents of the quantitative approach which considers the amount or quantity of attention given to a topic. This form of content analysis, often called a frequency count,
analyzes the level of emphasis placed on a topic by counting the number of times the topic is mentioned in a given written work (George, 1959; Kecskemeti, 1973). This method of content analysis has been refined to include simple dichotomous measures of whether or not some topic is mentioned at all, regardless of the number of times mentioned.

Evaluative assertion, the qualitative content analysis selected for use in this study, determines the attitude exhibited toward a topic in a piece of written work by analyzing the topic word(s) and their descriptors (Osgood, 1959). This method seeks to judge the direction of the attitude, positive, or negative, and the strength of the attitude on a scale from 0 to 3. Chapter 3 discusses the steps in this analysis method in greater detail.

Content Analysis: Social Responsibility Research

Examples of content analysis used in recent business research have been primarily quantitative in nature and for the most part directed toward assessing firms' corporate social responsibility activities or, whether a firm showed evidence of such activities as initiating environmental controls, contributing to community-related activities, making the charitable donations, providing special employee training and following affirmative action programs. Often a form of frequency count or dichotomous measure is used to assess whether a topic is mentioned in a publication.

Abbott and Monsen (1979) used Beresford's 1973 and 1974 reviews of the Fortune 500 companies' annual reports to judge whether social responsibility activities were mentioned. Bowman and Haire (1975)
measured social responsibility involvement disclosure by the percentage of total lines that referred to corporate social responsibility activities in an annual report. Fry and Hock (1976) examined annual reports' photographs and text for evidence of corporate social actions. Using content analysis on executive speeches, Seider (1974) identified general "corporate ideologies" or apparent philosophies of firms in doing business.

Although some researchers question the validity of content analysis measures (e.g., Aldag and Bartol, 1978), its use has been tested (e.g., Bowman and Haire, 1976) and appears to be gaining some acceptance by recent researchers (Abbott and Monsen, 1979).

Corporate social responsibility research often includes, among other actions or programs, those related to human resources. In a sense, human resource activities are considered a subset of corporate social responsibility.

Many human resource and/or management studies focus on the way specific corporate policies contribute to employee performance and, in some cases, indirectly to firm performance (See, for example, Lawler, 1971; Friedlander and Greenberg, 1971; Litwin and Stringer, 1968; Child, 1974, 1975). However, the emphasis is commonly on one or a few policies rather than a comprehensive approach to human resources management.

The corporate social responsibility-performance relationship has yet to be clearly established, however. Results from recent studies have been mixed. Some studies reveal a positive relationship between
corporate social responsibility involvement and firm financial performance (Sturdivant and Ginter, 1977; Fry and Hock, 1976; Bowman and Haire, 1976; Vance, 1975). The performance measures used in the studies are primarily financial measures of varying levels of detail. The corporate social responsibility measures tend to be one of three types: (1) an index of management attitudes, (2) results from content analysis of company provided data, e.g., annual reports, personnel handbooks, and (3) reputational scales of firms.

Sturdivant and Ginter (1977) found a positive relationship between corporate social responsibility and long run firm performance. Their measure was based on an analysis of managers' attitudes in selected companies that had been rated "good" or "bad" by Moskovitz (1973). Economic performance was measured as earnings/share growth as an estimate of long term growth.

Using results from content analysis of text and visual material of firms' annual reports and five dependent performance measures, Fry and Hock (1976) tested the relationship between performance and corporate social responsibility. Dependent measures were sales, net income, equity, assets and the firm's public image, a reputational scale generated from ratings of firms by college students and practicing managers. They concluded that individually the five dependent variables were positively related to the social responsibility content analysis scores. Return on investment, however, did not reveal a significant relationship with corporate social responsibility.
When Bowman and Haire (1975) used return on stockholders' equity as a dependent performance variable and related it to a social responsibility measure derived from annual report content analysis, they found a significant positive relationship. Their social responsibility measure differed from Fry and Hock's dichotomous measure though. Instead, they used square inches of space in an annual report devoted to social responsibility topics. To validate their percentage measure, Bowman and Haire (1976) subsequently tested fourteen firms highly rated by outside reputational scales.

Heinze (1976) also found a positive relationship between firm social involvement (measured by a reputation scale based on graduate student opinions) and financial performance. His study differs from most in that he used performance as the independent variable; some researchers argue that this is not as useful an approach as when performance is the dependent variable (Abbott and Monsen, 1979).

Similarly, Vance (1975) used a reputational scale measure for social involvement based on ratings of 90 firms by managers and students. The raters judged firms on levels of social responsibility involvement, the independent variable. He used percentage change in price/share for 1974 as the dependent variable. Vance discovered a negative relationship between social responsibility involvement and performance. The results may have been misleading, however since he discussed neither the level nor strength of the negative relationship (Abbott and Monsen, 1979). Also the year 1974 may have been a
particularly poor sample year since the economy in general was in the midst of the 1974 oil embargo.

Abbott and Monsen (1979) used Ernst & Ernst's reviews of the Fortune 500 company annual reports as a data base. These reviews describe and categorize annual reports based on references to corporate social responsibility activities. Their results exhibited no significant negative or adverse relationship between social involvement activities and performance. Likewise, the relationship was not strongly positive. Their conclusion was that social involvement activities may not contribute to return on investment but also are not detrimental to firm performance.

Past studies consistently reveal a strong relationship between corporate social responsibility and firm size. (Preston, Rey and Dierkes, 1978; Fry and Hock, 1976; Eilbert and Parket, 1973; Dent, 1959). Typically, larger firms whether measured in financial terms such as sales dollars or number of employees tend to exhibit more social responsibility activities. In addition, Dent (1959) found that larger firms' manager's goals show greater concern for employees than smaller firms' managers.

Organizational Performance

Organizational or firm performance can be measured many ways, in financial terms or how well a firm meets certain goals such as physical output, flexibility, stability, growth and so forth (Georgopoulos and Tannebaum, 1957; Caplow, 1964; Katz and Kahn, 1966; Schein, 1970; Mott, 1972). This section discusses relevant performance related research areas.
Financial Performance

Firm performance measures are useful for comparison across industries and companies. The broader the comparison, of course, the more complex the process of developing good performance measures. To standardize comparison, researchers have sought quantifiable objective measures. One fairly well-developed and proven comprehensive comparison approach, developed by the Interfirm Comparison Centre in the United Kingdom, provides a procedure consisting of successively more detailed levels of financial ratios for interfirm comparison (Ingham and Harrington, 1980). This approach suggests using an initial ratio indicating overall firm performance, i.e. operating income to operating assets, and subsequently more detailed ratios to increase the quality of the analysis. The selected financial measures of interest, e.g., sales, assets, equity and the like, act as the bases upon which descriptive ratios can be built. Furthermore, particular inputs or resources such as human resources may be added to analyze the significance of that resource to the output, or financial measure of interest. For example, one could use sales per employee or income per employee to test the assumption that the higher the output in sales or income dollars in relation to employees, the more efficient the use of employees in a given firm or industry. These ratios can supplement other performance measures and can assist in standardizing output across large and small companies.
Financial performance measures are fairly well accepted in research and practice as indicators of overall firm health or profitability (Friedlander and Pickle, 1968). As noted, several of the corporate social responsibility research studies used financial measures and ratios as dependent variables. For the current study, financial performance measures and ratios were used to assess and compare firm performance.

Organizational Effectiveness

The concept of organizational effectiveness differs somewhat from firm performance in its overall purpose. Effectiveness measures organizational capability to achieve a predetermined goal(s) (Steers, 1977). Effectiveness can be analyzed using financial measures to reveal the economic gains to a firm or its investors (Fullan, 1970; Child, 1974, 1975; Katz and Kahn, 1966; Negandhi and Reiman, 1973). Effectiveness then, represents the gap between goals and organizational ability to reach those goals.

The current study sought a means simply to compare firms, in a given industry and year. This was not, then, an attempt to reveal how well firms performed in meeting their own goals. However, the concept of effectiveness and some of the measures in terms of profitability were a basis for building a performance variable.

Managerial Goals

A third research area contributing to the development of performance measures for the current study was research on the goals that managers view as important for their firms. Although studies show a
variety of goals, some manager goals appear consistently in research conducted in different time periods, geographical locations and industries. Three common goals are improving profitability, providing good quality product(s), and maintaining employee welfare (England, 1967a; Dent, 1959).

Reviewing managers' organizational goals suggested several points to incorporate in the present study. First, profitability measured as return on investment is frequently mentioned as an important goal for managers, representing a potentially useful measure of firm performance.

Secondly, Dent (1959) and England (1967a) suggest that employee welfare, overall concern for employee health, safety and so forth are also important to managers. The present study sought to weave the idea of employee welfare into the independent measure of orientation toward employees.

Finally, the high emphasis on profitability and employee welfare in managers' goal ratings may suggest that managers see no incompatibility in firms pursuing both goals simultaneously. Having a goal of employee welfare should not diminish profitability's role, nor should profitability lessen the importance of the employee welfare goal. This observation provided another rationale for the present study's research questions.

**Human Resource Orientation**

Human resource orientation may be visualized as a continuum with three points describing various actions or combinations of
actions that a firm might exhibit to indicate its orientation toward human resources. Essentially, human resource orientation, as measured in this study, is an index of a firm's approach to or concern for its human resources. This study measured the orientation in terms of (1) firm disclosure (through annual reports) about employees, (2) apparent firm emphasis on three elements in the human resource function, i.e., whether the annual report mentioned a human resource director and/or related policies, and to what extent a firm was represented in a professional association, and (3) firm experience with conflict, i.e., litigation, arbitration and strikes.

Although human resource orientation is not yet a studied concept in the research literature, similar concepts offer some enlightenment as to defining and measuring it. Research areas of particular use in framing the human resource orientation concept include the following: (1) management philosophy toward employees in general, (2) continua describing labor-management relationships, and (3) overall firm philosophy or ideology toward business operations. Because the idea of human resource orientation is in an initial stage of definition, the concepts used in specifying it tended to be general in scope.

**General Management Philosophy Toward Employees**

Research on approaches or management philosophy toward employees is sometimes woven into discussions of management style or whether a
manager is people-oriented or production/output oriented (Blake and Mouton, 1964; Sibson, 1976). Essentially, the issue is how much concern or emphasis do managers put on interpersonal/people relationships as opposed to other topics.

The style or orientation of management may be based on an historical development of management philosophy, theory and teaching. Peterson and Tracy (1979) suggest three such philosophies:

- **Traditional Philosophy** - Management's major interests are productivity and efficiency; to achieve these goals, a firm employs "bodies," i.e., human resources, and motivates them primarily by financial incentives.

- **Human Relations Philosophy** - Management shows much concern for employee social and psychological "head-oriented" needs such as security, satisfaction. This attitude may lead to benevolence and/or paternalism in the firm.

- **Human Resource Philosophy** - Management values human resources as mental and physical skill inputs contributing to firm output; the concept of an exchange or trade-off between firm and employee becomes important as management recognizes potential benefits of proper selection, employee training, development and the like.

Peterson and Tracy's (1979) classification offers a philosophical overview. Although it focuses on management attitudes, it might be generalized to provide some indication of a philosophy exhibited by a firm. Another benefit of their classification is its incorporation of attitudes, regardless of whether a firm is unionized or not. Lastly, their classification is congruent with three principal schools of management thought which have been identified by many writers. These include scientific management...
(Taylor, 1911); human relations (Mayo, 1933; Roethlisberger and Dickson, 1939), and behavioral or systems approaches (Likert, 1961, 1967; Lawler, 1973; Argyris, 1957, 1964).

Other continua suggest specific management styles, e.g., ranging from boss-centered or authoritative to employee-centered or more participative (Glueck, 1977), or attitudes based on assumptions about employee motivation (e.g., McGregor, 1960; Herzberg, 1959; Atkinson, 1966; Tannenbaum and Schmidt, 1958).

Philosophies originating from climate research clarify the organization's environment (sometimes as a continuum) and potential outcomes. Litwin and Stringer (1968) proposed three descriptor climates: authoritative, affiliative, and achievement-oriented climates. An authoritative climate suggests strong management control, centralized decision-making and is comparable to Peterson and Tracy's (1979) traditional philosophy.

An affiliative climate (Litwin and Stringer, 1968) is an environment of good interpersonal manager-employee relations, similar to the human relations philosophy (Peterson and Tracy, 1979). Finally, an achievement climate emphasizes goal attainment. Each climate type is presumably linked to an individual performance outcome: relatively low performance for levels for authoritative and affiliative and relatively high for achievement-oriented climates.
The idea of management-employee exchange also contributes to a framework for studying a possible human resource orientation - performance relationship (March and Simon, 1958, Thibaut and Kelley, 1959). Employees and management each contribute (effort, skill, time, compensation, work environment, and so forth) for certain rewards (money, status, profit, etc). Presumably, as the inducements or rewards increase, so will the input or contributions from employees, leading in time to greater output.

In addition to academic research on management philosophy, style, climate, and performance, the business press also refers to such issues. Menzies (1980) recently characterized the "10 toughest bosses" in major U. S. corporations and concluded that people-oriented bosses are not among the top ten. In reviewing performance of the 10 toughest bosses' firms, however, Menzies (1980) finds no clear evidence that such bosses managed better or worse performing firms.

Labor-Management Relationship Continua

Labor-management relationship continua are often viewed as a range from conflict to cooperation behavior of the two parties (Dubin, 1958; Stagner, 1956; Harbison and Coleman, 1951; Selekman, 1949; Hill, 1947; Homans, 1954; Derr, 1978). Although not directly equivalent to human resource orientation, the labor-management conflict continua approach offered another viewpoint for input into the research framework.
Although conflict reflects some disorder in business operations, it is neither unusual nor abnormal for firms to experience a certain amount (March, 1973a). Conflict represents a way to express and resolve discontent in a work environment. Thus it was important to consider conflict in a human resource orientation variable.

In Dubin's (1958) labor-management continuum, the most conservative, management-centered position is labeled management prerogatives. This position represents an environment of strong management control and rights to decisionmaking. Somewhat less stringent is the situation of mutual labor-management tolerance or accommodation. Finally, Dubin suggests that some labor-management parties can forge a cooperative arrangement or limited partnership allowing more participation by labor in decisionmaking.

Derber's (1969) continuum, while similar to Dubin's, consists of five stages ranging from authoritative to democratic, indicating an increasing input and cooperation from labor. Like Dubin, Derber implies a movement along the continuum to democratic relationships is probable.

Less descriptive in the continuum dimensions but useful in its origin based on practical experience is Hill's (1947) continuum of management's attitudes toward relations with labor. His continuum ranges from extremely conservative to extremely liberal. He defines as extremely conservative those inflexible managers who
demand strict management rights in operations. Hill discounted the importance and strength of this group, however, based on his observation that its numbers and cohesiveness was dwindling even in the late 1940s. Extremely liberal managers could accept some cooperative arrangements with limited labor participation. His middle of the road managers show an arm's length approach to labor relationships similar to Dubin's and Derber's mid-range positions.

