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An empirical investigation into the personal value systems of accounting managers of CPA firms

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**AN EMPIRICAL INVESTIGATION INTO THE
PERSONAL VALUE SYSTEMS OF
ACCOUNTING MANAGERS
OF CPA FIRMS**

by

Morsheda T. Hassan, B. S., M. B. A.

**A Dissertation Presented in Partial fulfillment
of the Requirements for the Degree
Doctor of Business Administration**

**COLLEGE OF ADMINISTRATION AND BUSINESS
LOUISIANA TECH UNIVERSITY**

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We hereby recommend that the dissertation prepared under our supervision
by Morsheda Hassan

entitled An Empirical Investigation into the Personal Value Systems of Accounting Managers of CPA
Firms

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ABSTRACT

The objectives of this dissertation were to empirically examine (i) the primary value orientation of CPA firms' managers; (ii) the value profile of these managers; (iii) the relationship between the personal value systems of CPA firm's managers and their managerial decisions, job satisfaction, organizational commitment, and managerial success; (iv) whether the personal value systems of CPA firms' differ by gender or age; (v) differences between the personal value systems of CPA firm's managers affiliated with the departments of auditing, taxation, consulting, information technology, general administration, or others, and (vi) differences between the personal value systems of CPA firms' managers and their counterparts in other industries.

To shed light on the above issues, the following instruments are utilized: England's (1967) Personal Value Questionnaire (PVQ), England's (1975) Behavioral Measurement Questionnaire (BMQ), Brayfield and Rothe's (1951) Global Measure Questionnaire (GMQ) of Job satisfaction, and Mowday et al's. (1979) Organizational Commitment Questionnaire (OCQ).

A national sample of 1,000 CPA firms' managers (500 managers of small and medium size CPA firms and 500 managers of the Big-five CPA firms) were randomly selected from the AICPA list of members. The assistance of James Foster, the director of the AICPA membership, who provided the mailing list and randomly selected the sample from the fifty states is appreciated. Responses were received from 231 CPA firms' managers, yielding a response rate of 23.1 percent. Because 8 of the returned questionnaires were incomplete, 223 questionnaires were usable.

To validate dissertation's propositions, a host of statistical techniques were employed. These techniques include factor analysis, multivariate analysis of variance, a stepwise logistic regression analysis, Least Square means, Duncan test, Spearman correlation coefficients, and Wilcoxon nonparametric test.

The findings of this study were: (1) the primary value orientation of CPA firms' managers are pragmatic, rather than moralistic or affect, (2) The majority of the personal value questionnaire concepts assigned by CPA firms' managers fall in the operative values cell in their constructed personal value profile, (3) there is a significant relationship between these managers' personal values systems and their managerial decisions, (4) there is a significant relationship between these managers' personal values systems and their job satisfaction, (5) there is a significant relationship between these managers' personal values systems and their organizational commitment, (6) there is a significant relationship between these managers' personal values systems and their managerial success, (7) there are significant differences in the personal value systems of female and male managers, (8) there are significant differences in the personal value systems of younger and older managers, (9) there are significant differences in the personal value systems of departments' managers, and (10) there are no significant differences in the personal value systems of CPA firms' managers and the personal value systems of their counterparts in other industries.

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CHAPTER 1

INTRODUCTION

Since the mid 1970s, businesses are increasing their emphasis on ethical behavior. The Treadway Commission Report and the Foreign Corrupt Practices Act of 1977 make specific recommendations for businesses (Donlon, 2000). Concerns about unethical behavior in business heighten a senior manager of ethics and responsible business practice consulting firm to state that one cannot open the newspaper today and not see news about “*unethical behavior*” in relation to anything from corporate reputation to employment practices, regulators, shareholders, and others scrutinize every aspect of business conscience (Donlon, 2000). Unethical behavior refers to decisions that are morally unacceptable to society. The likelihood that individuals will engage in unethical behavior depends partly upon their personal values, which lead them to evaluate actions (Jones, 1991).

Given this increased attention to ethics and to the apparent need for all managers in general and managers of CPA firms in particular to be very involved, an enhanced knowledge about ethics would be very useful for managers to fulfill their role. For example, managers of CPA firms are expected to play a greater role in devising and implementing ethics programs and auditing control systems for compliance with the code of conduct. With this increased ethical knowledge, managers of CPA firms will be able to assist their firms with developing a code of conduct and to audit ethics control systems (Akers and Giacominio, 1999).

Importance of Personal Values

England (1975) concludes the following assertions: (1) personal values set the limits for the determination of what is and what is not ethical behavior by a manager; (2) personal values, influence the way a manager looks at other individuals and groups of individuals, thus influencing interpersonal relationships; (3) personal values, influence a manager's decisions and solutions to problems; and (4) personal values influence the manager's perception and behavior.

Furthermore, Brown (1986) indicates that personal values of a manager determine his or her behavior. England and Lee (1974), McDonald and Gandz (1991; 1992) find that personal values of managers influence managerial decisions. Other investigators (Mankoff, 1974; Kidron, 1978; Kalleberg, 1977; England 1978; Pezeshkpur, 1975; Singer, 1964) claim that there is a relationship between personal values and behavioral variables such as individual job satisfaction, organizational commitment, managerial success, the decision-making process, etc.

Similarly, Schmidt and Posner (1982) identify individual values as the silent power in the individual personal life. McClelland (1985) views values as guiding principles in individuals' lives. While personal values may vary between individuals and groups, particularly cross-culturally, they tend to function similarly for people in two ways. First, values grow out of the individual's understanding of the world. Second, values shape current and future behaviors (Hunger and Wheelen, 2000).

Bandura (1986) describes personal values as ideas that are maintained in all circumstances. According to Williams (1970), personal values involve self-awareness and consciously influence individual's choices and behavior. They are standards against which evaluations and judgements are made. Feather (1988) confirms that personal values are the core of personality and influence the individual behavior or characteristics, such as attitude, evaluation, judgements, decisions, commitment, and satisfaction. Therefore, Posner and Schmidt (1992) suggest that the direction and vitality of corporate

America and its managers cannot be fully understood without knowing more about the values and visions of the men and women who manage the corporation.

These notions or assertions are being emphasized by the CEO of Cisco Systems and the CEO of this year, John Chambers, who asserts that the company's strength is not only about technology; it is about personal values as well (Donlon, 2000). Similarly, CEOs of Honda of America Manufacturing corporation demonstrate that one of the major factors for the success of their company is the employees personal values (Bresnahan, 1997). Likewise, Yelverton (1997) asserts that the leader's strong personal values is one of seven key concepts vital to developing excellent managers. Yelverton (1997) also asserts that personal values are among the key factors required for developing an excellent plant manager.

In addition, top executives of the pharmaceutical firm Johnson & Johnson claim that one of the major sources of their success is their firm's culture, which emphasizes ethical conduct even across international boundaries (Sinclair, 1993). General Electric's (GE) culture also emphasizes values that underlie important ethical principles. GE's executives confirm that integrity is an important value for the company and its employees (Hitt, Ireland, and Hoskisson, 2000).

Statement of the Problem

There are no comprehensive studies conducted on the personal value systems of managers of CPA firms. Previous research in the accounting discipline has neither identified the value orientations or the value profile of managers of CPA firms, nor examined the relationship between the personal value systems of these managers and their behavior (e.g., decisions, managerial success, job satisfaction, and firm's organizational commitment).

There are few studies on the personal values of individuals in the accounting discipline. For example, Swindle (1987), Abdolmohammadi (1996), McCarthy (1997), Akers and Giacominio (1999), and Giacominio and Akers (1998) survey samples of public

accountants, certified internal auditors, male and female accounting and non-accounting majors, auditors, accounting educators, and accounting students. The main focus of these studies is on determining if the values of accounting professionals are consistent with the ethical standards of the American Institute of Certified Public Accountants (AICPA), or the Institute of Internal Auditors Standards of Conduct (IIASC).

This study attempts to narrow the apparent gap in the literature. It provides exploratory empirical evidence which supplements the literature on the value systems as it relates to current accounting practices, and substantial activities (auditing, taxation, consultation, information technology).

Objectives of the Study

The present study is based on the popular theoretical framework pertaining to the personal value systems of managers articulated by England (1967). According to England, a personal value system, as measured by 66 concepts, is viewed as a perceptual framework that is thought to shape and influence the general nature of an individual's behavior. A value profile represents an aggregation of personal value systems for a group of individuals. In this regard, the present study has ten main objectives.

The *first objective* is to identify the personal value systems of CPA firms' managers. This includes the determination of their primary value orientations (e.g., pragmatic, moralistic, etc.) as a group.