Harbison and Coleman (1951) propose another typology similar to those mentioned above. Their three stages of a labor-management relationship are armed truce, working harmony, and union-management cooperation, characterizing joint efforts by labor and management to improve workplace quality and output.

Labor-management relation typologies or continua offer two main insights for the current study. First, position on the continua, like those on a human resource orientation continuum, are not expected to be fixed or exact for any given relationship. Within a single firm, relations may range along a continuum and change overtime. Thus it is difficult to specify exactly the position of a unit at a given time unless one were to examine relevant criteria.

Secondly, these researchers tend to suggest a movement from strongly adversary hostile relations (armed truce) to a somewhat more cooperative stance. Consistent collaboration and cooperation are yet to be seen in many relationships in this country, but the realization that in some respects labor-management relations require joint efforts comes through in their discussion. Such a potential
coming together or rapprochement may also affect the firm's overall orientation toward employees: perhaps more attention to joint efforts to achieve better outcomes. Finally, the more democratic environment may result in better individual and firm performance, as suggested by other climate researchers. Coch and French (1953) suggested that increased participation by employees in technological changes result in increased production and decreased resistance to change and potential conflict.

**General Firm Philosophy**

The preceding two sections discuss management philosophy toward human resources and labor-management relations. This section focuses on research on general philosophies or ideologies of a firm's management in its business operations (Seider, 1974; Negandhi, 1974; Burns and Stalker, 1961).

Seider's 1974 study is especially useful since he utilized content analysis of 474 speeches by executives in eleven industries. He identified five classifications of firms' philosophies as follows:

- **Classical** - Executives of companies exhibiting this philosophy stressed the importance of free enterprise and the profit motive for the firms' continued survival. The classical company speeches called for self-regulation rather than government intervention in running an economy. Example companies were typically large, old, established companies.
Social Responsibility - Companies in this group showed concern that business play a role in fighting social problems. Such firms also indicated somewhat greater concern about employee needs and welfare. Control Data and Bank of America were examples.

Trustee - In this philosophy the firm acts as a "balancer" of rival interest groups, while meeting its own goals. Not only should a firm provide a quality product or service, it must simultaneously meet demands from its stakeholders: investors, employees, government, communities, and so forth.

Professionalism - In this philosophy firms exist to provide a good or service and have few other "roles." Most firms in this group were conglomerates: speeches were business-oriented with relatively little additional information. Examples of professionalism philosophy firms were ITT and other multinational companies.

Nationalism - A firm in this group incorporated company goals into the broader, national scope. Political and economic goals of the firm's home country can affect the firm's livelihood; as a result the firm thrusts itself into a "nationalist" mode. Very often, such firms in this group were in industries greatly affected by international competition such as the electronic and steel industries.

By this content analysis Seider was able to identify overall firm and industry ideologies rather than specific goals of managers. This method offered Seider a means to paint a portrait of a firm similar to the current study's objective.

Organizational Climate

Climate research focuses on individual employee perceptions of the work environment. Although the emphasis is on individuals rather than the firm, the research offers insights for the current study. Many studies have examined climate and its relationship to job satisfaction and employee performance. For example, Litwin and
Stringer (1968) found that more authoritarian climates are associated with lower productivity and job dissatisfaction. Conversely, achievement-oriented climates (emphasis on goal attainment) were linked to higher employee productivity. Other studies have related employee-centered climates to higher employee performance, lower turnover and lower manufacturing costs (Friedlander and Greenberg, 1971; Hand, Richards and Slocum, 1973).

Climate is somewhat similar to the concept of human resource orientation from the employees' perspective, i.e., how does the firm exhibit concern or its orientation. In a sense, climate is the converse of human resource orientation. Whereas climate research considers the bottom-up or inside perceptions about environment, from the perspective of the employee, human resource orientation takes the viewpoint of inferring the managerial attitude towards employees as manifested in personnel programs, activities and policies as measured by data from sources available to the general public, from "outside" the firm.
Research on Human Resource Function Components

Research on three components of the human resource function was examined to assist in the development of a human resource orientation measure. They were (1) position of the human resource director, (2) evidence of human resource programs and activities in the firm, (3) evidence of firm representation in a human resource professionals' association.

Position of the Human Resource Director

French and Raven (1960) proposed three sources of leader power based on a person's position in an organization: legitimate authority, reward power and coercive power. Two other power sources, expert and referent, are known as "personal power". Leader power has been assumed to be related to group performance. Research has indicated a weak, positive relationship between personal power and leader effectiveness, exhibited by subordinates showing better performance and lower absenteeism. The relationship between position power and leader effectiveness in terms of individual or group outcome has been relatively inconsistent (Ivancevich and Donnelly, 1970; Student, 1968). However, Leavitt (1958) suggests that organization members are more satisfied and ultimately better performers when they hold positions that provide knowledge about organizational activities, decisions and the like.
This study sought to incorporate the "position power" data by including the existence or mention of the human resource director in firm annual reports as one of the human resource orientation components.

The position of the human resource director in organization is to frequently relatively low. While firms often mention a manager of personnel, employee or industrial relations, or equivalent title, the title showing the manager's position (e.g., vice president vs. senior or executive vice president) has often been lower than others listed as part of management (Marsh, 1973b). Tantamount to the firm's antenna for human resources issues, the human resource manager acts as identifier of potential problems, advisor, and to some degree implementer of solutions. Even so, the personnel/human resource managers' importance, in terms of position may have been underestimated by many firms (Parkinson, 1973).

Some advocates for stronger human resource managers suggest placing the manager on the firm's board of directors or, at a minimum, giving the personnel manager the status and authority of a position on par with operational managers (Parkinson, 1973). The argument is that as firms' constituency groups, e.g., customers, job seekers, communities, and government, grow more demanding, firms need a highly positioned person attuned to human resource issues. Also, union influence may increasingly affect board of directors' decisions and firm operations (Smith, 1978). As a result, the human resource managers may increase in relative importance in the firm (Miner, 1979).
Representation in a Professional Organization

Human resource management specialists are increasingly viewing their field as a distinctive profession. (See ASPA's Handbook of Personnel and Industrial Relations, edited by Yoder and Heneman, 1979). Little empirical research exists on the significance of membership of firms' top executives and other representatives in human resource organizations. However, interest seems to be growing. For example, Miner (1979) provides data on the type of organizations and level of memberships by personnel managers. According to individuals surveyed, firms often support such activity by paying membership fees. This study sought to examine the level of firm support for the human resource management function by using as a proxy level of participation by firms' representatives in a human resource management organization.

Human Resource Activities and Programs

Research on the importance of human resource policies to a firm and its performance has been, as mentioned earlier, mainly directed at specific programs. Research on benefit, insurance and other maintenance programs, for example, indicate the importance of reviewing costs and benefits of such activities (Cheek, 1973; Koch, 1974). Also some managers believe certain programs such as employee stock ownership may indirectly lead to
improved employee performance (Beiswinger, 1979). Finally, economic theory suggests that in a market economy, better wage policies are usually associated with better performing firms (Galenson, 1966; Samuelson, 1968).

The basis for assumptions that human resource policy commitment may lead to increased performance stems in part from Thibaut and Kelley's (1959) proposition that managers and employees include policy commitment in their exchange of rewards and performance behavior. As firms increase their financial and philosophical commitment to policies benefiting employees, employees will in turn respond with improved or increased performance as their contribution to the exchange.
CHAPTER 3

METHODOLOGY

This chapter discusses the sample selection, relevant dependent and independent variables, their measurement, and the analytical methods that were used in this study.

Sample Selection

Country Selection

The original conception of this study was a cross-national comparison of several industries. Initial countries considered included the United States, West Germany and the United Kingdom. The idea for a cross-national study was abandoned because of three major problems that emerged. First, accounting practices and reporting methods are not yet easily comparable across countries, and thus extensive preliminary work would be necessary to prepare the data base for analysis. Despite such preparation, there still would be important omissions and differences between these countries simply in terms of their reporting methods.

A second problem concerned comparing annual report textual information. The structure and content of texts of non-U. S. annual reports differ widely. As would be the case with accounting
data, much preliminary work would be involved in preparing the data before performing any detailed analysis.

Finally, because the study was exploratory in its central purpose (developing a measure of human resource orientation), the additional complications from an international dimension were too much for the present study. The main objective was to build the measure itself and test it on selected domestic firms before tackling international intricacies.

Presumably, these problems are not unresolvable but for the present study they were perceived as too complicated for the methodology. Thus, after assessing potential international comparison problems of such a potential study, the research focus shifted to the United States as the country of interest.

**Industry Selection**

Similar to the country comparison issue, an earlier proposal sought to compare several industries. These were subsequently narrowed to two basic types of industries: one producing goods and the other producing a service. The specific example industries were the electrical, electronic and appliance industry (goods producing firms) and banks and insurance companies (financial service producing institutions). Once again, comparison problems arose especially for financial institutions and deriving financial outcome measures comparable to those readily available for manufacturing firms.
As a result, the author focused on one industry for an in-depth study: Standard Industrial Classification 36 (SIC 36), electrical, electronic and appliance products. This industry represents a basic manufacturing industry in the U.S. economy. It consists of firms that are diverse in product line and reflect a broad size range in terms of both numbers of employees and financial outputs, e.g., net sales, total assets, and the like. The firms also vary by geographic location and provide a mix of employee types (blue, white collar workers and professionals). A final reason for selecting the electrical industry to study was its relative lack of government regulatory control in contrast to such industries as public utilities or transportation, hence controlling somewhat for potential intervening effects from government regulation.

Company Selection

After choosing the industry for study, sample firms were selected. The universe from which firms were culled was Fortune magazine's annual list of top 1000 industrial firms in the United States for the years 1975, 1976, 1977, and 1978. Typically, the lists of top 500 and second 500 companies appear in the journal's May and June issues.

Firms listed in the electrical industry category according to Fortune's specification had 50 percent or more of their total sales volume in products within the SIC 36 industry group. Although some
firms produced products (e.g., aircraft engines, furniture) that were not within this SIC category, a firm was categorized in SIC 36 if the majority of its industrial sales volume came from electrical, electronic, or appliance products.

The sample firms were further specified based on the following criteria for each potential sample company:

- The company remained in the SIC 36 industry category throughout the 1975-1978 period.
- The company was on the New York or American Stock Exchange during the 1975-1978 period.

Using these criteria, there were 50 potential sample companies from the list of Fortune's top 1000 firms in the U.S. during the 1975-1978 period. For each of those 50 firms, the researcher sought 1975-1978 annual reports as an initial data base. The following approaches were used to obtain annual reports:

1. Letters to firms' public relations/investor relations departments (see Appendix A for example of the letter sent to firms).
2. Telephone calls to firms that did not respond to letters.
3. Review of microfiche and library files at The Ohio State University Commerce Library. Microfiche copies of annual reports are available for many firms listed on the New York or American Stock Exchange. Individual annual reports for some firms were available on a limited basis from the university's library files.
The 40 firms for which annual reports were obtained became the study sample, representing 80 percent (40/50) of the potential universe.

Firm Performance-Dependent Variable

For this study, firm performance was defined in relation to four financial measures: total assets, stockholders' equity, net sales, and net income. These indicate a firm's ability to operate competitively in its industry. They are objective data, readily measurable indicators, and widely accepted by managers and financial analysts to assess a firm's level of performance.

Two types of ratios were generated for each financial outcome in order to reveal relative performance. First, each financial outcome measure was divided by the number of employees in thousands in each year under consideration. In this manner, financial outcomes may be analyzed in terms of other specific resources, in this study employees (Ingham and Harrington, 1980). The resultant four per employee measures used to determine performance were:

- Total Assets/1000 employees
- Stockholders' Equity/1000 employees
- Net Sales/1000 employees
- Net Income/1000 employees
The second type of ratio indicated firm income generating capability in terms of assets, equity and sales. Three ratios (return on assets, return on equity, and return on sales) were used to evaluate company performance or profitability in light of these three financial outcome measures. The profitability measures were as follows:

- \( \frac{\text{Net Income}}{\text{Total Assets}} = \text{Return on Assets} \)
- \( \frac{\text{Net Income}}{\text{Stockholders' Equity}} = \text{Return on Equity} \)
- \( \frac{\text{Net Income}}{\text{Net Sales}} = \text{Return on Sales} \)

The financial data on electrical firms' performance and number of employees were gathered primarily from *Fortune* magazine's annual listing of the top 1000 industrial firms in the U.S. *Fortune* data have been standardized for the firms included in the list. In addition, firm financial data and/or information on numbers of employees collected from *Fortune* were compared against the annual report information on those measures (where the annual reports provided such data). Table 1 indicates, for the performance and orientation variables, principal data sources that were used to gather information.
### TABLE 1
DATA AND INFORMATION SOURCES FOR VARIABLES AND THEIR COMPONENTS IN THIS STUDY

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<th>VARIABLE &amp; VARIABLE COMPONENTS</th>
<th>ANNUAL REPORTS</th>
<th>FAIR EMPLOYMENT CASES</th>
<th>NLRB DECISIONS</th>
<th>OSH CASES</th>
<th>ARBITRATION DECISIONS</th>
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</tr>
<tr>
<td>- Litigation</td>
<td>(X)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>(X)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Arbitration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Strikes</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>(X)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

X = Primary Data Source
(X) = Secondary or "Back up" Data Source
Human Resource Orientation:

Independent Variable

The current study defined human resource orientation as a firm's apparent overall attention and attitude toward employees, based upon the information developed from unobtrusive and other measures used in this study. Orientation was measured where possible in quantitative terms.

The independent variable human resource orientation consisted of three components, each of which was used to review a different aspect of human resource orientation. The three components were as follows:

- The emphasis a firm appeared to place on its employees based on information available from the firm's annual report. These data were collected through the use of content analysis.

- The importance a firm appeared to attach to the human resource function and its role in the organization, based on the position of the human resource manager, representation of the firm in a professional association, and evidence in annual reports of example human resource policies and programs.

- The apparent ability of a firm to deal with employee-related conflict, in terms of success or failure in selected types of litigation, arbitration and occurrence of strikes.

Each of these components of the human resource orientation variable is discussed below as is the continuum which was used in this study.
The Human Resource Orientation Continuum

The continuum used in this study to describe firm orientation toward employees has three stages: low (traditional); medium (transitional); and high (progressive). The stages had no absolute boundaries but rather sought to clarify the relative levels of orientation which firms might show.

Low or traditional orientation suggested firms with strong emphasis on operational issues, exhibiting relatively little data on or about employees in annual reports, and relatively little evidence from other sources, e.g., representation in professional organizations. Such firms could also be low or traditional in orientation if their experience with conflict was relatively unfavorable, in which, for example, litigation cases were decided against the firm.

Progressive firms or those showing relatively high orientation toward employees were expected to reveal, for example, positive evidence of or attention to employees in their annual reports. In addition, they were expected to show very little, if any, litigation and would be perceived by outsiders, such as union officials, as having a positive or concerned orientation toward their employees.

1 The definitions or labels for relative position are not meant as value judgments of firms' orientation (for example good or bad), but merely as descriptors.
The transitional or medium stage firms were expected to exhibit some evidence of or attention to employees in annual reports, perform fairly well in reported conflict situations, and show some evidence of representation in professional associations. These firms are basically middle-of-the-road types; they reveal some level of human resource orientation, not as much as the progressive firms but more than traditional firms. The continuum showing relative positions of the human resource orientation stages appears below.

### Conceptual Human Resource Orientation Continuum

<table>
<thead>
<tr>
<th>LOW</th>
<th>MEDIUM</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>Transitional</td>
<td>Progressive</td>
</tr>
<tr>
<td>(Strong emphasis on operational, nonhuman elements, such as plant, equipment, marketing innovation, asset acquisition, etc.)</td>
<td>(Moderate emphasis upon human resources.)</td>
<td>(Emphasis on human resources in addition to operational issues.)</td>
</tr>
</tbody>
</table>

**Content Analysis—Employee Emphasis**

As noted previously the main method for generating data from annual reports was content analysis. It is a method that has often been used in nonbusiness research, but rarely in the administrative sciences (See Bowman and Haire, 1975, and Fry and Hock, 1976, as recent examples in business research). An advantage of content analysis is that it can delineate general themes (Macoby, 1973). For this study, it
was used on firm publications over a four-year period to characterize annual reports with regard to their emphasis on human resources. It was also an approach to determine an overview attitude toward the topic (Budd, 1967).

The method is flexible enough to indicate attention and/or attitude in several ways within a given piece of work. For example, for this study the level of apparent attention to human resources was measured by examining not only written material, but also visual, statistical and graphical material in firm annual reports. In addition to the potential usefulness of the quantitative content analysis, the major advantage for evaluative assertion, indicating attitude on a qualitative basis, is its systematic approach that increases reliability and decreases reviewer bias (Osgood, 1959; Budd, 1967; George, 1959).

A criticism of content analysis is its requirement for some degree of judgment on the part of the observer/reviewer.² As a result, its objectivity may be less than some other methods. Also, there is no simple, clearcut way to select topic categories for review and analysis (Budd, 1967; McClelland, 1961). Choosing the words or phrases for a frequency count or qualitative evaluation requires an observer to make certain decisions about which items to include. For example, the reviewer must decide whether to include proper names and words that are nouns, pronouns, and adjectives.

²See Appendix B for a discussion of the intra-rater reliability test for content analysis of the annual reports.
Reliability is relatively good for the frequency count and evaluative assertion methods (Holsti, 1963; Budd, 1967). Typically, however, each method is checked for validity by using other approaches such as expert opinion or factor analysis (Budd, 1967). It is important to recognize that content analysis cannot claim to measure the "true" intentions or attitudes of a subject, but rather what is conveyed by the communication. Thus, in the present study, for example, content analysis was perceived as one way to measure the apparent attitude or human resource orientation conveyed through annual reports. The method's results were compared with those from other approaches to seek a consistent measure of human resource orientation.

The current study added to previous research using content analysis in two ways. First, by using the evaluative assertion technique, the current study adds a qualitative dimension to the analysis. Second, this study used quantitative measures in addition to simple word frequency count and dichotomous measures. To account for other possible indications about human resource orientation, the content analysis method was expanded to review not only words and pictures inside the reports, but also statistics and graphs, and pictures on the annual report covers.

Throughout the analysis the employee emphasis measures were based on information gleaned from the previously noted particular segments of annual reports—the visual, statistical, graphical and textual portions—that were outside the report's financial summary and
discussion section(s). The section excluded from content analysis for this study is often referred to as the financial statistics and discussion section or the management summary, and includes such tables as the Consolidated Balance Sheet, Income Statements, Changes in Financial Position, and Notes to the various statistical tables. This financial section is usually clearly separated from the other more descriptive sections of an annual report. The financial section is structured similarly across industrial firms and usually includes the auditor's signature of approval. Unless otherwise indicated, the financial sections were not included in this study's analysis.

Before examining company annual reports it was necessary to develop certain criteria for approaching and analyzing the reports. To insure reliability, the process for analyzing annual reports had to be standardized and consistent. The criteria, or guidelines, provided a way to increase analytic consistency in examining the reports. Specifically, guidelines referred to three types of information reviewed in the reports:

- What and how to analyze visual content.
- What and how to analyze statistical and graphical information.
- What and how to analyze prose, or the text, of the report.
The fundamental purpose of the guidelines was to allow an annual report reviewer to pinpoint the human resource content in a report. This content was defined more precisely as the words, pictures, graphs and statistics in a report that reflect a firm's apparent human resource orientation. The proportion of the words, pictures, graphs and statistics related to the firm's human resources was used as a proxy measure for the level of emphasis or attention that a firm showed toward its employees.

To generate a measure of a firm's emphasis toward employees, general criteria were first framed for each of the three types of information: visual, statistical/graphical, and written or textual.

**Visual Information:** Pictures of humans shown through drawings, sketches, photographs or other means were analyzed. The visual information was taken from the front cover of the annual report and the (nonfinancial) discussion sections of the report.

**Statistical and Graphical Information:** Included for analysis would be a statistical table(s) in the annual report's nonfinancial discussion section; also, graphs that referred to employees, e.g., sales per employee, the portion of the sales dollar distributed to wages and salaries, and so forth would be included.

**Textual Information:** Words equivalent to "human resource(s)" that appeared in the report's text or words describing pictures, graphs, or tables that referred to employees were included. The words counted as human resource content words were nouns or pronouns referring to employees or an employee (e.g., he, she, they, them).

---

3 For the study, a picture of a "human" or "human resource" was defined as any easily recognizable body part, e.g., hand, eye, head, torso, and so forth, as well as an entire human body.
For each of these three information types, additional guidelines were developed to identify more precisely the human resource content in an annual report. The criteria and process of using content analysis for each information type is discussed below.

**Visual Human Resource Information—Criteria and Measures.** The issues in analyzing visual information were (1) how to identify human resource versus other human content and (2) how to measure such content. These questions applied to the visual information depicted on the front cover and pictures inside the report.

An annual report cover gives a first impression about a company. However, it was sometimes difficult to discern the specific role or activity of any human shown on the cover. The individual could be, for example, an employee, a customer, a model in an advertisement, or a board of directors member. Consequently, in estimating the cover's visual human resource content, all human figures or body parts were counted unless there was clear evidence that the individual was probably not an employee, e.g., a statue, young child, or picture of historical figure(s). The operational measure used was square inches of space devoted to human resource content as a proportion of total cover size. Thus, if the cover showed a photograph of a person covering an area of 2.0" x 1.5" and the cover was 8.5" x 11.0" in size, the proportion of human resource content would be

\[
\frac{2.0" \times 1.5"}{8.5" \times 11.0"} = \frac{3.0 \text{ sq. in.}}{93.5 \text{ sq. in.}} = 3.2 \text{ percent}
\]
In addition to reviewing the annual report cover for visual information, the inside of the annual report was also examined for human resource content. First, an initial review usually revealed the overall approach taken toward humans in the report's visual information. For example, the pictures commonly fell into one of the following categories:

- Pictures of employees working in factories, offices, in the field, or of employees in extracurricular activities, such as charity work.
- Pictures of customers (sometimes with the company or individual's name given) using the product or service.
- Pictures of the chief executive(s) and/or other managers in connection with a discussion of their operations, or picture(s) of the board of director members.
- Pictures of staged advertisements usually with a model using or buying the product or service in a home, place of purchase, or other place of work.

While not all annual reports' pictures followed a standard format, most reports usually exhibited some theme in their visual information. As a result, pictures could often be classified either as human resource or other pictures. Where the picture or a written description about the picture indicated it was of an employee or employees, that picture was counted as part of the report's visual human resource content. Where the picture revealed that the human shown was not an employee (e.g., the person wore a military or other noncompany uniform or the picture was clearly staged such as a woman loading a dishwasher with children playing nearby, etc.) that picture was excluded as human resource content. If, however, neither the
picture nor any discription about it revealed information about the human's affiliation with the company, the picture was included in the human resource content.

Additional specific criteria were as follows:

- A picture, not the number of humans or body parts in the picture, was the unit counted. Thus, a photograph showing three employees was counted once.

- In board of directors group pictures, showing both inside and outside (nonemployee) members, a picture was counted as human resource content if it included one of the firm's members (identified by the membership list in the report). If the picture showed only outside members of the board, the picture was not counted as part of the annual report's visual human resource content.

- Readily identified celebrities (e.g., actors, football players, etc.) who acted as spokespersons in ads for the company product, were excluded from the human resource content measure, since presumably their major occupation is not as a firm employee or human resource.
Once an annual report's human resource content pictures were identified, the rest of the report's pictures (with and without humans) were counted. The human resource content, then, was that proportion of the visual information emphasizing employees. The operational measure was

\[
\frac{\text{Number of Human Resource Content Pictures}}{\text{Total Number of Pictures in the Nonfinancial Portion of a Firm's Annual Report}}
\]

Statistical Human Resource Information-Criteria and Measures

The information about human resources available in statistics in most firms' annual reports was relatively meager. The most often cited statistic about human resources was the firm's estimated or actual employment in a given year. This statistic usually appeared in a summary table in the front of the report.

The measure for statistical human resource content was the number of line items or statistics, outside the financial discussion section, devoted to employees as a percent of all line items or statistics in the report tables.

The operational measure for statistical human resource content follows:

\[
\frac{\text{Number of Lines Referring to Statistics about Employees}}{\text{Total Number of Lines Referring to Statistics Excluding the Lines of Statistics Appearing in the Financial Sections of the Report}}
\]
Graphical Human Resource Information - Criteria and Measures.
For this information an annual report was examined for evidence of graphs, e.g., pie charts, and others, revealing such data as company employee distribution by type of employee, distribution of sales dollars by capital expenses, wages and salaries, pensions, and the like, or changes in sales or net income per employee.

In many reports, there were no graphs and/or no human resource content graphs. For those reports having graphs, the graphical human resource content was measured by the number of graphs that included human resource related information divided by the total number of graphs in the nonfinancial portion of the report.

Textual Human Resource Information - Criteria and Measures.
In evaluating the written material in annual reports two aspects were examined:

- The frequency with which human resource content words appeared in the annual reports that were reviewed.
- The qualitative value of the human resource content words that appeared in these reports.

The frequency issue known as word count or word frequency is the most common approach in content analysis. Its purpose is to indicate the number of words devoted to a certain topic, in this case to the concept of employees or human resources. The measure used in this study was the number of human resource content words as a proportion of the total number of words in the textual discussion (nonfinancial section) of an annual report. The measure was used as a proxy to assess the relative emphasis the annual report text placed on human resources as opposed to other topics, e.g., technology, new acquisitions, and the like.
A first criterion for identifying human resource content words was similar to that for the other types of information: only text in the nonfinancial portions of the annual report was analyzed. Human resource content words were defined as any that referred to an employee or groups of employees as nouns or pronouns. The words could be subjects, direct or indirect objects or objects of prepositions. Adjectives were excluded since they are not used in the qualitative analysis evaluative assertion. Human resource content words could also refer to specific individuals by name or could describe a person by a job or a job title. Example human resource content words appearing frequently in annual reports included the following:

- employee(s)
- human resource(s)
- staff(s)
- manager(s)
- management(s)
- people/person
- personnel
- operator
- team(s)
- (work) force
- (sales) force
- technician(s)
- researcher(s)
- union(s)
- (personnel) group(s)

Additional guidelines used in identifying human resource content words and counting total words included the following:

- Last names of individuals were counted as human resource content words when referring to a person in a picture or in the text (for overall counting purposes, an individual's name was counted as a single unit, including both first and last names).
• If an employee's name and title were given, only one unit (name or title) was counted for that person to avoid double counting.

• If a title consisted of several descriptors, only the final human resource content word was counted, e.g., executive vice president was considered one unit with president being the word that was counted.

• Numbers, e.g., 1975, $298, were not counted as words.

To generate the data for the textual human resource content measure, a three-step counting procedure was used:

1. Estimate words/line for each of the annual report sections reviewed.

2. Count lines/page for each of the annual report sections reviewed.

3. Count total human resource content words.

The first step involved selecting several lines on a page, counting the number of words per line and estimating an average number of words appearing in a line for that page or section of the annual report. For example, if the president's letter to stockholders (usually the first section of the annual report) averaged four words per line in five sentences on the first page, that estimate of four words per line was used for the entire letter in counting the number of words. If the next section of the report contained an average of five words per line, that average was used for the section.

Calculating numbers of lines per page was straightforward. Each line in the portion of the text (nonfinancial sections) was counted regardless of number of words/line. The difference in line length had been taken into account by the estimate of number of words/line calculated in Step 1.
The estimates of words/line and lines/page were used to calculate the total number of words for the textual portion of an annual report. The equation \((\text{average number of words/line}) \times (\text{number of lines/page})\) was calculated for each page of the report sections that were analyzed. The resulting total numbers of words for each page were summed to provide the number of total estimated words for the annual report.

The third step was counting the total number of human resource content words using the criteria specified above. Once total number of words and number of human resource content words were estimated, the following measure was used to determine the human resource content in the textual information:

\[
\frac{\text{Number of Human Resource Content Words}}{\text{Total Number of Words in the Annual Report Sections Analyzed}}
\]

This measure was the final proxy used to assess the level of employee emphasis a firm exhibited in its annual reports.

**Evaluative Assertion - Criteria and Measures.** In addition to assessing annual report attention given to human resources by reviewing word, visual and statistical/graphical information in terms of the amount or proportion of human resource content, the study also analyzed the qualitative direction of the reports' text toward human resources. This was performed by using another content analysis method called "evaluative assertion" developed by Osgood (1959) and used by others in the social sciences (Holsti, 1963; Budd, 1967; Gerbner, 1969; Pool, 1973).
Evaluative assertion is a means to determine the direction (positive or negative) and the strength or intensity (ranging from -3 to +3) of written material describing a particular object, in this case human resources of a firm. The evaluative assertion procedure consists of several steps described below.

In a given piece of written work, one first finds the "attitude objects" (AO₁) of words and phrases that will be analyzed as to the report's description of them. Attitude objects in this study were the nouns or pronouns representing human resource content words, e.g., human resources, employee(s), staff(s), people/person, manager(s) and so forth. Attitude objects then represent the actors in a sentence/phrase structure used for evaluating the attitude objects:

| AO₁ | Connector | Common Meaning Word |
| Actor | Action Word | Descriptor |

Step 2 of the procedure involves identifying "connector words." Connector(s) link the attitude object and the descriptor word(s) that attributes some strength and direction of attitude about the attitude object. In this context, connectors are the action words or verbs that link the AO and the word or phrase describing it. The connectors were analyzed for direction (positive or negative) and intensity or strength by a ranking system described in Step 5. Typical connectors included "to be", "to have", "to plan," "to seek," "to lead," and so on. Connectors may be implied rather than explicit. For instance, rather than saying the "company's employees are dedicated," a report may read "the company's dedicated employees," implying the connector "are."
In Step 3, the evaluator word or phrase describing the attitude object was assessed relative to its meaning. The evaluator word or phrase can be a common meaning (CM) term or adjective; in some cases, the evaluator may be another attitude object (AO₂) or noun. The descriptor words can be adjectives (good, bad, fair, hard working, dedicated), nouns formed from adjectives (honesty, leadership), adverbs formed from adjectives (fairly, smoothly), nouns (performers, leaders), or verbs (perform, respect). Thus for each set of attitude objects about which one wants to describe the reports' apparent orientation (direction and intensity), the descriptor word characterized the attitude object. Like connector words, descriptor words or phrases were rated for direction (positive /negative) and intensity (strength of the word).