The *second objective* is to investigate the value profile of CPA firms' managers as a group.

The *third objective* is to examine the relationship between the personal value systems of CPA firms' managers and their managerial decisions.

The *fourth objective* is to study the relationship between the personal value systems of CPA firms' managers and their job satisfaction.

The *fifth objective* is to examine the relationship between the personal value systems of CPA firms' managers and their organizational commitment.

The sixth objective is to shed light on the relationship between the personal value systems of CPA firm's managers and their managerial success.

The seventh objective is to find out if there are significant differences in the personal value systems of CPA firms' female managers and the personal value systems of CPA firms' male managers.

The eighth objective is to assess if there are significant differences in the personal systems of younger CPA firms' managers and the personal value systems of CPA firms' older managers.

The ninth objectives is to find out if there are significant differences among the personal values systems of CPA managers of auditing, taxation, and consultation departments.

The tenth objective is to find out if there are significant differences between the personal value systems of CPA firm's manager and the personal value systems of their managers in other industries.

In summary , the overall research aims at addressing the following research questions:

- (1) What are the personal value orientations of CPA firms' managers as a group?
- (2) What constitutes the personal value profile of CPA firms' managers as a group?
- (3) Is there a relationship between the personal value systems of CPA firms' managers and their business decisions?
- (4) Is there a relationship between the personal value systems of CPA firms' managers and their job satisfaction?
- (5) Is there a relationship between the personal value systems of CPA firms' managers and their organizational commitment?
- (6) Is there a relationship between the personal value systems of CPA firms' managers and their managerial success?

- (7) Are there significant differences in the personal value systems of CPA firms' female and male managers?
- (8) Are there significant differences in the personal value systems of younger and older CPA firms' managers?
- (9) Are there significant differences among the personal values systems of CPA managers of auditing, taxation, and consultation departments.
- (10) Are there significant differences between the personal value system of CPA firms' managers and the personal value systems of managers in other industries?

Importance of the Study

In recent years, the corporate world is under increasing pressure to behave in a socially responsible manner. Most consumers, government officials, and even business executives no longer believe the current famous dictum of Milton Friedman (1970) that the only responsibility of business is to make a profit. There is a large gap between those who just recognize that business has an obligation to society and those who actually know how to implement ethical policies that will be respected by all members of an organization (Finegan, 1994).

Concentrating on the accounting profession, McCarthy (1997) predicts that the closing years of the 21st century will evidence a great challenge to the continuance of accounting as a profession. The author suggests that a challenge will be centered on the profession's need to strengthen public confidence in its effectiveness and ethics. This prediction has been supported by numerous researchers (e.g., Yelverton, 1997; Neal, 1999; Akers and Giacomino, 1999; Donlon, 2000; Schnebel, 2000).

Social concern regarding accounting ethics in the United States focuses on the interaction of ethics and professionalism and by emphasizing the importance of self-regulation. One of the major factors that positively affect a manager's self-regulation is his or her personal value system (Singhapakdi and Scott, 1993; Akaah, 1994; Yelverton, 1997; Donlon, 2000). Therefore, the personal value systems of managers should be

studied (Bresnahan, 1997) because they are the agents who formulate and implement business strategies (Kotey and Meredith,1997; Cichy,1997).

According to various researchers (e.g., England, 1975; Vyakarnam et al, 1997; Oliver,1999; Schnebel, 2000), managers' personal value systems affect their behavior in terms of how they evaluate information, make decisions, motivate and direct their subordinates, and how they behave generally in business activities. A better understanding of managers' personal values enhances our understanding of their behaviors.

Despite the important role of accounting managers of CPA firms, there is a considerable lack of research on their personal value systems and its relatedness to their behavior. Considering the important role of accounting managers of CPA firms, this study is very crucial.

CHAPTER 2

REVIEW OF THE LITERATURE

The purpose of this chapter is to clarify the concept of values and to review the empirical research related to personal values of managers. First, the concepts of personal values and value systems are defined. Second, the relative stability of personal values is presented. Third, personal values are differentiated from other related concepts such as beliefs, attitudes, opinions, interests, needs, social norms, and ideologies. Fourth, major factors affecting the personal values of managers are discussed, after a brief introduction of culture. Fifth, few studies on personal values in the accounting discipline are summarized. Finally, studies on personal values in other areas are highlighted.

Human Values

There is no universal definition of the concept of values and value systems in the literature. The way a writer defines values is affected by his or her field of knowledge, background, the era, and purpose of research. According to anthropologist Clyde Kluckhohn (1951), a value is a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable which influences the selection from available modes, means, and ends of action.

Williams (1967), a sociologist, defines values as those conceptions of desirable states of affairs that are utilized in selective conduct as criteria for performance or choice or as justification for proposed and actual behavior. Rokeach (1973), a psychologist, offers the following definition: A value is an enduring belief that a specific mode of

conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence.

Morrill (1980) defines values as standards and patterns of choices that guide persons and groups toward satisfactions, fulfillment, and meaning. To Hofstede (1985), a shorthand definition of values is that they are broad preferences for one state of affairs over others. They direct our feelings of good and evil. They are opinions on how things should be done. Indirectly they also affect our perceptions of how things are, and they affect our behavior. Bamberger (1986) defines values as “standards that determine what is considered good, desirable, or preferred. Brown (1986) sees that values represent priorities. The term *value* is generally used to describe concepts like truth, loyalty, commitment, and love. Management values deal with the way managers demonstrate priorities in a work setting (Brown, 1986).

Despite the variety of definition of what constitutes one’s values, there seems to be some consensus regarding two essential elements comprising value systems. These elements include: (a) a frame of reference which serves as a guide, system or standard an individual uses in making evaluations, and (b) alternative behaviors from which an individual selects the preferred action (Powell, 1977). Thus, behavior generally is viewed as a manifestation of values and values can be predictive of behavior.

Value System

As stated before, values are conceptions of desirable behaviors, goods, services, or other entities. Values represent wants, preferences, or general standards of conduct. Every individual has a set of values that are ordered in a hierarchy according to their importance or priority to the individual. This hierarchy of values is a value system which is considered as one determinant of the person’s actions enabling him or her to transmit expected responses to other persons (Zalezink et al., 1970).

According to Rokeach, a value system is an enduring organization of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of

relative importance (Rokeach 1973). A similar definition of value system is given by Sikula (1971). He has noted that value systems are a set of individual values which exist in a scale or a hierarchy that reveals their degree of relative importance. Individuals may all possess the same values, but they may attach different priorities or degrees of importance to them. Value systems are merely priority patterns of values or a ranking of values along a continuum of importance.

England (1967) defines one's values and value systems as "a relatively permanent perceptual framework which shapes and influences the general nature of an individual's behavior". Values are similar to attitudes but are more ingrained, permanent, and stable in nature. Likewise, a value is seen as being more general and less tied to any specific reference object than is the case with many attitudes. A value, as used here, is closer to ideology or philosophy than it is to attitude. It is England's definition which serves as the operational definition of values and value systems for the purpose of this study.

The Relative Stability of Personal Values

In 1967, England publishes the results of his investigation into the personal values of corporate management in the United States. He concludes that a personal value system is a relatively permanent perceptual framework that affects human behavior. Rokeach (1973) concurred with England that the personal value system is an enduring organization of beliefs or general plans employed to resolve conflicts and to make decisions.

Lusk and Oliver (1972) replicate England's (1967) study after five years. Their results reveal that personal value systems of American managers seem to be relatively stable. The differences between the value systems of England (1967) and the (1972) samples of managers were very small and insignificant. Using various conceptualization and measurements, Inglehart (1985) and Rokeach and Ball-Rokeach (1989) also demonstrate the stability of values over time. These results are consistent with those of Posner and Schmidt (1992) and Gable and Wolf (1993).

On the other hand, Cavanaugh (1984) finds that younger managers are more involved in their personal interests and less concerned with their business interests. Posner and Schmidt (1984) find somewhat similar findings. Hiley (1987) wondered if such assertions about changing values hold true. Later, Korsgaard et al. (1996) discovers temporary declines in values.

Oliver (1999) surveys a national sample of American managers in 1995 and compares his results with those of England (1967) and those of Lusk and Oliver (1972). The results of Oliver confirm two important findings: (1) the stability of the personal value structure over these three decades, and (2) the continuing pragmatism of American managers.