Once the above three elements were identified, they were put into a format for scoring. The format is called an assertion because the word/phrase elements must assert some attitude about the initial attitude object. The first set of attitude objects are typically coded (as AO, AO₂, AO₃, etc.) or identified by letters (AB, GK, XY, etc.) to mask the identity of the attitude objects. In the current study, the attitude objects all referred in some way to human resources or employees of a firm. The format was as follows:

\[ AO₁/\text{connector}/AO₂ \] or common meaning (cm)
Examples of assertions include:

- Employees/are/outstanding or in coded form:
  XY/are/outstanding

- Managers/show/leadership ability coded as
  AB/show/leadership ability

- Human resources/perform/well or
  GH/perform/well

Examples of nonassertions include:

- Workers/enjoy/vacations or
  DN/enjoy/vacations

- Employees/join/stock option plans coded as
  XY/join/stock option plans

A fifth step was to score the connectors and evaluators on a scale of ± 3. The direction of the attitude exhibited by the connector and the evaluator words/phrases was represented by assigning the word a +/- score. This positive or negative direction relates or separates the actor and the complement or descriptor. Examples of intensity levels follow:

+3 = Very strong intensity for connectors: "to be," "to have," "performs." For evaluators, strongly descriptive words, such as "outstanding," "superior." The opposites of these words would be assigned -3 weights.

+2 = Moderate intensity evincing a partial or probable association such as "plans to," "trying to," "has favored," for connectors. For evaluators, examples may include "good," "encouraging," "improving."
Weak intensity indicating hypothetical relationship. For connectors, examples may be "may commit," "appears to be," "ought to," "might agree with." Evaluators rated as +1 could include "adequately," "appropriate."

A zero score indicates that the evaluators or connectors have no value in describing the attitude object or are neutral in their evaluation.

For ease of scoring, the attitude object, connector and descriptor/evaluator words/phrases were set up in the following format:

<table>
<thead>
<tr>
<th>Items</th>
<th>Source</th>
<th>Value of C</th>
<th>CM or A02</th>
<th>Value of CM or A02</th>
<th>Col. A X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Report A, 1978</td>
<td>A01</td>
<td>+3</td>
<td>talented</td>
<td>+1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>A01</td>
<td>+3</td>
<td>excellent</td>
<td>+3</td>
<td>9</td>
</tr>
</tbody>
</table>

Finally, to determine the overall rank or score for the attitude objects in the annual report, values in column 7 were summed and divided by the sum of the column 4's values:

\[
\frac{3 + 9}{3 + 3} = \frac{12}{6} = 2.0
\]

Thus the firm's apparent attitude toward human resources, reflected in its annual report, is fairly positive in this example case.

**Human Resource Function**

The second proxy used in the study for measuring the human resource orientation variable was the apparent emphasis or attention a firm showed for the human resource function as a separate concept from
emphasis on employees. This function was defined generally as the type of policies which the firm had and the individuals who implemented the policies and represented the firm in human resource activities in and outside the firm. The proxy attempted to reflect the degree to which the firms appeared to value the function described in three dimensions: the role of the human resource director (or equivalent title and person), the evidence of human resource policies and programs in a firm's annual report, and the extent of membership participation by the firm in a representative human resource professional organization.

For this study, the human resource manager or director was perceived as the person with overall responsibility for the human resource function within an organization. As such, the position held by that person was assumed to be a proxy measure indicating the relative weight or power of the manager or the position in the company. While the existence of a human resource manager in the list of senior management of the firm admittedly is not a perfect measure of the firm's view towards the human resource function, it was selected as one proxy to assess the importance which this function is accorded by the firm.\footnote{The measure did not attempt to assess titles, e.g., whether "senior vice president" ranked higher than "director" in two different firms.} The operational measure was a binary variable (yes-no) answering the following question:

- Does the name of the human resource director (with respective title) appear in the list of senior company officers?
In cases where titles did not mention functions, such as marketing, personnel/human resources, and so forth, but rather just the title such as vice president or senior vice president and the human resource director was not identified elsewhere in the report, the measure was rated "no."

The second proxy for the relative importance of the human resource function was a measure of a firm's representation in a general professional organization, the American Society for Personnel Administrators (ASPA), for each of the years 1975-1978. This measure attempted to determine whether a firm or representative of a firm considered the human resource function important enough to join a professional organization to receive the association's literature, to confer with counterparts in other companies or to engage in other activities that might provide the firm with insights or benefits of such an organization. The American Society for Personnel Administrators was selected as an example association because it is a broadly scoped organization oriented toward general human resource activities and programs rather than a specific aspect of company personnel activities (such as human resource planning or training). Its chapters are located throughout the U. S. in large and small cities, making membership a possibility for all sample firms on this study. Also, this organization issues annual membership lists. Other professional human resources associations such as the Industrial Relations Research Association issue membership lists less frequently.
Also, ASPA was selected because it is primarily oriented toward practicing managers. The association's periodicals, meetings, and literature are directed to the manager or representative in the field, rather than academics or others not directly associated with firm human resource operations. Lastly, as an example professional organization, ASPA was broad enough to include sample companies that may not have been unionized. Thus, ASPA, as an example organization, had less chance of limiting participation of an organization which an association such as the Industrial Relations Research Association with its emphasis upon labor-management relations research and academics might have.

The operational measure used for firm representation in ASPA was the number of representatives from a company who were members of ASPA in a given year per 1000 employees of the company:

<table>
<thead>
<tr>
<th>Number of Company Representatives in ASPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 Employees in the Company</td>
</tr>
</tbody>
</table>

One would expect, and a brief review of ASPA membership lists by firm indicates, that larger firms appear to support more representatives in this organization. In many cases, representatives from several locations represent the firm.

The third proxy measure of human resource function concerned whether the annual report mentioned any of the firm's specific human resource programs or policies. Again, on the assumption that management faces space limitations in annual reports, if a firm devoted space to mention specific human resource program(s) or activities that it was
pursuing, this was considered evidence of the relative importance of human resources. A binary (yes/no) operational measure was used to record any mentioned human resource activities such as affirmative action results, training programs, establishment of an employee stock ownership plan, the firm's involvement in CETA programs, etc.

This measure was checked against the firms' responses to questionnaires which were mailed to human resource managers (See Appendix C for example of the questionnaire), interviews with knowledgeable union representatives, and the information from the general literature that might reveal evidence concerning the firm's human resource functions.

Performance in Conflict Resolution

A final indicator to assess firm human resource orientation was a proxy measure of how each company appeared to fare in selected conflict resolution results. The proxy was compared with report data and other proxy measures.

The specific measure in this study referred to a firm's experience in reported litigation and arbitration decisions, i.e., number of cases and whether the decision was for, against or neutral toward the firm. A strike occurrence measure was also used and recorded the number of strikes per 1000 employees. Again, information was gathered for the most part from outside the firm. It was checked against qualitative information gathered from union representatives about the sample firms and their dealing with unions in collective
bargaining, litigation, arbitration, and strikes.

The sources for selected conflict resolution results examined in the study were:

- Occupational Safety and Health Cases (OSH)
- Fair Employment Practice Cases (FEP)
- National Labor Relations Board Decisions (NLRB)
- Arbitration Decisions

Although not all firms had reported litigation cases, in each sample year, there were data for at least 50 percent of the firms (See Appendix D for information on data availability for sample firms). Even so the lack of large quantities of data from all sample firms was recognized as a limitation.

The author recognizes that litigation in itself is not a sign of a poor or adverse human resource orientation; instead, it is used here as a proxy measure in conjunction with other measures to judge the orientation depicted in annual reports.

To take into account, qualitatively and quantitatively, the outcome of the decision, using available unobtrusively gathered data, a weight or value for each type of decision was assigned from the standpoint of the firm. This way a range of scores was available for each firm. Using this measure, the best situation for a firm would be no reported cases (number of cases = 0). The next best situation would be, based upon

5 The author recognized the "no data" situation need not indicate a lack of conflict. However, in this study there was no indication of what a "no cases" situation implied. Thus all 40 companies were analyzed based on whether or not they had reported litigation or other such cases, just as all the firms were analyzed regarding proportion of pictures, lines, so forth in annual reports. However, as a way to account for possible bias from considering a "no data" situation as a best case, Appendix E includes selected regression analyses results using only those firms with reported litigation cases as the sample.
given reported cases, all decisions were favorable to the firm. The next most attractive situation would be cases whose outcomes were neutral, i.e., neither party clearly won or lost, or decisions were split among the parties. The least attractive situation involved reported litigation or arbitration cases in which the decisions were all negative for the firm. In this situation, the decision was in favor of an employee(s) or union (s). This weighting allowed for proxy scores to be generated for each company's experience with such cases. The equation used, with high scores implying a more negative conflict experience on the part of the firm, appears below:

\[
\frac{\# \text{Positive Cases} \times 1 + \# \text{Neutral Cases} \times 2 + \# \text{Negative Cases} \times 3}{\#1000 \text{ Employees}} = \text{Firm Conflict Score.}
\]

In each part of the equation the number of reported cases is divided by number of employees.

The measure has limitations in that actual situations may in fact be very different from the public record. For example, some companies may seek to settle legal suits or potential arbitration cases before they reach a court or arbiter. Arbitration cases, unless the firm expects to win, can be costly and could be used by a union as evidence of a poor record on human resource issues.

The examination of litigation outcomes faces further problems. Where a master agreement or pattern bargaining exists between a firm or group of firms and a union, the union may elect to bring suit against one firm in the group which it perceives as most vulnerable, that firm
whose policies or lawyers might be least aggressive. The results then might be applied to the other firms. Thus the number of cases against firms may be skewed toward the firms unions perceived as vulnerable.

An additional difficulty with using NLRB cases is that they often exclude nonunionized firms unless, of course, they are involved in unfair labor practices and representation elections. Hence, the OSH and Fair Employment Practices litigation was also examined so as to include both union and nonunion firms, whose employees could bring a suit on those issues. Also, even in unionized firms, not all arbitration cases are published in the regular reporting series.

The final element of the conflict measure was the number of reported strikes per 1000 employees in each company in each survey year. Again, the measure is a general proxy and does not take into account the causes or severity of the strike, its duration or the number of employees who were affected. Nevertheless, this is an appropriate measure of whether or not a firm was able to avert a work stoppage through other means. The measure used number of strikes per 1000 employees to control somewhat for firm size, since all sample firms had at least 1000 employees.

Additional Measures to Validate Content Analysis

Outside Opinions

Opinion surveys or reputational scales offer an additional means to validate methods of analyzing firms (Abbott and Monsen, 1979; Sturdivant and Ginter, 1977; Heinz, 1976; Bowman and Haire, 1975).
Typically, opinion surveys are broadly based and reflect overview perceptions by some group of "experts" outside the firm about some firm activity or concept, such as the firm's concern about or involvement in corporate social responsibility.

Opinions of persons outside the firm can be based on the experiences of those persons from a particular perspective. For example, opinions from union representatives about firms' labor relations may lead to insights on how unionized firms deal with employees, conflict management and general bargaining relationships.

Because reputational scales or opinion surveys are often general in scope, in that the opinion giver offers views on the firm's overall image with regard to one or several attributes, the surveys may be difficult to replicate (Abbott and Monsen, 1979). In addition, opinions may be biased by recent events or personal interactions with the firm (Simon, 1969). To account for such problems, the current study compared opinions about the sample firms from representatives of four unions representing electrical workers and the AFL-CIO.

The union representatives interviewed for the study (N = 6 interviewees) were either directors or members of the research department in the national headquarters of major unions that interact with firms in the sample industry. The interviewees represented unions willing and able to discuss the companies in the electrical industry. Each of the unions' national headquarters are located in Washington D.C., facilitating personal interviews by the author in
one geographic location. The interviewees represented the following groups:

- The International Brotherhood of Electrical Workers (IBEW)
- The International Union of Electrical, Radio and Machine Workers (IUE)
- The International Association of Machinists and Aerospace Workers (IAM)
- The International Union of Operating Engineers (IUOE)
- AFL-CIO Industrial Union Department (IUD)

The interview format consisted basically of two parts. First, the author requested each interviewee to review the list of 40 sample firms and rate, as best he could, the human resource orientation of those firms with which the interviewee was familiar. The interviewees were often reluctant to use quantified ratings, e.g., 1 through 10, but preferred qualitative measures such as "very good," "poor," "O.K." The union representatives in essence insisted on their own rating scale, which the researcher subsequently translated into a numerical ranking by each union. Thus, while one representative's ranking ranged from "absolutely the worst" to "not too bad," another representative used a range from "pretty bad" to "pretty good." In relative terms, however, the ratings could be put on a single continuum ranging from 1 (poor) to 10 (good). Where possible, interviewees provided specific examples of experience with sample firms.

In addition to rating the sample firms, each interviewee responded where possible, to general questions about the electrical industry on such topics as trends in union-management relations,
tactics employed by each party in its relations, importance of the
human resource staff and management in maintaining good relationships.

Representatives from three unions, IUE, IBEW, and the AFL-CIO, provided the bulk of the ratings and qualitative information. The interviewees rated a total of 29 of the 40 sample firms, even though some firms were rated by more than one union.

Sample Firm Survey

A brief questionnaire was sent to all sample firms' personnel directors. It was used as another approach to assess human resource orientation and check the content analysis of annual reports results. Twenty-two managers responded. The questionnaire (See Appendix C for a sample) polled human resource directors on: (1) whether their firms had any of 10 example human resource policies and programs, (2) if so, whether those programs had begun before or after 1975, (3) whether the firm had experienced a strike(s) since 1975, and (4) if so, its duration. The questionnaires were scored 1 or zero based on whether they had the example program and a range of 1, 2, or 3 depending upon the program's initiation date. For example, if the company did not have the program or policy in 1978-1979, the score for that program was zero. If the company had the policy, but the respondent did not know its initiation date, the score was "1". If the firm had the policy since 1975 or before 1975, the score for that program was 2 or 3 respectively.
The scoring matrix appears below:

<table>
<thead>
<tr>
<th>Program Exists</th>
<th>Date Started</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before 1975 = 3</td>
<td>Since 1975 = 2</td>
<td>Don't Know = 1</td>
</tr>
<tr>
<td>Yes = 1</td>
<td>3 X 1 = 3</td>
<td>2 X 1 = 2</td>
<td>1 X 1 = 1</td>
</tr>
<tr>
<td>No = 0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The strike information was used as a check against information found elsewhere about the firm's strike record.

**Analysis Methods**

The data were compiled and analyzed using several approaches discussed below.

**Categorizing Firms**

Firms were categorized in two ways for analysis, by relative human resource orientation position - traditional (low), transitional (medium) or progressive (high) - and by size in terms of number of employees. In addition, firms' performance was classified by high, medium, or low for comparison with human resource orientation levels. The three group classification (high, medium, low) was used to focus the analysis on the measures of (1) human resource orientation (content analysis and a composite measure including content analysis and other measures) and (2) composite performance. The classification of firms by human resource orientation and performance is described below.
First, each firm's score on every human resource orientation variable (e.g., percent of pictures, words, representatives, union opinions, etc.) was ranked, highest score to lowest. Thus, the value for each company's percent of pictures, words, representatives, union opinions and so forth was ranked relative to other sample firms' values on those variables.

The ranked values were divided into three groups given scores of 1, 2, or 3 (low, medium or high). For each firm, all variables except two (the mention of human resource director and policies in annual reports) were scored 1, 2, or 3. The two remaining variables were scored 1 (low) or 3 (high), to indicate no mention or mention.

The next step was to consolidate the variables into a composite human resource orientation measure. After ranking each variable for each firm, the author summed the scores for each firm and divided the sum by the number of variables for which there were scores (between 14-18). Some firms, for example, had no scores from any of the three union representative organizations (IBEW, IUE, ALL-CIO) or from the sample firm survey. In such a case scores were available for only 14 variables.

The resulting ratios, which were averages of the firms' scores, were also ranked. While the author recognized potential problems with using simple averages, there was, at this stage in this overall

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6 The eighteen possible variables for which each firm could have a score follow: in annual reports (1) covers, (2) pictures, (3) lines, (4) graphs, (5) words, (6) evaluative assertion score, (7) mention of human resource director, and (8) mention of human resource policies; other variables were (9) percent of representatives in ASFA, (10) FEP score, (11) NLRB score, (12) OSH score, (13) arbitration score, (14) strike occurrence score, (15) IBEW score, (16) IUE score, (17) AFL-CIO score, and (18) sample firm questionnaire ratings.
research, no method to weight the individual variables to generate a possibly more plausible composite measure. The ranks were again grouped and scored 1, 2, or 3, to indicate a measure of composite human resource orientation for each firm:

- 1 = Traditional
- 2 = Transitional
- 3 = Progressive

Composite scores for the five groups of independent variables (content analysis, percent of representatives, conflict experience, union opinions, sample firm questionnaire ratings) were generated in a similar manner. For instance, a content analysis human resource orientation measure score was developed by the following process:

- Adding scores from the content analysis variables (percent of pictures on cover, inside report, graphs, lines, words, evaluative assertion score, and mention of human resource director and/or policies).

- Ranking the summed scores from the previous step and scoring them 1, 2, 3. The result was a content analysis human resource orientation measure of progressive, transitional, or traditional.

The performance variables were classified high, medium, or low as individual performance outcomes and as a composite measure. The result from the classification process was a set of high, medium, low scores on several variables for each firm. The measures follow:

- Percent of representatives measure
- Conflict experience measure
- Union opinion measure
- Sample firm questionnaire ratings measure
- Content analysis human resource orientation measure
- Composite human resource orientation, comprising content analysis and the other four human resource orientation measures
- Individual performance outcomes scores, e.g., assets per employee, return on assets, and the like
- Composite performance, comprising the individual performance outcome scores

This scoring process allowed for analysis of three relationships:

1. The content analysis measure with other human resource orientation measures.
2. The content analysis measure with composite and individual performance outcomes.
3. The composite human resource orientation measure with composite and individual performance outcomes.

Companies were also classified in three groups by size, small, medium, large, in terms of number of employees. For the sample firms drawn from the Fortune 1000 group, crosstabs analysis revealed three general size classes:

- Small firms: less than or equal to 15,000 employees
- Medium firms: greater than 15,000 but less than or equal to 50,000 employees
- Large firms: greater than 50,000 employees
Assessing Relationships

Several analysis methods were used to assess the three relationships mentioned above by means of the SPSS (Statistical Package for the Social Sciences) computer package and its analytical methods. The most useful methods, after trying several approaches, were the simplest: Pearson's correlation analysis and t-test analysis.\(^7\) Crosstabs analysis was useful in determining size classes, discussed earlier. Other methods that were tried for compiling or analyzing data but proved less valuable were factor analysis and multiple regression analysis. Factor analysis was not particularly useful in combining variables (e.g., content analysis variables, union opinions, etc.) because the factors changed year-to-year revealing no real pattern. Regression analysis was also weak because the sample size (N = 40) was relatively small and in this research the explanatory power of the variables was not especially strong. (See Appendix E for selected regression analysis results).

Thus, correlation and t-test analyses were used in assessing the content analysis method's value as a measure of human resource orientation. Even though the number of classes (ranks = 3) was small, correlation represented one approach to assessing relationships. Strong positive correlations were perceived as indications of the method's relative strength. T-test analysis was used to compare mean scores of human resource orientation measures between firms that

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\(^7\) Both Pearson's and Spearman Rank Order correlation analyses were used on coded data with very similar results. Pearson's was used on the raw data (before coding) and coded data which is presented in the body of the paper. The Spearman correlations on coded data appear in Appendix F for comparison.
rated progressive (high) or traditional (low) on the content analysis human resource orientation measure.

Correlation and t-test analysis were also used to examine the direction and strength of human resource orientation measures (content analysis and composite) with the performance outcomes, individual and composite.
CHAPTER 4

FINDINGS ON CONTENT ANALYSIS AS A METHODOLOGICAL APPROACH

This chapter discusses the findings on content analysis as a methodological approach for measuring human resource orientation. The focus is upon the first research question posed in Chapter 1:

Is content analysis of annual reports an effective methodological approach to measure a business firm's human resource orientation?

(a) What relationship, if any, exists between the human resource orientation of a firm as measured by content analysis versus other external sources, such as public documents, litigation awards, arbitration cases, and the experiences and observations of union representatives?

Because the study was an initial effort to establish whether any relationships exist, Pearson's correlation and the t-test were the principal analytical methods used. The results were reviewed with regard to: (1) whether the relationship between content analysis and other human resource orientation measures was significant and/or in an expected (positive) direction, and (2) whether there was any pattern in the correlations over the four-year period (1975 to 1978) under consideration in this study.

Content Analysis Measure Compared with Other Human Resource Orientation Measures

The content analysis measure was examined for correlation with four other human resource orientation measures discussed in Chapter 3:
percent of representatives as measured by number of firm representatives in a professional association per 1000 employees of the firm.

- Conflict experience as reflected in the number and outcome of litigation, arbitration awards and strike occurrences.

- Union opinions voiced in interviews regarding overall firm interactions with major electrical unions.

- Sample firm questionnaire ratings relative to whether and when selected example policies were initiated by firms.

The original variables were compiled and recoded into three categories of human resource orientation measures for each firm: progressive (high orientation), transitional (medium orientation) and traditional (low orientation). During the compiling, each measure was coded so that higher scores meant higher orientation.

The correlation directions between the above four measures (after coding) and the content analysis measure were expected to be positive. This expectation suggested that firms with a progressive or high content analysis human resource orientation should also have a progressive or high orientation on these four measures. In addition, firms with mid-range or transitional content analysis human resource orientation scores should exhibit medium or mixed (some high, some low) scores on the four measures. In turn, traditional or lower scoring firms on content analysis human resource orientation would be expected to score low on these four measures.

As shown in Table 2, the content analysis human resource orientation measure was usually correlated positively, although weakly, in the 1975-1978 years, and over the 4 year average with three of the
of the four measures - percent of representatives, union opinions and sample firm questionnaire ratings. The content analysis measure was inversely related to the conflict experience measure in all four years; in three of the sample years (1975-1977) the inverse relationship was statistically significant at the .05 level. For the other measures, the content analysis measure was usually correlated positively, although not often significantly. In two years (1976 and 1977) the content analysis and percent of representatives measures were significantly correlated (α = .05) in a direct relationship. In other words, the higher the content analysis human resource orientation measure's score, the greater the number of representatives/1000 employees ratio. (Appendix F provides the Spearman Rank Order correlation matrix for comparison).

TABLE 2
CORRELATION BETWEEN CONTENT ANALYSIS AND OTHER HUMAN RESOURCE ORIENTATION MEASURES, 1975-1978

<table>
<thead>
<tr>
<th>Other Measures</th>
<th>1975</th>
<th>1976</th>
<th>1977</th>
<th>1978</th>
<th>Average All Four Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Representatives</td>
<td>-.18</td>
<td>.31**</td>
<td>.31**</td>
<td>.09</td>
<td>.03</td>
</tr>
<tr>
<td>Conflict Experience</td>
<td>-.27</td>
<td>-.40**</td>
<td>-.45**</td>
<td>-.02</td>
<td>-.34**</td>
</tr>
<tr>
<td>Union Opinions</td>
<td>.16</td>
<td>.07</td>
<td>.07</td>
<td>.06</td>
<td>.19</td>
</tr>
<tr>
<td>Sample Firm Questionnaire Ratings</td>
<td>.23</td>
<td>.09</td>
<td>.08</td>
<td>-.08</td>
<td>-.11</td>
</tr>
</tbody>
</table>

* = significant at α = .10
** = significant at α = .05
In the years 1976 and 1977, 3 out of 4 measures correlated positively with the content analysis human resource orientation measure. In each year, the percent of representatives, union opinions and the sample firm questionnaire ratings measures were correlated positively with the content analysis measure. The latter two correlations were weak: less than .10 in 1976 and 1977 for each measure (union opinions, sample firm questionnaire ratings).

In 1975, two measures (percent of representative and conflict experience) were negatively correlated with the content analysis measure. However, the other two measures (union opinions and sample firm questionnaire ratings) were higher than in any of the succeeding years, 1976-1978. In 1978, all four measures were weakly correlated with the content analysis measure (between -.10 and .10).

The conflict experience measure was consistently inversely correlated with the content analysis measure. The negative correlation, significant in 3 years (1975-1977), was greatest in 1977. The correlation was weak but still negative in 1978, similar to the other measures, which were also weaker in 1978.

**T-tests of significance.** T-test analysis was also used to examine the value of content analysis in assessing human resource orientation. The test compared mean scores on the four other human resource orientation measures for two groups of firms, progressive and traditional, or high and low scoring firms on the content analysis measure. Table 3 shows that in all four years the progressive firms had higher mean scores (although none statistically significant) on
the union opinion and sample firm questionnaire rating measures than did traditional firms. In the last three years (1976-1978) the percent of representative measure was also higher for progressive firms than for traditional firms. As was the situation with correlation matrices, the conflict experience measure followed another pattern. In the t-test analysis, in each of the four years, the traditional firms showed higher mean scores than the progressive firms.

### TABLE 3

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>P(n=12)</td>
<td>P(n=10)</td>
<td>P(n=12)</td>
<td>P(n=10)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T(n=14)</td>
<td>T(n=12)</td>
<td>T(n= 9)</td>
<td>T(n= 7)</td>
<td></td>
</tr>
<tr>
<td>Percent of Representatives</td>
<td>P(a)</td>
<td>1.4167</td>
<td>2.3000**</td>
<td>2.3333*</td>
<td>2.3000</td>
</tr>
<tr>
<td></td>
<td>T(b)</td>
<td>1.7857</td>
<td>1.6667</td>
<td>1.7778</td>
<td>1.8571</td>
</tr>
<tr>
<td>Conflict Experience</td>
<td>P(a)</td>
<td>1.8333</td>
<td>1.9000**</td>
<td>2.0833**</td>
<td>2.4000</td>
</tr>
<tr>
<td></td>
<td>T(b)</td>
<td>2.4286</td>
<td>2.7500</td>
<td>2.8889</td>
<td>2.5714</td>
</tr>
<tr>
<td>Union Opinions</td>
<td>P(a)</td>
<td>2.1818</td>
<td>2.0000</td>
<td>2.1111</td>
<td>2.2500</td>
</tr>
<tr>
<td></td>
<td>T(b)</td>
<td>1.8889</td>
<td>1.8333</td>
<td>2.0000</td>
<td>1.7500</td>
</tr>
<tr>
<td>Sample Firm Questionnaire</td>
<td>P(a)</td>
<td>2.4286</td>
<td>2.3333</td>
<td>2.2222</td>
<td>2.1429</td>
</tr>
<tr>
<td></td>
<td>T(b)</td>
<td>2.0000</td>
<td>2.1667</td>
<td>2.0000</td>
<td>2.0000</td>
</tr>
</tbody>
</table>

(a) Progressive firm, based on content analysis measure.
(b) Traditional firm, based on content analysis measure.

* significant difference between mean score at \( \alpha = .10 \)
** significant difference between mean scores at \( \alpha = .05 \)
The t-test table reveals one other factor: the number of traditional firms fell 50 percent (from n=14 to n=7) in the four year period (See Appendix G for information regarding changes in firm positions over the 4 years). The number of progressive firms remained relatively stable (n=12 or n=10) for the period. This implies a larger transitional (middle range) group or a possible overall improvement in the level of content analysis scores.
CHAPTER 5

FINDINGS ON THE HUMAN RESOURCE ORIENTATION-FIRM PERFORMANCE RELATIONSHIP

This chapter examines the relationships between firm performance (composite performance and individual performance outcomes) and (1) the content analysis human resource orientation measure, and (2) the composite human resource orientation measure which consolidates the content analysis and other four human resource orientation measures into a single measure for each firm. The size of the firm as a potential factor affecting human resource orientation and firm performance is also considered.

Three of the study's key questions are the principal focus of this chapter:

1. What is the relationship, if any, between a firm's human resource orientation and its financial performance?

2. Are differences in performance outcomes attributable more to company size than to human resource orientation? Also, is company size related to human resource orientation?

3. Are changes or shifts in firm orientation over time—from traditional to progressive or vice versa—reflected in changes in firm performance outcomes?
Relationship Between Firm Performance and the Content Analysis Measure

The content analysis human resource orientation measure was weakly correlated with the composite firm performance measure over the sample four year period, 1975-1978. The composite firm performance measure, described in Chapter 3, combined the per employee variables (assets/employee, equity/employee, sales/employee, income/employee) and the profitability variables (return on assets, return on equity, return on sales). The two variable groups were coded high, medium and low (as described in Chapter 3) describing the relative performance of each firm. Those scores were combined and subsequently coded high, medium, and low for an overall composite firm performance measure.

As shown in Table 4 correlations between the content analysis and composite performance measures in three years (1975, 1977, 1978) were positive but weak (.08, .03, and .09).

TABLE 4

<table>
<thead>
<tr>
<th>Human Resource Orientation Measure</th>
<th>Composite Performance Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Analysis</td>
<td>.08</td>
</tr>
</tbody>
</table>

1 An objective of this exploratory study was to specify a performance measure that took several aspects of financial performance into account. Such a composite measure may, however, suffer from intercorrelation of the individual performance measure. Future studies will focus on better specification of the performance, as well as human resource orientation, variables. Single measures, such as return on equity, as used in other research studies, may ultimately prove more useful than a composite measure.
The lackluster performance of the content analysis measure's relationship to the composite firm performance measure may stem from the correlations between the content analysis measure and the individual performance outcomes as evident in Table 5. Except for 1978 and to a lesser extent 1975, correlations between the content analysis measure and individual performance outcomes were usually weak and often negative.