Values and Related Concepts

There are no universally accepted, clear-cut definitions that distinguish values from other concepts such as opinions, interests, needs, social norms, ideologies, beliefs, and attitudes. Since beliefs and attitudes are the most relevant concepts, these two concepts are given more emphasis and elaboration than are the other concepts in the following discussion:

1. Beliefs. Jacob and Flink (1962) refer to beliefs as existential propositions held by individual human beings regarding the structure and operation of the social and physical universe and one's place in it; vectors which bear upon an individual as he confronts a choice of conduct. According to Scheibe (1970), belief statements are answers to questions of fact. According to Berelson and Steiner (1970), beliefs are basic, having to do with central values of life. In other words, beliefs are more enduring, deep-rooted, and reflective of central personal values. Bamberger (1985) considers beliefs as certain opinions that seem to go together. Furthermore, Williams (1970) states that beliefs were primarily an existential reference; they concern what the believer takes as reality—the properties of and relationship among entities and processes. Beliefs are true or false, valid or invalid, or not testable. There is beliefs as such, no criterion of good or

bad, only 'is' or 'is not' in some sense and some degree. Since some definitions possess a notion of fact-orientation, it must be noted that Lesikar (1979) refers to a person's belief about or perception of reality as not being identical with reality itself.

Rokeach (1968) differentiates between three types of beliefs. The first type of belief is a descriptive or existential belief, which can be evaluated as being true or false. The second type of belief is an evaluative one in which the object of belief is judged to be good or bad. Powell (1977) points out that the third type of belief is a prescriptive or exhortatory belief, which involves evaluation of some means of end of action as desirable or undesirable.

According to Rokeach (1968), this third type of belief is a value. Thus, a value may be viewed as a particular kind of belief. Although the concepts of beliefs and values are closely related. Scheibe (1970) differentiates between them in the following manner: Belief statements refer to what is possible, what exists, what happened in history, what a person is, and what he can do. They are framed in terms of expectancies, hypotheses, subjective probabilities, assumptive worlds, cognitive maps, and so on. Value judgments refer to what is wanted, what is best, what is desirable or preferable, and what ought to be done. They suggest the operation of wishes, desires, goals, passions, valences, or morals. Williams (1970) also demonstrates that values and beliefs are related but not identical.

2. *Attitudes.* Attitudes are defined in various ways. Here are some examples. One definition is that "an attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (Allport, 1935). Another definition is that an attitude is primarily a way of being 'set' toward or against certain things (Murphy and Newcomb, 1937). A further definition is that an attitude is a relatively stable affective response to an object (Rosenberg, 1956).

Finally, an attitude is a tendency or disposition to evaluate an object or the symbol of that object in a certain way (Katz and Stotland, 1959). According to Insko (1967), while the first definition implies that attitudes refer to a very general state of readiness, and the second one restricts the state of readiness towards or against certain objects, the third and fourth definitions focus on the affective tendency to favorably or unfavorably evaluate objects and completely discard the notion that any overt behavior is implied. While Wagner and Scherwood (1969) argues that a value may represent a collection of attitudes, England's (1967) views a value as more ingrained, permanent, and stable in nature than an attitude.

Other researchers are differentiating between attitudes and values. For instance, Rokeach (1973) elaborates on the differences between an attitude and a value. Some major differences are: (a) while the substantial content of a value may concern ego defense, knowledge, or self-actualizing functions, the concept of an attitude is related to such functions only inferentially; (b) values occupy a more central position within an individual's personality make up than attitudes, so they are determinants of attitudes and behavior; (c) whereas a value is a single belief, an attitude refers to the organization of several beliefs that are all focused on a given subject or situation; and (d) a value is a standard but an attitude is not a standard.

A similar elaboration on the differences between attitudes and values comes from Mindell and Gorden (1981). The authors view values as more pervasive and fewer in number than attitudes. Values do not differ from attitudes in quality only, but also in terms of their depth of impact, judgement and choices about persons and things.

3. Opinions. Insko (1967) describes opinions as non-evaluative beliefs which must be distinguished from values. Berelson and Steiner (1964) also indicate that opinions usually refer to topical and short run affairs reflective of central personal values. Finally, Martha Brown (1976) considers an opinion as "a verbal expression of some belief, attitude or value, insufficient to produce certainty."

4. *Interests.* Perry (1954) considers a value as any object of interest. Therefore, the two concepts are identical. But Rokeach (1973) views interest as a narrow concept of value, one that cannot be classified as an idealized mode of behavior or end-state of existence. Interests resemble attitudes more than values, representing a favorable or unfavorable attitude toward certain objects or activities.

5. *Needs.* Murray's (1938) list of needs is transformed into White's (1951) list of values. French and Kahn (1962) also indicate the similarity between values and needs. Moreover, Maslow (1964) has referred to self-actualization both as a need and as a higher-order value. Based on Maslow's mentioned arguments (values are equivalent to needs), then the lowly animals may possess values. However, Rokeach (1973) asserts that human beings are the only animals that have values.

6. *Social Norms.* A social norm is a prescription and proscription to behave in a specific way in a specific condition (Rokeach, 1973). For example, Navajo Indians were found to refrain from having ceremonials at the time of an eclipse of the moon (Kluckhohn, 1951). Social norms thus neither refer to end-states of existence nor transcend specific situations as do values. Furthermore, a norm is consensual and external to the person, but a value is more personal and internal (Rokeach, 1973).

7. *Ideology.* Kluckhohn defines ideology in terms of a system of ideas; he says that ideology: always refers to a system of ideas, but the system is sometimes constructed to be based on the special interests of some segmental or distributive minority within the society, sometimes upon a supernatural revelation, sometimes upon any non-empirical, nonscientific norm. In general, ideology has today a somewhat pejorative sense which does not attach to value. It might legitimately be argued that ideologies determine the choice between alternative paths of action, which are equally compatible with the underlying values (Kluckhohn, 1951).

Brown (1976) defines ideology as an organization of beliefs and attitudes—religious, political, or philosophical in nature—that is more or less institutionalized or shared with others, deriving from external authority.

Elements of Culture

Hunger and Wheelen (2000) points out that: (a) as economic factors affect the exchange of materials, money, energy, and information, (b) as technological factors generate problem-solving inventions, and (c) as political-legal forces allocate power and provide constraining and protecting laws and/or regulations, sociocultural forces concurrently regulate values, habits, manners, and customs. Shartle et al. (1964) suggest that personal values are determined by culture. Hofstede's (1976) study of 372 middle-level managers from forty nationalities who attended resident management programs in Lausanne, Switzerland, reveals that both linguistic and cultural reasons lead to similarities and differences in the manager's value profiles in each country. In another study, Hofstede (1980) finds value systems to be culturally determined to a large extent. Similar findings are provided by England et al. (1974), England (1975), and Whitely and England (1977, 1980).

In order to understand the complex phenomenon of culture and cultural differences, one should study the elements of culture. Murdock (1945) provides a classical list of seventy-three cultural universals including language, communication, nonverbal communication, religion, and attitudes toward family, authority, material, time, achievement, change, risk, and decision making. Wheelen and Hunger (1987) also identify various sociocultural factors such as life-style changes, career expectations, consumer activism, rate of family formation, growth rate of population, age distribution in population, regional shifts in population, life expectancies, and birth rates. Finally, Buchholz (1986) identifies various influences on values such as technology, shifts in population, education, family, religion, the increasing numbers of working women, and affluence.

In practice, these sociocultural elements are closely interrelated. They are separated throughout the following section only to facilitate their presentation. For practical reasons, only major sociocultural factors affecting values are discussed, excluding other cultural phenomena.

Major Sociocultural Factors Affecting Personal Values of Managers

After the concepts of society and culture are presented and several sociocultural factors are illustrated, major factors affecting the values of American managers follow. These factors include family, friendship, groups, experience, peers, religion, education, shift in population, affluence, and technology.

1. Family. The family is the first basic institution that affects values (Buchholz, 1986). Child-bearing practices are an expression of the family's values and the values of the social group to which the family belongs (England et al., 1974). Parents and other members of the family have great influence on the formation of an individual's values. Consciously or unconsciously, children tend to internalize their parents' values and attitudes regarding religion, education, friendships, work, spending money, decisions concerning how to resolve conflicts with friends, good or bad behavior, etc. Of course, the individual's values are not expected to be exactly the same as those of his or her parents—there may be some differences and conflicts in values due to the influence of other sources of values or because of other factors (Kalish, 1970).

According to Buchholz (1986), the American family plays a crucial role in the socialization of children and the transmitting of values from generation to generation. But with the increasing numbers of American women employed outside the home, more and more children are spending their early years in day-care centers or nursery homes. The increasing divorce rate also is destroying many American families, having a severe impact on the American culture.

On the other hand, Pezeshkpur (1975) indicates that many changes are occurring in the American family. In the frontier days, the American family was very close-knit. It was the center of educational, religious, and recreational activities. But gradually these activities are taken over by specialized groups external to the family, such as schools, churches, and social organizations. American family members have less contact with each other today than they ever had in past years. In addition, the tremendous mobility of American society during the past several decades has physically separated family members. Consequently, Americans are less dependent on their immediate family members and have become more tolerant of other people around them who are external to the family.

2. Friendship: Groups, Experiences, and Peers. A factor related to the family is the combination of the individuals' friendship groups, their experiences, and peers. Personal experiences and the values of friends interact with an individual's personality and values to affect his or her value system (Kalish 1970). Posner and Schmidt (1984) find that the value system of American managers is affected by their peers, subordinates, and superiors.

3. Religion. Davies (1976) defines religion as "the expression of man's belief and reverence for a superhuman power recognized as the creator and governor of the universe." Judaism, Christianity, and Islam are religions that claim to be divinely inspired (Lutfiyya 1970). For many people, values are derived from a religious commitment which may conflict with the dominant values of a society. Shinn said that "it is hard to imagine any serious religious commitment that does not shape the values of its adherents" (Shinn, 1979).

The dominant religion in America is Christianity. Like other religions, Christianity has various groupings such as Roman Catholics, Protestants, and Eastern Orthodox. For Christianity, God is the center of value. Grant (1983), for example, supports the idea that God is the center of value according to the value theory in

Neibuhr's (1960) theology. In his recent ambitious research, Fichter (1983) also finds that the American nation is witnessing a re-evaluation that is leading to the deprivatization and reinstitutionalization of religion.

Although Americans are religious persons like other managers, the religious orientation of the American persons is tempered by other values. While the other managers believe that God oversees his or her most minute activities, the American person has a tendency to categorize situations according to individual circumstances rather than viewing all events within a religious context (Pezeshkpur, 1975).

4. Education. Education is also an important source of values. Values are acquired from and are influenced by formal and informal education. Students are influenced by the books they read, the teachers to whom they listen, their classmates, television, etc. (Kirschenbaum and Simon, 1973). Education influences cultural values because it broadens individuals' horizons and acquaints people with new sets of possibilities. In addition, education gives people access to different directions or dimensions of life. As people attain more formal education, they may question their values or reject some traditional values and adopt other values that achieve their desires and goals (Buchholz, 1986).

While other universities emphasize religion (Tell, 1980), American colleges and universities are committed to moral education (Morrill, 1980). Values clarification has received great devotion from various educators (Simon, Howe, and Kirschenbaum, 1972; Raths, Harmon, and Simon, 1978). However, the tradition of moral education in most contemporary colleges and universities became weak for various reasons: autonomy and professionalization of the disciplines, the prestige of value-free scientific method as a model for all inquiry, and the secularization and pluralism of society and the university.

The turbulence of the American campuses during the late 1960s and early 1970s helped to generate and mask a serious plea for reform in liberal education (Morrill, 1980). Despite recent interest in moral education and human values, education and educators

find a breach between knowledge and values, according to a study of twelve professors of various disciplines (Sloan, 1980). Although values in education are as important for a student's development as math and sciences, schools are often captured by academic achievement and goals, excluding factors contributing to young people's character (Hornbeck, 1987). Consequently, Morrill (1980) and Hornbeck (1987) suggest that schools should put high emphasis on values teaching in classroom curricula at all schools and universities.

5. Shift in Population. A shift in population influences the dominant values in society. For example, if the aged come to be a majority of the population, the values of this majority as a group will exercise more influence over the whole society. When young people became the majority of the American population in the 1960s, their values dominated many segments of American society during those years (Buchholz, 1986).

Various researchers are providing empirical evidence that shifts in population affect managers' values. For example, Cherrington (1977) and Cherrington et al. (1979) find that older workers emphasize different value concepts from those emphasized by younger workers. Similarly, Askar (1979), El-Baruni (1980), and Ali (1982) provide empirical evidence from Egypt, Iraq, and Libya, respectively, that shifts in populations' demographic characteristics affect their personal value system.

6. Affluence. Buchholz (1986) indicates that affluence influences values. The author argues that society can be looked at from the point of view of the Maslowian hierarchy of needs (1959). When more and more people in a society become affluent and thus fulfill their basic needs, they can move up the hierarchical ladder to fulfill higher order of needs. With increased levels of income, other things become important to them that were not within the range of possibility before. Besides their economic needs, they desire other services and pursue other goals in order to improve the quality of life for the whole society.

As affluence affects values in America (Buchholz, 1986), various related studies in Egypt (Askar, 1979), Iraq (Ali, 1982), and Malaysia (Ismail, 1977) provide empirical evidence that high levels of income affect managers' personal values.

7. Technology. Technology includes both the so-called "hardware" technology, such as labor ratio, product design, manufacturing methods, and patterns and "software" or managerial technology (Yeh, 1986). Differences in managerial technology are attributed to cultural origins that can be measured by managers' values (Hofstede, 1985). Technology affects values in that it makes some things possible that could never be done before, or allows one to do something more easily or cheaply than before, changing the benefit-cost ratio.

Various examples of the effect of technology follow. The invention of the airplane has made it possible to travel long distances with relative ease and at increased speeds, making more distant places accessible. Modern medical technology has made it possible for more people to enjoy good health than ever before. Technological information also changes the importance of certain things in American society. For example, since it is known that using the environment for dumping dangerous wastes is commonplace, the importance of protecting the environment has increased dramatically with more resources being allocated to cleaning it up and preventing future irreparable harmful occurrences (Buchholz, 1986).

The influence of technology on managers' values is in other countries being felt in cities and towns through imported technology from West Europe, Canada, and America. Imported technology is affecting business, industry, most professions, and general patterns of life in matters ranging from recreation means to dress fashions (Shelibi, 1987). However, research on multinational corporations (MNCs) raises many vital issues, one of the most interesting being the transfer of technology within MNCs (Baranson, 1978; Stobaugh and Wells, 1984). In general, technological advancements in

communication and information are bringing the world closer, resulting in increased interaction and cultural borrowing (attitudes, beliefs, and values) among societies.

Studies on Personal Values in the Accounting Discipline

Unfortunately, few studies are available on personal values in the Accounting Discipline. For example, Swindle, Phelps, and Broussard (1987) survey a national sample of CPAs. The authors conclude that CPAs have values that are “personal oriented” as opposed to “social-oriented.” Possible explanation are (1) CPAs’ values are not representative of society’s value, (2) the authorities are not correct in their views of society’s values, and (3) the selected sample is not representative of the population. In addition, the CPAs reject the unethical actions illustrated in most cases. Corless, Bartlett, and Seglund (1990) investigated psychological factors affecting the auditor’s independence. It is found that auditors and clients share personal vales. This fact is one of the five factors affecting auditor independence.

Similarly, Abdolmohammadi (1996) surveyed auditors, accounting educators, and accounting students. He found that personal attributes, such as honesty, are rated more important than professional attributes. McCarthy (1997) examines the level of consensus of accounting students (ethical orientation) to the ethical standards of the American Institute of Certified Public Accountants (AICPA). She does not find a relationship between ethical orientation scores of AICPA Code of Conduct in collegiate courses in accounting and the accounting students’ personal values.

Yetmar, Cooper, and Frank (1999) survey a sample of AICPA Tax Division members to ascertain the factors that help and challenge CPA tax practitioners in responding to various ethical dilemmas encountered in the course of their work. Results indicate that ethical behavior may be affected by their personal values in addition to their firm’s formal policy, culture, and professional environment. Giacomino and Akers (1998) examined differences between the personal values and value types of female and male

accounting and non-accounting majors. The authors found very few differences between the values of the two groups of students.

Using the Schwartz's (1992) personal values questionnaire, Akers and Giacomino (1999) examine the personal values of certified internal auditors (CIA). The findings of the study suggest that: (1) certified internal auditors exhibit values and value systems (value types) embodied in the Standards of Conduct, (2) female and male certified internal auditors have very similar values and value systems. However, few differences do exist between the two groups, (3) there are only minor differences between younger and older surveyed certified internal auditors.

Using the Schwartz's personal values questionnaire, Gacomino and Akers (2000) examine the individual values and value types of the one-hundred most influential people in accounting (as determined by Accounting Today) and the managing partners of the one-hundred largest public accounting firms. The results do not reveal differences in the ranking order of both groups.

Hence, it can be seen that no study has examined the value orientations and value profiles of individual CPAs or higher levels (manager, CEOs, or partners). Furthermore, none of the previous studies has focuses on the relationship between the personal values of individual CPAs or their managers and the decision-making processes of these individuals.