**TABLE 5**

CORRELATIONS OF CONTENT ANALYSIS MEASURE AND INDIVIDUAL PERFORMANCE OUTCOMES 1975-1978

<table>
<thead>
<tr>
<th>Individual Performance Outcomes</th>
<th>Content Analysis Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets/Employee</td>
<td>.12</td>
</tr>
<tr>
<td>Equity/Employee</td>
<td>-.08</td>
</tr>
<tr>
<td>Sales/Employee</td>
<td>.16</td>
</tr>
<tr>
<td>Income/Employee</td>
<td>-.08</td>
</tr>
<tr>
<td>Return on Assets</td>
<td>-.13</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>.08</td>
</tr>
<tr>
<td>Return on Sales</td>
<td>-.08</td>
</tr>
</tbody>
</table>

* = significant at $\alpha = .10$

** = significant at $\alpha = .05$

Although the 1975-1978 correlations may reflect only random variation, when the correlations are viewed in terms of overall directions, some patterns may be emerging. Again, the timeframe, four years, is
relatively short to ascertain anything other than tentative patterns. There appears to be a slight pattern in some correlations over the 1976-1978 period. Of the correlations between the seven performance outcomes and content analysis measure, five correlations (content analysis and assets/employee, income/employee, return on assets, return on equity, and return on sales) show improvement or more positive associations. The same general pattern is also reflected in the relationship between the content analysis and composite performance measures.

The correlations between the content analysis measure and two profitability measures, return on assets and return on equity, show somewhat more improvement than other correlations. In 1976, both profitability measures were significantly correlated ($\alpha = .05$) with the content analysis measure in a negative direction. In 1977 and 1978, the relationship was not as strongly negative, and one outcome (return on equity) was positively (although weakly) correlated with the content analysis measure. Again, the time period is four years; however, there appears to be some change in overall correlation directions and strength between 1975 and 1978. Correlations shifted from a relatively mixed situation in 1975 (some positive, some negative correlations, none strong) to a situation of some fairly strong negative correlations in 1976. The 1977 correlations were mainly negative but not as strong as those of 1976. The 1978 correlations appear to be increasingly positive, one significantly so (assets/employee).
Relationship Between Firm Performance and the Composite Human Resource Orientation Measure

The composite human resource orientation measure was somewhat stronger in its positive correlations with the composite performance measure (See Table 6) than were the correlations between content analysis and composite performance (Table 4). The composite human resource orientation measure combined content analysis and the other four measures (percent of representatives, conflict experience, union opinions and sample firm questionnaire ratings) into an overall measure of firm human resource orientation. The combining of the individual measures involved averaging the individual firms' scores, ranking all firms' average scores and coding the firms, progressive (high overall orientation), transitional (medium overall orientation) and traditional (low overall orientation).

TABLE 6
CORRELATIONS BETWEEN COMPOSITE HUMAN RESOURCE ORIENTATION MEASURE AND COMPOSITE PERFORMANCE MEASURE, 1975-1978

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite Human Resource Orientation Measure</td>
<td>.09</td>
<td>-.05</td>
<td>.16</td>
<td>.11</td>
</tr>
</tbody>
</table>

Similar to the situation with the content analysis measure, correlations between the composite human resource orientation and composite performance measures were positive in three of four years (1975, 1977, 1978). The 1977 correlation, although it was the strongest correlation, was still not significant statistically.
The somewhat better composite human resource orientation - performance relationship may suggest that components of the composite measure give it greater strength than the content analysis performance correlation. In particular, the percent of representatives measure (usually significantly correlated with the content analysis human resource orientation measure) could be a strong input bolstering the composite measure's correlation with performance.

An analysis of the composite human resource orientation - individual performance outcome measures (Table 7) reveals a situation somewhat different from that found between the content analysis measure and individual performance outcomes (Table 5). Correlation patterns seem to be grouped or split between the four per employee and three profitability measures. In 1973, for example, the per employee measures were positively correlated (one at the $\alpha = .10$ level) with the composite human resource orientation measure, while the profitability measures (return on assets, equity and sales) were much weaker (Table 7) and two were negatively correlated.
However, in 1977, the correlations of composite human resource orientation-profitability measures (return on assets, equity, sales) were positive while the per employee measures were all negative. Overall, however, the correlations may simply reflect random variances, particularly since none of measures showed a consistent sign over four years.

**TABLE 7**

**CORRELATIONS OF COMPOSITE HUMAN RESOURCE ORIENTATION MEASURE AND INDIVIDUAL PERFORMANCE OUTCOMES, 1975-1978**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets/Employee</td>
<td>.21*</td>
<td>-.14</td>
<td>-.04</td>
<td>.20</td>
</tr>
<tr>
<td>Equity/Employee</td>
<td>-.04</td>
<td>-.10</td>
<td>-.09</td>
<td>.05</td>
</tr>
<tr>
<td>Sales/Employee</td>
<td>.04</td>
<td>.003</td>
<td>-.10</td>
<td>.21*</td>
</tr>
<tr>
<td>Income/Employee</td>
<td>.00</td>
<td>-.16</td>
<td>-.04</td>
<td>.01</td>
</tr>
<tr>
<td>Return on Assets</td>
<td>-.04</td>
<td>-.09</td>
<td>.09</td>
<td>-.02</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>.12</td>
<td>-.13</td>
<td>.19</td>
<td>-.01</td>
</tr>
<tr>
<td>Return on Sales</td>
<td>.04</td>
<td>-.05</td>
<td>.19</td>
<td>.06</td>
</tr>
</tbody>
</table>

* significant at $\alpha = .10$

2Similar to the content analysis-performance correlations, the issue of possible intercorrelation among individual performance measures may affect the composite human resource orientation and individual performance outcome. This problem is another reason for better specification of the performance variable in the future.
The potential pattern of improving relationships (trend to stronger, positive correlations) revealed in the correlations between content analysis and some individual performance outcome measures (Table 5) is not as evident with regard to correlations between the composite human resource orientation measure and individual performance outcomes. However, in both cases, content analysis and composite human resource measures, the year 1976 had more negative correlations, compared with the other three years (Tables 5,7).

While the years 1975 and 1978 showed somewhat stronger positive correlations between the content analysis and individual performance outcomes (both per employee and profitability), the situation was not as clear for the composite human resource orientation - individual performance outcomes. In 1975 and 1978, the composite human resource orientation - per employee correlations were positive and sometimes relatively strong (assets and sales/employee) but the profitability correlations were very weak. In 1977 correlations between the composite human resource orientation and two profitability measures (return on equity and sales) were positive and somewhat higher than other years, but the per employee relationships were weak (Table 7).

In all correlation matrices (Tables 4 thru 7) the year 1976 was most often the year of negative correlations in terms of expected relationship directions between the human resource orientation and firm performance. In 1976, most correlations were negative between the following measures: (1) content analysis and composite performance, (2) content analysis and individual performance outcomes, (3) composite
human resource orientation and composite performance, and (4) composite human resource orientation and individual performance outcomes. The years 1976 to 1978 showed a slight improvement trend in some situations (such as content analysis–composite performance, composite human resource orientation–composite performance, composite human resource orientation–individual performance outcomes), the years 1975 and 1978 showed some similarity in level and direction of correlation. On the whole, however, few of the correlations were consistent in sign or trend over the period, indicating relatively low association between variables, as measured in the study.

Firm Size, Human Resource Orientation and Performance

Past research (Fry and Hock, 1976; Eilbert and Parket, 1973; Dent, 1959) has suggested a possible relationship between firm size and various "orientation type" measures such as content analysis of social responsibility, manager emphasis on employee welfare and so forth. This study reviewed firm size as a variable affecting the human resource orientation measures – content analysis and the composite measure – and composite performance.

The size factor was reviewed two ways. First, the three measures (content analysis, composite human resource orientation, and composite performance) were correlated with number of employees in a firm. Secondly, firms were divided into three size groups, small, medium and large and examined by t-test analysis for the three measures.
The three size groups were determined by reviewing crosstabs analyses between number of employees (in classes of 5,000) and the study's variables: content analysis and other data on human resource orientation and performance.

Small firms (given the sample taken from the Fortune 1000) were companies with 15,000 or fewer employees. The large firms tended to have more than 50,000 employees. Medium sized firms had 15,001 to 50,000 employees.

The groups were fairly stable for the four year period although some firms moved from less than 15,000 to greater than 15,000 during the four year period. The large firm group remained stable.

Correlations between number of employees and the three measures, content analysis, composite human resource orientation and composite performance, appear in Table 8. Firm size was directly and significantly related (α = .05) to the content analysis measure during the 1975-1978 sample time period. In other words, larger firms had higher scores on the content analysis measure than smaller firms: big companies are more likely to use annual reports as a means to transfer information about human resources than are smaller firms. Even so, the correlation's strength fell somewhat (.46 to .41) between 1975-1978.

The situation is less straightforward regarding the correlations between size and the composite human resource orientation measure. In all four years, the relationship was positive and in two of the four years (1975, 1978), it was significant (at the α = .10 and α = .05
levels, respectively). Thus, the size-composite human resource orientation relationship, while positive, is weaker than that between content analysis and firm size.

The size-composite performance correlations also appear in Table 8. The relationships were mixed and weak in all four years: negative correlations (-.004, -.07) in 1975 and 1976 and positive correlations (.02, .12) in 1977 and 1978. Although the correlations are not significant, there was again a trend of slight improvement (increasingly positive relationship) over the four years.
TABLE 8

CORRELATION OF NUMBER OF EMPLOYEES AND CONTENT ANALYSIS, COMPOSITE HUMAN RESOURCE ORIENTATION AND COMPOSITE PERFORMANCE MEASURES, 1975-1978

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Analysis Measure</td>
<td>.46**</td>
<td>.47**</td>
<td>.41**</td>
<td>.41**</td>
</tr>
<tr>
<td>Composite Human Resource Orientation Measure</td>
<td>.25**</td>
<td>.14</td>
<td>.13</td>
<td>.34**</td>
</tr>
<tr>
<td>Composite Performance Measure</td>
<td>-.004</td>
<td>-.07</td>
<td>.02</td>
<td>.12</td>
</tr>
</tbody>
</table>

* = significant at α = .10
** = significant at α = .05

The t-test analysis offered a second approach to examining the size factor's relationship to the measures of content analysis, composite human resource orientation and composite performance. This test compared the sample mean scores of the three measures by firm size (large, medium and small).

In regard to the size-content analysis relationship, Table 9 shows that larger firms' content analysis scores were consistently higher than those of medium or small firms during 1975-1978. Also, in each year, small firms had the lowest scores on the content analysis measure, thus supporting the correlation findings in Table 8.
TABLE 9

T-TEST RESULTS ON COMPARISON OF MEAN SCORES OF HUMAN RESOURCE ORIENTATION AND PERFORMANCE MEASURES BY COMPANY SIZE (SMALL, MEDIUM, LARGE) IN TERMS OF NUMBERS OF EMPLOYEES, 1975-1978

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Analysis</td>
<td>L</td>
<td>2.6250</td>
<td>2.5000</td>
<td>2.5000</td>
<td>2.3750</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>2.1818</td>
<td>1.9167</td>
<td>2.1429</td>
<td>2.2000</td>
</tr>
<tr>
<td></td>
<td>S</td>
<td>1.5714</td>
<td>1.7500</td>
<td>1.8333</td>
<td>1.8235</td>
</tr>
<tr>
<td>Composite Human Resource</td>
<td>L</td>
<td>2.3750</td>
<td>2.0000</td>
<td>2.5000</td>
<td>2.5000</td>
</tr>
<tr>
<td>Orientation Measure</td>
<td>M</td>
<td>2.0909</td>
<td>2.1667</td>
<td>2.2857</td>
<td>2.3333</td>
</tr>
<tr>
<td></td>
<td>S</td>
<td>1.8095</td>
<td>1.8500</td>
<td>1.6667</td>
<td>1.8235</td>
</tr>
<tr>
<td>Composite Performance</td>
<td>L</td>
<td>1.8750</td>
<td>1.7500</td>
<td>2.1250</td>
<td>2.0000</td>
</tr>
<tr>
<td>Measure</td>
<td>M</td>
<td>2.0909</td>
<td>2.0000</td>
<td>2.0000</td>
<td>2.2667</td>
</tr>
<tr>
<td></td>
<td>S</td>
<td>2.0476</td>
<td>2.1500</td>
<td>2.1111</td>
<td>1.9412</td>
</tr>
</tbody>
</table>

a Small = 15,000 or fewer employees
Medium = 15,001 to 50,000 employees
Large = Over 50,000 employees

The t-test results on the size-composite human resource orientation measure relationship were similar to those concerning the content analysis measure, except for one year. In three of the four years (1975, 1977, 1978) large firms had the highest composite human resource orientation mean scores, followed by medium and lastly small firms (Table 9). In 1976, however, medium firms' mean scores were the highest, followed by large firms' scores. Like the size-content analysis t-test results, small firms had the lowest mean scores on the composite human resource orientation measure.
The t-test results on size and composite performance outcome mean scores showed a varying pattern. In the years 1975 and 1976, medium and small firms (respectively) had the highest composite performance scores. In 1977, however, large firms' scores were highest, but not by much, and were followed by the small and finally medium firms. In 1978, medium sized firms led with the highest performance mean scores, followed by large and lastly small firms (Table 9). Thus, while the human resource orientation measures scores (both the content analysis and composite measures) were usually highest for large firms, performance measures mean scores were mixed: usually small or medium size firms showed higher performance scores, but a trend toward better performance by large firms seems evident over the four year period.

T-tests analysis was used to compare progressive and traditional firms' composite performance scores. Firms that were progressive, having high scores on content analysis or composite human resource orientation measures, exhibited higher mean scores on financial performance (although none were statistically significant) in three of the four years (1975, 1977, 1978) than did traditional firms (See Table 10). As revealed through other approaches, the year 1976 did not follow the typical pattern. For that year traditional firms' composite performance scores were typically higher than those of the progressive firms although, once again, not significantly in statistical terms. These two tables indicate that while large firms tend to be
progressive on the content analysis and composite human resource orientation measures, large firms do not consistently have the highest composite performance scores. However, those firms (large, medium and smaller firms) that have higher human resource orientation scores (content analysis and composite) also tend to perform better.
Table 10 also shows that the number of traditional firms dropped from 1975 to 1978 on both human resource orientation measures. As mentioned in Chapter 4, the number of traditional, low scoring firms declined from 14 to 7 in the 4 year period (See Appendix G). The decrease was not as dramatic for the composite human resource orientation measure \((n=13\) for 1975, decreasing to 9 in 1978). On the other hand, the number of progressive firms, based on composite human resource orientation measure, showed some increase in the period, from 11 to 15.

**TABLE 10**

T-TEST SCORES ON COMPOSITE PERFORMANCE FOR FIRMS RATED PROGRESSIVE OR TRADITIONAL ON CONTENT ANALYSIS AND COMPOSITE HUMAN RESOURCE ORIENTATION MEASURES, 1975-1978

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>P((n=12))</td>
<td>P((n=10))</td>
<td>P((n=12))</td>
<td>P((n=10))</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T((n=14))</td>
<td>T((n=12))</td>
<td>T((n=9))</td>
<td>T((n=7))</td>
<td></td>
</tr>
<tr>
<td>Content P((a))</td>
<td>2.2500</td>
<td>2.1000</td>
<td>2.5000</td>
<td>2.2000</td>
<td></td>
</tr>
<tr>
<td>Analysis Measure T((b))</td>
<td>2.0714</td>
<td>2.1667</td>
<td>2.2222</td>
<td>2.0000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P((n=11))</td>
<td>P((n=11))</td>
<td>P((n=12))</td>
<td>P((n=15))</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T((n=13))</td>
<td>T((n=12))</td>
<td>T((n=12))</td>
<td>T((n=9))</td>
<td></td>
</tr>
<tr>
<td>Composite P((c))</td>
<td>2.3333</td>
<td>2.0909</td>
<td>2.3333</td>
<td>2.2000</td>
<td></td>
</tr>
<tr>
<td>Human Resource Orientation Measure T((d))</td>
<td>2.1667</td>
<td>2.1667</td>
<td>2.0000</td>
<td>2.0000</td>
<td></td>
</tr>
</tbody>
</table>

(a) Progressive firm, based on content analysis measure.
(b) Traditional firm, based on content analysis measure.
(c) Progressive firm, based on composite human resource orientation measure.
(d) Traditional firm, based on composite human resource orientation measure.
Once again, the difference in human resource orientation measure mean scores between high and low performers was not statistically significant. Even so the pattern again emerges that higher human resource orientation measure scores are consistent with high performing firms, except for the year 1976.

In one final approach to assessing the relationship between the two human resource orientation measures and composite financial performance, a t-test analysis compared high and low performing firms (high scoring = good performers vs. low scoring = poor performer). The content analysis and composite human resource orientation measure mean scores for each year were compared for those two firm groups. The results in Table 11 show that, except for the year 1976, high performers tended to have high scores on both human resource orientation measures.

TABLE 11
T-TEST RESULTS: MEAN SCORES OF CONTENT ANALYSIS AND COMPOSITE HUMAN RESOURCE ORIENTATION MEASURES FOR TWO FIRM GROUPS: HIGH AND LOW SCORING PERFORMERS, 1975-1978

<table>
<thead>
<tr>
<th>Human Orientation Measure</th>
<th>Firm Type</th>
<th>Year and Sample Size</th>
<th>1975</th>
<th>1976</th>
<th>1977</th>
<th>1978</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H(n=12)</td>
<td>H(n=10)</td>
<td>H(n=14)</td>
<td>H(n=14)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content Analysis</td>
<td>L(n=11)</td>
<td>L(n=9)</td>
<td>L(n=11)</td>
<td>L(n=11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Scoring Firms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Scoring Firms</td>
<td></td>
<td></td>
<td>1.9167</td>
<td>1.7000</td>
<td>2.0714</td>
<td>2.0714</td>
</tr>
<tr>
<td>Low Scoring Firms</td>
<td></td>
<td></td>
<td>1.7273</td>
<td>1.7778</td>
<td>2.0000</td>
<td>1.9091</td>
</tr>
<tr>
<td>Composite Human Resource</td>
<td>H(n=14)</td>
<td>H(n=14)</td>
<td>H(n=14)</td>
<td>H(n=14)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>L(n=11)</td>
<td>L(n=11)</td>
<td>L(n=11)</td>
<td>L(n=11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Scoring Firms</td>
<td></td>
<td></td>
<td>2.0000</td>
<td>1.8000</td>
<td>2.0714</td>
<td>2.2143</td>
</tr>
<tr>
<td>Low Scoring Firms</td>
<td></td>
<td></td>
<td>1.8182</td>
<td>1.8889</td>
<td>1.7273</td>
<td>2.0000</td>
</tr>
</tbody>
</table>

(a) High Scoring Firms in Composite Performance
(b) Low Scoring Firms in Composite Performance
A final question posed in the study concerned whether increasing human resource orientation was also related to improving performance. Table 11 reveals that for both content analysis and composite human resource orientation measures, high firm financial performance was related to a slight increase in human resource orientation mean scores. The number of high performers increased slightly from 12 to 14 over the four year period. Likewise the human resource orientation mean scores also improved somewhat for those high performers. Thus, human resource orientation and performance scores appeared to increase simultaneously over the four year period.
CHAPTER 6
FINDINGS, CONCLUSIONS AND RECOMMENDATIONS
FOR FUTURE RESEARCH

This chapter covers three areas: (1) an overall summary of the research study; (2) the findings and conclusions based on the key questions; and (3) recommendations for future research.

Study Summary

The purposes of this study were to assess the value of content analysis as a method to measure a business firm's human resource orientation, and to examine potential relationships between human resource orientation and firm performance. The study examined 40 sample firms in the U.S. electrical, electronic, and appliance industry (SIC 36) over four years, 1975-1978. The sample was drawn from Fortune magazine's annual survey of top 1000 U.S. companies. The research excluded other industrialized countries such as the United Kingdom and Federal Republic of Germany and other industries, either manufacturing or service, because of comparison problems.

The study's independent variable, human resource orientation, was measured (1) by content analysis of the sample firms' annual reports over four years, and (2) by four other measures, three of which were developed from sources external to each firm. The four measures were the following: (1) percent of representatives in a professional
organization (number of representatives per 1000 firm employees); (2) firms' conflict experience (number and outcome - positive, negative, neutral - of Fair Employment Practice, Occupational Safety and Health cases, National Labor Relations Board decisions, arbitrations awards, and strike occurrence); (3) union opinions (impressions of representatives of five major unions associated with the electrical industry on firms' dealings with unions, contract negotiations, grievance handling and the like); and (4) questionnaire ratings (data collected from the sample firms relative to their human resource policies and practices).

The dependent variable, firm performance, was measured by seven ratios (assets/employee, equity/employee, sales/employee, income/employee, return on assets, return on equity, and return on sales). The independent and dependent measures were scored high, medium or low for each firm for analysis purposes.

Pearson's correlation and t-test analysis methods were used to examine the usefulness of the content analysis human resource orientation measure and relationships between two human resource orientation measures - content analysis and a composite measure comprising all five human resource orientation measures and firm financial performance.

Findings and Conclusions

Findings and conclusions on the four key questions posed in the study are presented below.
Is content analysis of annual reports an effective methodological approach to measure a business firm's human resource orientation?

Content analysis and three other human resource orientation measures (percent of representatives, union opinions and sample firm questionnaire ratings) usually were positively, although often weakly, correlated over the four year period 1975-1978. The content analysis measure was consistently negatively correlated with the conflict experience human resource orientation measure. When high orientation (or progressive) and low orientation (or traditional) firms were compared (measured by content analysis), t-test analysis revealed a pattern of higher mean scores on three other human resource orientation measures for progressive firms. The conflict experience measure was consistently higher for traditional than progressive firms from 1975 to 1978. In addition, the number of traditional (low orientation) firms, as measured by content analysis, decreased from 1975 to 1978.

Other findings showed a strong positive relationship between firm size and higher content analysis scores. Finally, for the three firm size groups (large, medium, small) composite human resource orientation scores usually improved (or increased) over the period 1975-1978.

Content analysis represents one indicator of firm human resource orientation. The first conclusion is that content analysis of annual reports did not provide the only or best measure of firms' human resource orientation. The method did offer some indication as to how firms' other human resource orientation measures might fare. Firms
that rated progressive on the content analysis measure typically ranked higher on other measures (except for conflict experience) than did traditional firms. Although the difference in mean scores between traditional and progressive firms was rarely statistically significant, there was an overall pattern of higher scores for progressive firms.

Content analysis and other measures appraise different aspects of the human resource orientation concept. The lack of significant correlation between the content analysis and other human resource orientation measures could reflect several issues. The human resource orientation measures, as discussed in Chapter 3, assess various facets of the concept: content analysis reflects a firm's public stance and disclosure about its human resources; the percent of representatives in a professional organization seeks to determine the firm's willingness to support such activities and/or staff members' interest in human resource management organizations. The conflict experience measures focus on publicly reported legal cases, not the specific situations, problems or grievances leading to those cases. Union opinions and the sample firm questionnaire ratings sought to measure, respectively, opinions of a certain group of outsiders and firms' usage of selected policies. The various measures each contributed to an overall portrait of a firm's orientation but were not as closely related as had been expected. Thus, although the content analysis and other measures were typically higher for progressive than traditional firms, the specific measures' overlap regarding the aspects they examined was relatively low.
The lack of strong correlation among measures might also stem from outside influences on those measures. Even though the study sought to control for external influences by using one industry and country, not all factors were controlled, such as specific product lines or firm location in the U.S. Also, it should be recognized that not all actions necessarily become public data, e.g., not all arbitration awards are reported and OSH and similar issues may be voluntarily and quietly resolved.

**Content analysis may be more useful for certain types of firms.** The relatively strong relationship between content analysis and firm size suggests that the measure may be more applicable for larger firms. These firms tend to provide more information in general in annual reports; also other types of information are often more available on larger firms, such as litigation cases as articles in the general press.

More firms are using annual reports as a medium to transfer information about employees. The decline in number of traditional firms, as measured by content analysis, could suggest that annual reports are being used increasingly to give information about human resources. Although the number of higher orientation or progressive firms (when measured by content analysis) seems to be fairly stable, there appears to be an increase in the number of transitional (medium orientation) firms. Also, the slight decline in the content analysis - size correlation may indicate smaller firms are improving their content analysis human resource orientation, that is, using
annual reports to discuss employees and policies. Such a trend could indicate possible greater usefulness of annual reports as a data source for future research.

**Overall human resource orientation scores are improving for each size group.** An important conclusion of the study may be that, given the constraints and measures used in the study, there appears to be an improvement in composite human resource orientation scores. Except for the year 1976, companies in each size class (small, medium and large) were indeed improving their composite human resource orientation scores. This may indicate a possible increase in the amount of attention or concern that U.S. electrical industry firms are directing toward employees, as reported through the readily available data sources used in this study: annual reports, percent of representatives, litigation, union official opinions and human resource directors.

What is the relationship, if any, between a firm's human resource orientation and its financial performance?

The findings in Chapter 5 indicate that content analysis and the financial performance measures were weakly correlated although there was a pattern of slight improvement (increasing scores) over the 1975-1978 period. The composite human resource orientation-performance correlations, although also weak, were slightly stronger than the content analysis-performance correlations and showed an overall improving trend. Finally, when progressive (high orientation) and traditional (low orientation) firms were compared, composite financial performance scores were consistently better for progressive firms except in 1976.
When high and low performing firms were compared, the human resource orientation scores (content analysis and composite) tended to be higher (although again not statistically significantly so) for better performers (except in 1976). High performers' human resource orientation scores tend to improve over time suggesting that if a firm continues its high performance it may also tend to increase its human resource orientation score. A second explanation may be that the smaller and medium sized firms (typically better performers than the large firms) are beginning to increase their human resource orientation. The second case suggests that firms that continue higher orientation may also experience increasing performance. Like the former situation, this case could suggest increasing human resource orientation scores by smaller firms, which tend to be better performers in general.

*High performance is often associated with high or progressive human resource orientation.* While this study could not explain performance by human resource orientation, whether measured by content analysis or using other externally obtained data, the study does suggest a potential, if weak, link between the two elements: high performance and high orientation often exist together. As an exploratory investigation, the study sought only to clear a pathway for further research. The unobtrusive measures approach thus showed some promise for (1) developing a new concept, human resource orientation,
which should be further defined and measured and (2) exploring possible relationships between human resource orientation and firm performance.

Are differences in performance outcomes attributable more to company size than to human resource orientation? Also, is company size related to human resource orientation?

The findings in Chapter 5 showed that firm size was negative and positive and weak in its correlation with composite financial performance (inversely related in 1975 and 1976 and positively related in 1977 and 1978). However, there was a slight pattern of increasing correlation scores between 1975-1978. Finally, t-test results showed that size may be related to performance scores: in 1975 and 1976, medium and small firms had higher mean performance scores, respectively, whereas in 1977 and 1978, large and medium firms, respectively, had better performance scores.

It was also revealed in Chapter 5 that firm size was directly and significantly related to the content analysis human resource orientation measure in the 1975-1978 period. The composite human resource orientation was also positively, although not as strongly, related to firm size.

Firm size influences performance. The findings suggest that firm performance may in fact be more affected by firm size than by human resource orientation. The early years (1975-1976) suggested that smaller firms were better performers than large firms. In the latter two years, medium and larger firms seemed to perform as well
as or better than small firms. This may suggest that large firms' performance is better in periods of overall economic strength and relatively poorer than smaller firms in a weaker economy. In poor economic periods, smaller firms may be able to scale down more quickly than larger firms and thus perform better.

Firm size does affect human resource orientation. As mentioned earlier, firm size and human resource orientation appear to be related, especially for content analysis and size. Larger firms tend to have higher orientation scores. This may indicate greater awareness of public relations, a larger annual report preparation budget, or a desire to improve firm image by providing information about employees through annual reports. The decreasing trend in size–human resource orientation correlation, however, may indicate that smaller firms are beginning to use annual reports more frequently to discuss employees.

Are changes or shifts in firm orientation over time - from traditional to progressive or vice versa - reflected in changes in performance outcomes?

The findings in Chapter 5 indicated that higher scores on performance were usually linked with higher scores on orientation, except in 1976. Also, as the number of traditional firms decreased, t-tests results showed slight declines in performance mean scores of traditional firms. However, as the number of progressive firms increased, measured by the composite human resource orientation scores, the performance scores declined slightly. Thus the link between shifts in orientation was not clearly related to similar shifts in performance.
Human resource orientation and performance may be affected by many outside influences. Possibly more than was expected, the study's lack of strong correlations between either the content analysis or composite human resource measure and firm performance over time suggested that other factors may significantly affect these variables. This is particularly probable in light of the results for the year 1976, which consistently differed in pattern from those of the other years in the sample period. Certain elements about 1976 varied from other years and may have affected both human resource orientation and performance. The year 1976 was the end of a recession and an election year. Most firms had some backlog of orders to carry them through the 1974-1975 period. With the decrease in 1975 orders, however, the year 1976 emerged as the industry's performance "valley". This may indicate stronger influence from outside forces than had been originally expected.

Suggestions for Future Research

The present study revealed several areas for potential research related to the refinement of the measure and its application.