Due to the scarcity of studies on personal values in the Accounting Discipline, selected studies conducted on personal values in other areas are presented in ensuing sections.

Studies on Personal Values and Manager's Behavior

Several researchers claim that the manager's personal values have significant effects on various dimensions of his/her behavior including organizational

competitiveness, job performance, organizational and professional commitment, turnover, willingness to take risk, success, satisfaction, etc. Some studies are mentioned here.

There is very little conceptual or theoretical literature that explicitly deals with the influences of managers' personal values on firm's *competitiveness*. Using parametric and non-parametric tests on a sample of 600 firms, Porter et al. (1974) point out that managers' personal values positively affect firms' competitiveness.

Finegan (2000) explores the relationship between personal values and *organizational commitment*. He utilizes McDonald and Gandz's (1992) taxonomy of values and the eighteen-item commitment scale developed by Meyer, Allen, and Smith's (1993). The result of this study confirms a relationship between personal values and the three dimensions of organizational commitment (affective, normative and continence commitment). Likewise, Cramer (1986) founds positive relationship between the manager's personal values and his or her *professional commitment*.

Studies on Personal Values and Managerial Decisions

Organizational decisions are made by individual organization managers. Therefore, understanding the managers' value systems will be crucial to institutionalize business ethics in their organizations Barnett and Karson (1987). According to Fritzsche (1995), personal values are long associated with individual's decision behavior. The author examines the relationship between personal values and the decision making process to clarify the role played by personal values in the decision making within organizations. The results of this study finds a relationship between personal values and the decision making process. Similarly, Sokoya (1992) finds similar results.

Finegan (1994) examines the relationship between personal values and judgement of ethical decision in the work place. Finegan (1994) uses Rokeach's (1973) instrumental and terminal values to measure the personal values. The decision making is measured by four scenarios, each of which described ethically questionable behavior of the sort that

might be encountered in business organizations. The result indicates a relationship between the managers' personal values and their ethical decisions.

Studies on Personal Values and Marketing Professionals' Ethical Behavior

The proposition that personal values influence ethical decision making of marketers is well organized in the marketing ethics theories. Singhapakdi and Scott (1993) provide an additional partial test of some theoretical work in marketing ethics. The authors examine the relative influences of personal values on the ethical judgements of marketers. The results reveal an association between the personal values of marketers and their ethical decision.

Akaah and Lund (1994) conduct a similar study to refute the notion that marketing practices has been identified as the one most often charged with unethical practices. They did not find a relationship between the marketing professional's values and their ethical behavior. In contrast, Rustogi, Hensel, and Burgers (1996) found similar results to those of Singhapakdi and Scott (1993) in the advertising area.

Studies on Personal Values and Organizational Commitment

Organizational commitment is an identification with and involvement in a particular organization. Three factors comprise its definition: (1) an acceptance of organizational goals and values, (2) a willingness to act in the interest of the organization, and (3) a desire to remain part of the organization (Mowday, Steers, and Porter, 1979). Organizational commitment pertains to the organization itself and consists of three factors: (1) agreement and acceptance of organizational goals and values, (2) Willingness to work on behalf of the organization, and (3) Loyalty to the organization (Mowday et al., 1979).

Edwards (1994) attests that the relationship between personal values and organizational commitment is not new to the field of Organizational Psychology. For

example, Fiedler's leadership theory (1978), Holland's (1985) theory of vocational choice, and Hackman and Oldham's (1980) job characteristics model are but a few examples of the theoretical framework that is based on the idea that characteristics of the person and job interact to determine such things as a job choice, satisfaction, commitment, and employee well-being.

One fundamental characteristic that both employees and organizations share is values (Dose, 1997). According to Dose, *personal values* are "evaluative standards relating to the work or the work environment by which individuals discern what is right or assess the importance of preferences." One can easily generate examples to show how individuals would probably be more comfortable in an environment that is consistent with their values. Therefore, personal values of an individual can affect his or her commitment to the organization. Porter et al. (1974) define commitment as a "strong belief in the acceptance of organization's goals and values, a willingness to exert considerable effort on behalf of the organization, and a definite desire to maintain organizational membership." Given that personal values play such an important role in the definition of commitment, it stands to reason that a person whose personal values matched the operating values of the organization would be more committed to the organization than a person whose personal values differed from those of the organization.

Despite the important role of personal values, little empirical evidence exists for this idea (O'Reilly, Chatman, and Caldwell, 1991). One major study that examines the relationship between value congruency and commitment was that of Chatman and her colleagues (Chatman, 1989, 1991; Cladwell and O'Reilly, 1990; O'Reilly, Chatman, and Cladwell, 1991). They find evidence to suggest that a value fit between the person and the organization is related to commitment. Illustrative of such a unidimensional approach is the work of Posner and Schmidt (1992) who looked at person-organization value fit and commitment.

On the other hand, O'Reilly et al. (1991) recognizes the multidimensional nature of commitment and finds that normative, value-based commitment is predicted by person- organization fit but instrumental compliance-based commitment is not. More recently, Meyer and Allen (1991) present compelling evidence to suggest that commitment comprises three distinct components, not two. Affective commitment describes the emotional attachment a person feels for the organization. Normative commitment describes the feelings of obligation a person has to remain with an organization. Finally, continuance commitment develops as employees recognize that they have accumulated investments which would be lost if they were to leave the organization, or as they recognize that the availability of comparable alternatives is limited (Meyer et al. 1993). With all three types of commitment, the employee is committed to the organization but for different reasons, and each type of commitment produces different effects.

Meyer et al. (1989) find that affective commitment is associated with higher productivity. Allen and Meyer (1996) find that affective commitment is associated with more positive work attitudes. Meyer and Allen (1991) find that the same type of commitment is associated with a greater likelihood of engaging in organizational citizenship. While Meyer et al. (1989) find similar results for normative commitment, they find continuance commitment to have very few positive relations with performance indicators. Kalliath and Bluedorn (1999) investigate the personal and organizational value congruence on organizational commitment. A sample of hospital employees were asked to make judgements about their personal preferences for four competing value sets. It is found that the value congruence of the surveyed employees and those of their organizations is not important to job satisfaction. On the other hand, the personal values of these employees were important to their organizational commitment.

Finally, Finegan (2000) goes beyond past work by looking at the personal relationship between personal values and organizational commitment. The author treats

personal values and organizational commitment as multidimensional constructs. Thus, the study examines the relationship between different clusters of values and different types of commitment. Finegan uses factor analysis with a varimax rotation for the 24 personal ratings of McDonald and Gandz's (1991, 1992) taxonomy of values. The results generate a four-factor solution which are used to create scales representing how much participants valued the items which loaded on a given factor. He also used Meyer, Allen, and Smith's (1993) 18-item commitment scales. The results of hierarchical multiple regression analysis showed that organizational commitment are predicted by the employees' values. Further more, affective , normative, and continece commitment were each predicted by different clusters of values.

Studies on Personal Values and Job Satisfaction

Job satisfaction refers to the degree of positive feelings one experiences on the job (Locke, 1976). High job satisfaction suggests that an individual feels good about specific work responsibilities and his/her ability to accomplish them. Job satisfaction represents the degree to which an individual feels good about his or her job (Locke, 1976).

Several studies examined the relationship between personal values and job satisfaction. Mobley and Locke (1970) attest that when values are considered important, values attainment produced more satisfaction. In contrast, values frustration produced lesser satisfaction. In a suggested theory of job satisfaction, Kalleberg (1977) points out that values should be in the model of job satisfaction since values have independent and significant effect on job satisfaction. England (1975) asks managers in five countries (United States, Japan, Korea, India, and Australia) to respond to four items pertaining to job satisfaction. These items are drawn from the Hoppock Job Satisfaction Scale and have been used extensively in job satisfaction research. Each of the four job satisfaction items is measured on a seven Likert scale. England (1975) finds that managerial values were moderately related to the level of managerial job satisfaction. While there are country

differences in these relationships, the findings across the five countries are similar in a reasonable fashion. Across the five countries, job satisfaction tends to go with high affective identification with one's own country. The United States' managers and Korean managers are slightly more satisfied than the managers in the other three countries.

Because the primacy of values in managerial and organizational behavior continues to gain support in management literature, El-Baruni (1980) replicates England's (1975) study to investigate the relationship between the personal values of Libyan managers and their job satisfaction. The findings of El-Baruni's (1980) study reveal that there is no significant relationship between personal value systems of Libyan managers and their job satisfaction. These findings are contrary to El-Baruni's expectations and to England's (1975) findings on this topic in five countries (United States, Japan, Korea, India, and Australia). Apasu (1986) tests the relationship between the personal values of salespersons and their job satisfaction. The personal value questionnaire was used to measure the personal values of a national sales force of a company manufacturing high-technology industrial goods. The results of correlation analysis and regression analysis reveal that personal values of salespersons affect their job satisfaction. Mottaz (1986) finds similar results.

Using the personal value questionnaire of England (1967), Sokoya (1992) studies the personal values of 150 public managers at the state level in Nigeria. The results of Sokoya's (1992) study indicates that there is a positive and significant relationship between personal values of the surveyed Nigerian public managers and their job satisfaction. Comparing corporate managers' personal values over three decades (1967-1995), Oliver (1999) finds that the four attitude related questions concerning job satisfaction yields some interesting results. The answers to "How well do you like your job" are statistically similar to those answers for the years 1967 and 1995 with only a few percent hating or disliking their jobs. Almost 60 percent of current respondents are satisfied with their jobs most or all of the time, but over 12 percent of them are seldom

or never satisfied. Similarly, almost 11 percent would like to change their jobs and occupations.

Kalliath and Bluedorn (1999) investigate the impact of personal values on job satisfaction. A sample of hospital employees are asked to make judgements about their personal preferences in terms of values. The results indicate that personal values have a significant impact on their job satisfaction.

Studies on Personal Values and Managerial Success

According to England et al. (1974), the relationship between the personal values of managers and their success as managers is an important issue. The authors want to know if the value systems of successful managers are different from those of relatively less successful managers. One major problem in dealing with this topic includes the definition and determination of a success measurement.

Previous studies are employing *salary* corrected by starting salary, seniority, or salary relative to peers (Bray, Grant, and Katkousky 1967; Hinrichs 1967; and Laurent 1970). Pay, organizational level, promotion, and promotion rates are also being employed as success criteria (Patton 1965; Mitchell and Porter 1967; and Laurent 1970). Finally, a frequently used criterion measure of success is ratings, either of behavior or of overall managerial effectiveness (Hinrichs 1967; Hemphill 1960; Williams 1956; and Smith and Kendall 1963).

England et al. (1974) defines *managerial success* as *managerial pay relative to age*. This *success criterion* is a relative measure of personal success within the total sample of managers and is not necessarily identical to organizational success or managerial effectiveness. However, it does provide a cross-organizational measure which is sufficiently accurate for the purposes of this study. England et al. (1974) procedure for developing a measure of success is as follows: (1) Separate managers into eight age categories--20-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60 and over. (2) Convert the

distribution of monthly income received by managers in each age category into a standard score with a mean of zero and a standard deviation of 1.

Thus, a manager in any age category who received a high salary compared to others in his age category would receive a high relative success score (approaching 3.0), while a manager whose salary was low relative to others in his age group would receive a low relative success score (approaching -3.0). Each manager, then, has a personal success index between -3.0 and +3.0, depending upon his relative salary position within his age group.

England et al. (1974) examine the relationship between the personal values of Indian managers and their success as managers. It is found that there was a qualified relationship between the level of success achieved by Indian managers and their personal values. Successful managers appear to favor pragmatic, dynamic, achievement oriented values. In contrast, less successful managers emphasize more static and passive values. More successful managers seek achievement orientations and looked for active and leadership roles. Less successful managers prefer values associated with protected environment in which they took relatively passive roles.

England and Lee (1974) examine the relationship between managerial values of international managers (American, Australian, Indian, Japanese, and Korean) and managerial success. The researchers conclude that cross-validated results show that values are significantly predictive of managerial success and could be used as a basis for selection and placement decisions. They also find that more successful managers have pragmatic, dynamic, and achievement-oriented values, while less successful managers have more static and passive values. Singer (1975) also investigates the relationship between values and leadership and found that successful managers placed a high priority on moral standards and personal integrity. In contrast, El-Baruni's study (1980) does not find a significant relationship between personal value orientation and Libyan managerial success.

Lindcamp (1981) conducts a study to examine the relationship between personal values and business success of small independent retailers. Results show a relationship between personal values and business success with consideration to situational variables (e.g., education, age, and others). Finally, in their ambitious study of over 6,000 managers, Posner, Kouzes, and Schmidt (1985) find that shared values are related to feelings of personal success. Nomikos (1985) find similar results for a national sample of Greek managers.

Studies on Personal Value Differences Between Male and Female Managers

Although information systems (IS) are an integral part of business today, and the benefits are numerous, there is also a downside to the easy data access that IS provides today. There are opportunities for invasion of privacy, data theft, money, and intellectual property (such as software, and product design). Studies are citing the monetary loss to business as a result of the misuse of computers and computer fraud amounts to billions of dollars per year. Fortune Magazine reported recently that many companies do not report such problems to avoid negative publicity. It is found that about half of the 1,300 respondents suffered security-related losses (Kreie and Cronan, 1998).

Kreie and Cronan (1998) investigate the personal values of men and women managers in terms of what is ethically acceptable and what is unacceptable judgements about issues in the IS activities. The results indicate that men and women managers are distinctly different in their assessment of what is ethical or unethical behavior. For all five scenarios presented, men are less likely to consider a behavior as unethical although their judgements are influenced by their personal values. Women are more conservative in their judgements than men, and are affected by their personal values than do men.

Many suggest that the type of individual who becomes an entrepreneur is psychologically distinguishable from the type of individual who becomes a manager. It is also argued that within these occupations men and women are fundamentally different.

Fagenson (1993) evaluate the accuracy of these characteristics by comparing the personal values systems of men and women entrepreneurs and managers. The results of the study revealed that the individual's gender has very little influence on the value systems.

On the other hand, Chusmir and Parker (1991) examine gender differences in values of men and women managers at work and home. The authors propose that there are significance differences between the values of both men and women managers at work and at home. It is found that men and women managers report strikingly similar values at work. In contrast, there are differences in values of the two groups at home. The results suggest that the dual hierarchy varies according to gender.

Ryan et al. (1981) tests the relationship between personal values and the success of male and female managers. Subjects are taken from public and private sectors. They find a moderate relationship between the personal values of each of the male-female managerial groups and their success as managers. The results of their study also indicate that female managers show a slight success-value difference from their male counterparts.

Chapter Summary

Chapter two provides a review of the relevant literature concerning theoretical and empirical studies on personal values. The first section introduces some definitions pertaining to human values and value systems. The second section briefly elaborates on the relative stability of personal values. The third section differentiates between personal values and other related concepts (belief, attitudes, opinion, interests, needs, social norms and ideologies). The first part of the fourth section includes a brief introduction about culture and some details about culture elements. The second part of the fourth section presents major factors affecting the personal values of managers. The first part of the fifth section focuses on few studies conducted on personal values in the Accounting field. Due to the little of research conducted on personal values in the Accounting field, the second part of the fifth section has highlights studies conducted on the personal values in other

business areas. These studies concentrate on the impact of personal values on the individual's behavior, decision, ethical behavior, organizational commitment, job satisfaction, and managerial success. Finally, the third part in this section explores studies that investigated potential value differences between male and female managers.

The literature review reveals that research on personal values in the Accounting discipline is lacking at best. This study attempts to narrow this gap by investigating the value orientations and the value profile of CPA firm's managers as a group. This study also examines value differences, if any, between female and male managers of CPA firms. In addition, the study investigates the relationship between the personal value systems of CPA firms' managers and their managerial decisions, job satisfaction, organizational commitment, and their success as managers.

In Chapter 3, instruments of measuring personal values are discussed and evaluated. In that chapter, England's Personal Value Questionnaire is presented. Instruments that aim at assessing managerial decisions, job satisfaction, organizational commitment, and managerial success are provided in Chapter 4.

CHAPTER 3

APPROACHES TO VALUES MEASUREMENT

There are various scales which are devised to measure values. For example, Robinson and Shaver (1973) reviews twelve instruments that have been developed by various theorists to measure values. Despite this variety, relatively few instruments have been frequently used to measure values. Five relevant approaches are briefly discussed and assessed in this chapter.

The Study of Values (SV)

Spranger (1928), a German psychologist, is one of the first theorists to classify people according to the main values they hold. He recognizes six fundamental types of values: theoretical, economic, aesthetic, social, political, and religious. These six value types are summarized below:

1. The theoretical person. The theoretical person is primarily interested in the discovery of truth and in the systematic ordering of his knowledge. His or her interests are empirical, critical, and rational. Scientists or philosophers are often this type of individuals.

2. The economic person. The economic person is primarily oriented toward what is useful. He is interested in the practical affairs of the business world, in the production, marketing, and consumption of goods, and in the use of economic resources. He fits the stereotype of the American businessman or business woman.