Refining the Human Resource Orientation Measure

The present study proposed human resource orientation proxy measures based on information obtained primarily from outside a firm (annual reports and other data sources). These measures were relatively limited and not overly fruitful and suggest a need for other sources.
Other studies, for example, might seek information from sources closer to or inside firms. Such sources might be company documents, current, former or potential employees, firm managers, local union representatives at a given plant or division, community leaders and so forth. A case study approach may be useful to study an individual firm, plant, or division's orientation, but several cases may be needed to generalize the data.

In refining the measure, the human resource orientation continuum's dimensions should also become sharper. The present descriptors - traditional, transitional and progressive - might be defined more precisely to present clearer portraits of a firm's human resource orientation.

An important objective would be to identify and examine specific individual policies or attitudes incorporated in the descriptors. Ultimately, research could assess how these individual policies contribute to a firm's human resource orientation. Then it may be possible to identify the ways in which firms could alter their human resource orientation or practices in order to influence firm financial performance.

Additional Comparative Research

There is also potential for studying human resource orientation on a comparative and/or longitudinal basis. The human resource measure could be applied to other U. S. industries, manufacturing and nonmanufacturing alike. Also, the measure could be monitored annually to detect trends in human resource orientation and performance.
The possibility of applying a human resource orientation measure to non-American firms is also very appealing. It could initiate an interesting international research area, once comparability issues are resolved. For international comparison, the measure may be further refined to adapt different approaches to obtaining information.
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APPENDIX A

SAMPLE LETTER TO REQUEST

ANNUAL REPORTS
Dear Sir/Madam:

As we move into the 1980s, firms will face increasing challenges affecting their individual performance in the marketplace. As a candidate for the doctorate degree in management sciences at Ohio State University, Columbus, Ohio, U.S.A., I am interested in studying various factors contributing to recent firm performance in several industries in the United States, United Kingdom, and West Germany over a 4-year timeframe (1975-1978).

For part of my dissertation I plan to review annual reports and any other publicly available company publications referring to how a firm performed in a given year. Any other reports to stockholders, employees, or the public-at-large are also of real interest and value to me.

It would be very helpful for my study if you would kindly send me copies to my home address (below) of your company's annual reports and any other publications reflecting the company's performance in financial and other areas for the years of 1975, 1976, 1977, and 1978. I would be happy to reimburse you for whatever expenses you incur in making these reports available to me.

I appreciate any help you can provide. If you have any questions, please feel free to contact me.

Sincerely,

Nancy K. Napier
4541 Carriage Hill Lane
Columbus, Ohio 43220
U.S.A.

P. S. Should you wish to confirm my dissertation project, please contact my advisor:

Dr. Robert C. Miljus
Faculty of Management Sciences
1 Page Hall
The Ohio State University
Columbus, Ohio
U.S.A.
APPENDIX B

RESULTS OF INTRA-RATER
RELIABILITY OF CONTENT ANALYSIS
OF ANNUAL REPORTS
Results of Intra-rater Reliability
of Content Analysis of Annual Reports

The study required performing content analysis of 160 annual reports: 40 firms over 4 years. To check reliability of the original content analysis procedure, the author selected 10 firms to review, every fourth firm in the alphabetized list of 40 firms. Content analysis of the 10 firms annual reports over 4 years (N=40 annual reports) revealed high correlations between scores from the first and second content analysis (Table B-1).

A limitation of this study was that interrater reliability could not be checked. Given constraints of time and commitments by other possible raters, the author was the sole content analyzer.
TABLE B-1 TEST-RETEST
RESULTS ON CONTENT ANALYSIS OF

10 SAMPLE FIRMS OVER 4 YEARS
(N=40)

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<th>Pictures</th>
<th>Lines</th>
<th>Graphs</th>
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<th>Eval. Assertion</th>
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1 Annual Report Elements were those measures analyzed by content analysis for indication of human resource orientation.
APPENDIX C

LETTER AND QUESTIONNAIRE SENT TO

SAMPLE FIRMS' PERSONNEL MANAGERS
Dear,

Do organizations that exhibit greater concern for their employees perform better in the marketplace?

For my dissertation, I am studying corporate performance and several related factors, one of which is whether various employee policies and programs are related to financial performance of firms.

Would you please help me by filling out the attached one page questionnaire? For your information, I am also gathering data from public documents, such as annual reports and the general literature.

Your completed survey will, of course, be confidential. I will be glad to send you an executive summary of the study's findings. Please enclose your name and address on the survey or in a separate letter if you prefer.

Thank you so much for your help.

Sincerely,

Nancy K. Napier

P. S. Please return the survey to me at the address below or to my advisor, whose address is also below.

Nancy K. Napier
4541 Carriage Hill Lane
Columbus, Ohio 43220

Dr. Robert C. Miljus
Faculty of Management Sciences
1 Page Hall
The Ohio State University
Columbus, Ohio 43210

NKN lm
Encl.
Please check (✓) the policies or programs that your company has/had for its employees. Thank you very much for your time and cooperation.

<table>
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<tr>
<th>Program or Policy</th>
<th>Existing in 1978-1979</th>
<th>If yes, when was this program or policy adopted by your firm? Check below.</th>
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<td>Yes</td>
<td>No</td>
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<td>Company organized car pool arrangements</td>
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<td>Tuition reimbursement program</td>
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<td>&quot;Promotion from within&quot; policy</td>
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<td>Affirmative action recruiting program(s)</td>
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<td>Provision of day care centers</td>
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<td>Flexible work hours for most employees</td>
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<td>Health/other counseling such as for drug, alcohol, marital problems</td>
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<td>Physical fitness facilities, sponsored teams</td>
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<td>&quot;Cafeteria benefit programs,&quot; i.e., employee choose preferred benefits</td>
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<td>Employee stock ownership program</td>
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Has your firm experienced an employee strike during the period 1975-1978?  
Yes__________ No__________
If yes, number_______________ and total duration______________ months
APPENDIX D

PROPORTION OF FIRMS WITH AVAILABLE INFORMATION
PROPORTION OF FIRMS WITH AVAILABLE INFORMATION

Information from all the methods used (content analysis, litigation, membership rosters, interviews and questionnaires) was available for many but not all firms. This appendix reports the proportion of sample firms for which information was available, by information sources, over the 1975-1978 period.

Table D-1 shows that an increasing proportion of firms was reporting certain types of information over time. Specifically in annual reports, from 1975-1978, an increasing number of firms conveyed impressions about their human resource orientation using the following indicators:

- Pictures
- Lines
- Graphs
- Qualitative information that could be assessed with evaluative assertion analysis
- Mention of human resource director
- Mention of human resource policies

This trend also suggests as more information is available, content analysis may have greater value in analyzing the impressions conveyed by annual reports.
TABLE D-1 PROPORTION OF FIRMS WITH INFORMATION AVAILABLE

<table>
<thead>
<tr>
<th></th>
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</tr>
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<tbody>
<tr>
<td><strong>Annual Reports</strong></td>
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</tr>
<tr>
<td>Cover</td>
<td>29.5</td>
<td>25.0</td>
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<td>100.0</td>
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<td>Evaluative Assertion</td>
<td>42.5</td>
<td>55.0</td>
<td>50.0</td>
<td>65.0</td>
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<td>Director</td>
<td>47.5</td>
<td>47.5</td>
<td>50.0</td>
<td>57.5</td>
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<tr>
<td>Policies</td>
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<td>37.5</td>
<td>42.5</td>
<td>45.0</td>
</tr>
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<td>ASPA Membership</td>
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<td>.925</td>
<td>.925</td>
<td>.925</td>
</tr>
<tr>
<td><strong>Conflict/Litigation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEP</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>NLRB</td>
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<td></td>
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</tr>
<tr>
<td>OSHA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arbitration</td>
<td></td>
<td></td>
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<td>72.5</td>
<td>72.5</td>
<td>72.5</td>
<td>72.5</td>
</tr>
<tr>
<td>Questionnaires</td>
<td>55.0</td>
<td>55.0</td>
<td>55.0</td>
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</tbody>
</table>
APPENDIX E

SELECTED REGRESSION RESULTS
SELECTED REGRESSION RESULTS

The major emphasis on the study was assessing bivariate associations between human resource orientation, measured by content analysis and a composite measure, and a firm composite performance measure. However, to assess relationships among several variables, multiple regressions were also performed.

The regression analyses sought to evaluate the human resource orientation - performance relationship from two approaches. First, the human resource orientation measures (scores from percent of representatives, content analysis, union representatives, conflict measures and questionnaires) were examined as explanatory variables for firm return on equity. Return on equity was used as the dependent performance variable to remove possible biases from a composite performance measure. The regression was run using the 4 years' data, controlling for each year's variation by using dummy variables.

The second regression analysis approach involved using the content analysis measure as the dependent variable. The question raised was whether performance (return on equity) and other human resource orientation variables may in fact explain the content analysis of annual reports, i.e., do firms that perform better and show strong orientation in other ways then reflect that through annual reports?
The first regression equation appears below (N=68, combination of 4 years' data)

\[
\text{Return on} = 0.17 - 0.09 \times \text{(Year)} + 0.06 \times \text{(Year Equity 1975 Scores 1977)} + 0.002 \times \text{(Content Analysis + 0.003 (Questionnaires of Annual Reports))}
\]

\[R^2 = 0.10\]

For this regression the following variables were entered in a stepwise manner; variables explaining more of return on equity entered first. The following variables could enter the equation:

- Years: 1975, 1976, 1977, with 1978 as the reference year, against which other years were compared.
- Annual Report content analysis scores.
- Percent of representatives.
- Union representatives' opinions.
- Conflict scores, which allowed only firms exhibiting any litigation to enter the sample group.
- Questionnaire responses.

The equation suggests several findings:

1. The 1975 year variable entered the equations first suggesting it is fairly strong, i.e., economic performance varies widely depending upon the year examined. For the sample group, performance in 1975 was worse than 1978, whereas 1977 performance was better than 1978.

2. Annual report and questionnaire scores are weakly but positively related to return on equity, as expected. As annual report content and personnel manager questionnaire response scores improve, so should return on equity.
3. Union opinions and return on equity are inversely related suggesting that union representatives rate higher firms that are not the best performers.

4. Overall explanatory value is relatively low; 10 percent of the variance in return on equity is explained by these variables.

The second regression equation with annual report content analysis scores as the dependent variable follows (N=68, all 4 years' data):

\[
\text{Annual Report Content Analysis} = 17.45 + 0.25 (\text{Conflict Scores}) - 0.20 (\text{Questionnaire Responses})
+ 2.63 (\text{Return on Equity}) - 0.18 (\text{Union Opinions}) - 0.55 (\text{Percent of Representatives})
+ 0.27 (\text{Year 1976})
\]

The total $R^2$ was .03, indicating negligible explanatory power of the independent variables for the variation on content analysis scores. This suggests that the relationship is more likely to be one where performance is explained by orientation rather than where content analysis is the dependent variable.

Overall, the independent variables, as measured in the study, and used in the first equation - human resource orientation and year measures - do not explain much of the variance in return on equity. However, while the explanatory power is low, the regression results do show some interesting relationships particularly between return on equity and the year, union opinions questionnaire responses, and content analysis scores. These variables may be useful in future studies, once refined and better specified.
SPEARMAN CORRELATION MATRIX

SPEARMAN RANK ORDER CORRELATION BETWEEN CONTENT ANALYSIS AND OTHER HUMAN RESOURCE ORIENTATION MEASURES 1975 - 1978

<table>
<thead>
<tr>
<th>Other Measures</th>
<th>1975</th>
<th>1976</th>
<th>1977</th>
<th>1978</th>
<th>All Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Representatives</td>
<td>-.14</td>
<td>.31**</td>
<td>.31**</td>
<td>.20</td>
<td>.15**</td>
</tr>
<tr>
<td>Conflict experience</td>
<td>-.24*</td>
<td>-.40**</td>
<td>-.42**</td>
<td>-.09</td>
<td>-.28**</td>
</tr>
<tr>
<td>Union Opinions</td>
<td>.16</td>
<td>.06</td>
<td>.06</td>
<td>.17</td>
<td>.12*</td>
</tr>
<tr>
<td>Sample Firm Questionnaire Ratings</td>
<td>.25</td>
<td>.09</td>
<td>.06</td>
<td>-.05</td>
<td>.10</td>
</tr>
</tbody>
</table>

* Significant at $\alpha = .10$

** Significant at $\alpha = .05$
APPENDIX G

FIRMS' POSITIONS ON HUMAN RESOURCE ORIENTATION CONTINUUM
FIRMS' POSITIONS ON HUMAN RESOURCE ORIENTATION CONTINUUM

Tables G1 and G2 indicate the changes in human resource orientation of sample firms between 1975 - 1978, as measured in this study. The table shows number of firms in each category - traditional (T), transitional (Tn) and progressive (P) in each year and the shifts among those categories.

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>T</td>
<td>14</td>
<td>12</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Tn</td>
<td>14</td>
<td>18</td>
<td>19</td>
<td>23</td>
</tr>
<tr>
<td>P</td>
<td>12</td>
<td>10</td>
<td>12</td>
<td>10</td>
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</table>

<table>
<thead>
<tr>
<th>Changes in Position</th>
<th>1975-76</th>
<th>1976-77</th>
<th>1977-78</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase</td>
<td>8</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>(T to Tn, T to P, or Tn to P)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decrease</td>
<td>6</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>(P to Tn, Tn to T or P to T)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>No Change</td>
<td>26</td>
<td>22</td>
<td>28</td>
</tr>
<tr>
<td>(Same Position)</td>
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<td></td>
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<tr>
<td>Net Change</td>
<td>2 Increases</td>
<td>4 Increases</td>
<td>0</td>
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Table G-2. Firms' Positions On Human Resource Orientation Continuum
By Composite Human Resource Orientation Scores 1975 - 1978

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>13</td>
<td>12</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Tn</td>
<td>16</td>
<td>17</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>P</td>
<td>11</td>
<td>11</td>
<td>12</td>
<td>15</td>
</tr>
</tbody>
</table>

Changes in Position 1975-76 1976-77 1977-78

<table>
<thead>
<tr>
<th>Increase (T to Tn, Tn to P, T to P)</th>
<th>10</th>
<th>15</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decreases (P to Tn, Tn to T, P to T)</td>
<td>9</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>No Change (Same Position)</td>
<td>21</td>
<td>12</td>
<td>22</td>
</tr>
</tbody>
</table>

Net Change 1 Increase 2 Increases 4 Increases
Table G-3 indicates the trend, over 1975 - 1978, of firms' positions: whether the firm showed a general increase (moving from traditional or transitional to a higher category), general decrease (moving from Progressive or transitional to a lower category), remained in a single category over the 4 year period or was "mixed" (moving up and down in its position).

Table G-3. General 4 Year Trend of Firm Positions measured by Content Analysis And Composite Human Resource Orientation Scores

<table>
<thead>
<tr>
<th>Measure of Human Resource Orientation</th>
<th>Content Analysis</th>
<th>Composite</th>
</tr>
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<tbody>
<tr>
<td>Increase</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Decrease</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Same</td>
<td>14</td>
<td>7</td>
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<tr>
<td>T</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Tn</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>P</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Mixed</td>
<td>14</td>
<td>24</td>
</tr>
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</table>