3. The aesthetic person. The aesthetic person finds his or her main interest in the artistic aspect of life, although he or she does not need to be a creative artist. The importance of beauty is in all aspects of existence, especially nature.

4. The essential value for the social person. The essential value for the social person is love of people. He or she values people as ends in themselves and tends to be kind, sympathetic, unselfish, and approaches life via a religious philosophy and attitude.

5. The political person. The political person is characteristically oriented toward power, not necessarily in politics, but in whatever area he or she functions. Most leaders have a high power orientation.

6. The religious person. The religious person is one whose mental structure is permanently directed to the creation of the highest and most absolutely satisfying value experience. He or she has a mystical orientation (Guth and Taguri, 1965)

This classification scheme serves as the theoretical basis for a questionnaire developed by Allport and Vernon in 1931, and revised in 1951 and 1960, to measure the relative strength of each of the six value orientations summarized above. The questionnaire consists of 120 questions (with 20 questions per value). Each respondent can express strong, slightly strong, or weak preferences to each item of the 20 questions based on a scaling technique (3= strong, 2= slightly strong, and 1= weak preference). The rank order of the six values is decided by the total scores related to the 20 items of the six values.

Values for Working Questionnaire (VWQ)

Flowers and his associates (1975) classify values into six profiles and developed an instrument known as the Values for Working Questionnaire (VWQ) based on Graves' (1970) work. The six value profiles identified are as follows:

1. A tribalistic value system. A tribalistic (traditionalistic) value system is characterized by rigid traditions and adherence to the tribe's belief system. Tribalistic

individuals prefer routine work, strong guidance, and encouragement from their superiors. They expect recognition when their work is done properly.

2. *Egocentric individuals.* Egocentric (exploitive) individuals are those who no longer devote their energy to maintain the tribal way of life. They are not generally inclined to live within the limits and constraints of society's norms. They also let their subordinates know that they are in charge.

3. *Conformist individuals.* Conformists (sacrificial) individuals are those who focus on the means to ends and not on the end of existence. They do not tolerate values of others and may sacrifice themselves if their values are threatened. Conformists prefer job descriptions and procedures, and enforce their organizations' rules.

4. *Manipulative individuals.* Manipulative (materialistic) individuals know how to play the game and how to master and manipulate their environment. They are interested in short-run profits for their own reputation, and prefer leadership that does not ask questions as long as the work is done.

5. *Sociocentric (sociocratic) individuals.* Sociocentric individuals are those who value interpersonal relations, communication, respect, kindness, and have little concern for material things, power, and wealth. They create a supportive working environment and emphasize cooperation with all of their employees.

6. *Existential individuals.* Existential individuals are those who have a high tolerance for the values of others. They create an open environment in which any individual can realize his goals, and they are inclined to work with their subordinates in setting goals. They also prefer job autonomy, job challenge, imagination, initiative, and creativity (Flowers et al., 1975).

The Rokeach Value Survey (RVS)

The RVS, a widely use instrumental technique to measure values, was developed by Rokeach (1973). It is widely used in various disciplines such as psychology, sociology, and management. The RVS, which consists of eighteen "instrumental" values

and eighteen “terminal” values, is presented in Table 1. The terminal values represent end-states of existence, while the instrumental values represent means towards achieving the end or terminal values. Respondents rank each of these lists of values by their perceived relative importance. Thompson et al. (1982) conclude that ranking requirements from respondents evaluation for a list of values are useful when information about value choice is desired, but that normative or rating evaluations for each value are more appropriate when the research investigates the nature of value perception. Because the RVS is also more concerned with philosophical understanding of values than most, if not all, available instruments, Kitwood (1978) recommends the RVS for individuals with average or above average academic attainment.

TABLE 1
Concepts of the Rokeach Value Survey

Instrumental	Terminal Values
Ambitious	Comfortable life
Broad-minded	Exciting life
Capable	Equality
Cheerful	Family security
Clean	Freedom
Courageous	Happiness
Forgiving	Inner harmony
Helpful	Mature love
Honest	National security
Imaginative	Pleasure
Independent	Salvation
Intellectual	Self-respect
Logical	Sense of achievement
Loving	Social recognition
Obedient	True friendship
Polite	Wisdom
Responsible	World of beauty
Self-controlled	World at peace

Source: Milton Rokeach, *The Nature of Human Values* (New York: Free Press, 1973), 28.

Schwartz Values Survey (SVS)

Following the work of Kluckhohn (1951) and Rokeach (1968), Schwartz and Blisky (1987, 1990) develop a theory of values. Their theory identifies ten motivationally distinct value types. Schwartz and Blisky (1987, 1990) propose that the principal difference between instrumental and terminal values is the motivational aim they intend to illustrate. This aim takes the form of three universal needs: physiological components, coordinated social interaction, and effective group functioning. From these universal needs, ten motivational distinct values emerge. Each type of value specifies a primary goal and the instrumental or terminal value that it represents. The ten universal value types are presented in Table 2.

TABLE 2

Motivationally Distinct Value Types

Value Types	Definitions/components
Achievement	Personal success through the demonstration of competence according to social standards. (Successful, Capable, Ambitious, Influential)
Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact. (Helpful, Honest, Forgiving, Loyal, Responsible)
Conformity	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms. (Politeness, Obedient, Self-discipline, Honoring Parents and Elders)
Hedonism	Pleasure and sensuous gratification for one self. (Pleasure, Enjoying Life)
Power	Social status and prestige, control or dominance over people and resources.(Social power, Authority)
Security	Safety, harmony, and stability of society, of relationships, and of self. (Family Security, National Security, Social Order, Clean, Reciprocation of Favors)
Self- direction	Independent thought and action-choosing, creating, exploring.(Creativity, Freedom, Independent, Curious Choosing Own Goals)
Stimulation	Excitement, novelty, and challenge of life. (Daring, A Varied life, and Exciting Life)
Tradition	Respect, commitment, and acceptance of the customs and ideas that traditional culture or Religion impose of the self. (Humble, Accepting, My Part in Life, Devout, Respect for Tradition, Moderate)

TABLE 2 (Continued)

Universal	Understanding, appreciation, tolerance and protection for the welfare of all people and for nature. (Broad-minded, Wisdom, Social Justice, Equality, A World at Peace, A World of Beauty, Unity with Nature, Protecting the Environment)
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Source: S. H. Schwartz and L. Sagiv. Identifying culture specifics in the content and structure of values. *Journal of Cross-cultural Psychology*, 26 (January 1995), 95.

Two dimensions are employed to differentiate the ten universal value types and classify them into four discrete categories: openness to change, conservation, self-enhancement, and self-transcendence. The first dimension is openness to change versus conservation. While openness to change refers to willingness to try new things, conservation reflects a desire to order through self-denial. This dimension includes the values independence and freedom versus the values of submission and stability (Schwartz and Sagiv, 1995).

The second dimension is self-enhancement versus self-transcendence. While self-enhancement refers to a need for social status and personal success, self-transcendence expresses an understanding and appreciation of nature and society. This dimension comprises the values of dominance and success versus the values of acceptance and equality (Schwartz and Sagiv, 1995).

Personal Value Questionnaire (PVQ)

England's (1967) PVQ is a popular value-measuring instrument which is presented in detail in Chapter IV, the methodology chapter. The PVQ is based on a theoretical model developed by England (1967). However, this model is sequentially revised by England and Keaveny (1968), England, Agarwal, and Terise (1971), England Dhingra, and Agarwal (1974), and finally by England (1975). The model contains two major value classes: Conceived values (values that are likely to be translated from intentional state into behavior) and nonrelevant or weak values (values that have little or no impact on behavior). Conceived values are made up of "operative" values (those

which have a relatively high probability of being translated from the intentional state into actual behavior), “*intended*” values (those which are viewed as important but may have only a moderate probability of being translated from the intentional state into behavior because of situational factors), and “*adopted*” values (those which have less influence on behavior).

The PVQ measures the importance that an individual attaches to sixty-six concepts classified into five categories: goals of business organizations, personal goals of individuals, ideas associated with people, and ideas about general topics.

England’s (1967) PVQ scores each of the 66 concepts on four dimensions:

(1) Importance to individual; (2) Successful (organization perspective), (3) Right (ethical), and (4) Pleasant (aesthetic).

According to England, the PVQ is the only available measurement of values specifically developed for managers. Table 3 presents the sixty-six concepts of the PVQ together with their related five categories.

Evaluation of Approaches

As briefly discussed earlier, there are several instruments that could be used to measure personal values. For example, one of the value instruments is developed by Allport and Vernon (1960). However, this instrument is probably a measure of interests rather than values. Moreover, this instrument was standardized primarily on college students in liberal arts colleges, rather managers (Powell, 1977).

A second instrument, the Flowers et al.’s (1975) Values for Working Questionnaire (VWQ) is related to the attitudes and behaviors of persons in the work place. It might be appropriate for employees, rather than managers.

TABLE 3
Concepts of the Personal Value System

<u>Goals of Business</u>	<u>Personal Goals</u>	<u>Groups of People</u>
Employee welfare	Achievement	Blue collar workers
High productivity	Autonomy	Crafts men
Industry leadership	Creativity	Customers
Organizational efficiency	Dignity	Employees
Organization growth	Individuality	Government
Organization stability	Influence	Laborers
Profit maximization	Job Satisfaction	Labor unions
Social welfare	Leisure	Managers
Money		Me
Power		My boss
Prestige		My company
Security		My co-workers
Success		My subordinates
		Owners
		Stockholders
		Technical staff
		White-collar employees
<u>Ideas Associated with People</u>		<u>Ideas about General Topics</u>
Ability		Authority
Aggressiveness		Caution
Ambition		Changes
Compassion		Competition
Conformity		Compromise
Cooperation		Conflict
Honor		Conservatism
Loyalty		Emotions
Obedience		Equality
Prejudice		Force
Skill		Liberalism
Tolerance		Property
Trust		Rational
		Religion
		Risk

Source: George England, Personal Value Systems of American Managers, *Academy of Management Journal*, 10 (March 1967), 58.

The relatively popular Rokeach Value Survey (1973) is a third instrument that has not been adopted. Despite the popularity of the RVS, numerous criticisms of the instrument are raised. Thompson et al. (1982) criticizes the ranking procedures used in the RVS instrument. Reviewing the advantages and disadvantages of the RVS, Kitwood (1978) claims that the instrument is concerned with philosophical understanding of values

more than available instruments. Nomikos (1985) also argues that RVS measurements are affected by three main problems. (1) Respondents are constrained to a standard set of values that may not effectively describe the values that they recognize and view as important, (2) values are suggested to respondents which may not actually be part of their cognitive worlds, and (3) there are questions involving respondents agreement concerning connotations of definitions or meanings of terms used in the RVS.

A fourth instrument is the Schwartz and Sagiv (1995) value types. This instrument is also not considered because the instrument measures types of values only. It does not relate values to behavior.

A fifth instrument is England's (1967) Personal Value Questionnaire (PVQ). The major reason for choosing England's methodology is that it is the only instrument that allows researchers to identify the value orientations of managers (pragmatic, moralistic, affect, or mixed), and construct their value profile (operative, adopted, intended, or weak values). More importantly, the instrument has a behavioral measurement component that allows researchers to investigate the relationship between the personal values of the individual and his or her behavior. A questionnaire is developed to provide a measure of self-reported behavior of managers when confronted with typical problem situations. The questionnaire consists of five incidents each representing a situation that a manager may encounter in practice (Davis and Rasool, 1988). Although some researchers (e.g., Swindle, Phelps, and Broussard, 1987; Fritzsche, 1995) use other value instruments, they either construct their own questionnaires or use vignettes from other instruments as supplements (Schwartz, 1994).

The fact that England's PVQ is a reliable and valid instrument for assessing behaviorally-relevant personal values has made it a very powerful tool for organizational research not only in one culture but across several cultures (Munson and Posner, 1980). Since this exploratory study represents a logical extension of England's (1967, 1974,

1975) studies, it seems appropriate for consistency considerations to use the method of inquiry employed by England.

Chapter Summary

This chapter identifies five instruments that are widely used to measure personal values. These are (1) Study of Value (SV), (2) Values of Working Questionnaire (VWQ), (3) Rokeach Value Survey (RVS), (4) Shwartz Values Survey (SVS), and (5) Personal Value Questionnaire (PVQ). Given the scope and purposes of this dissertation, England's Personal Value Questionnaire (PVQ) is adopted due to its perceived advantages over the alternative counterparts.

CHAPTER 4

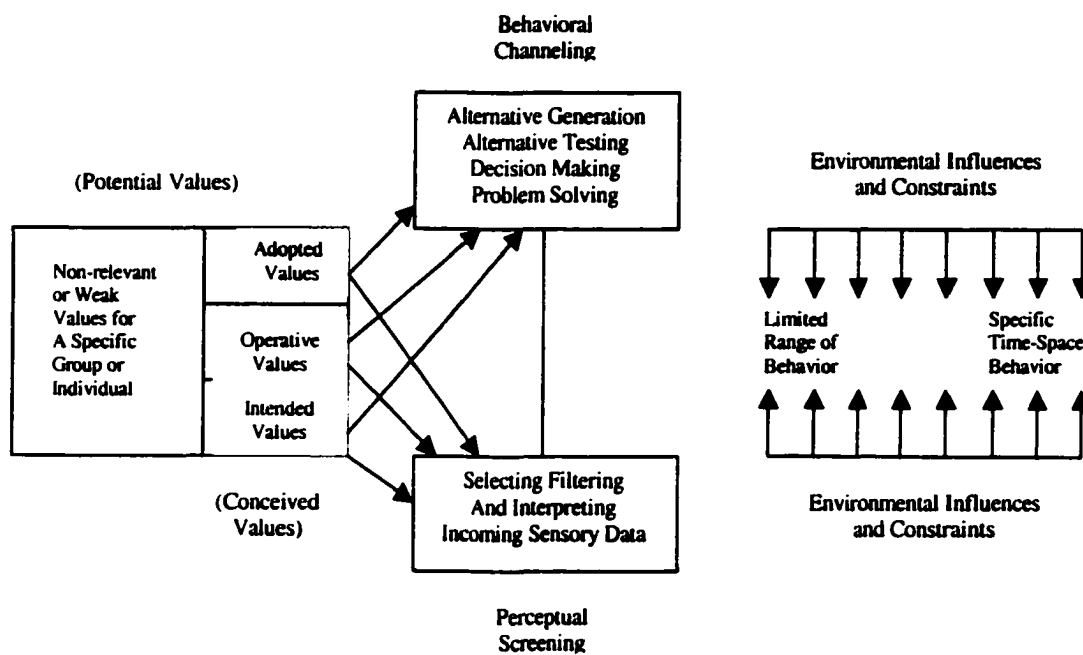
METHODOLOGY

This chapter includes a discussion pertaining to England's theoretical model on which this study is based, measurement instruments, value orientation, value profile, interpretation and scoring procedures, research design, data collection, and statistical techniques.

England's Theoretical Model

The methodology of England (1967) and England, Dhingra, and Agarwal (1974), and England (1975) is utilized in this study. This methodology is based on a theoretical framework of the relationship of values to the behavior of individuals. The model is presented in Figure 1. The theoretical model was developed by England (1967), and sequentially revised by England and Keaveny (1968); England, Agarwal, and Terise (1971); England, Dhingra, and Agarwal (1974); and finally by England (1975).

Several major classes of overlapping values are identified in the framework. All values which might be held by an individual or a specific group constitute the total value space and are identified as potential values. These overlapping values are categorized into two broad classes of values:



Source: George W. England, O.P. Dhingra, and N. C. Agarwal, *The Manager and the Man: A Cross-Cultural Study of Personal Values* (Kent, Ohio: Kent State University, 1974), 7.

FIGURE 1. Theoretical Model of the Relationship of Values to Behavior

1. *Non-relevant or weak values* are values which have little or no impact on behavior.

2. *Conceived values* are values which are likely to be translated from the intentional state to behavior.

Conceived values are made up of: (a) operative values, which have the highest probability of being translated into behavior; (b) intended values, which are viewed as important but do not have a high probability of being translated into behavior because of situational factors; and (c) adopted values, which are less a part of the personality structure of the individual, and affect behavior only because of situational factors (England, 1967; England, Dhingra, and Agarwal, 1974).

The model also indicates two ways in which values can influence behavior through behavior channeling and perceptual screening:

1. *Behavior channeling.* Behavior channeling has a rather direct influence on behavior. Behavior channeling is illustrated by the behavior of an individual who places a high value on honesty and integrity when approached with a proposition which involves deception and questionable ethics. This individual's behavior would be channeled away from the proposition as a direct result of his or her operative values.

2. *Perceptual screening.* Perceptual screening has an indirect influence on behavior and is illustrated by the idea of one seeing what he or she wants to see or hearing what he or she wants to hear. The power of personal values to select, filter, and influence interpretation of what one sees and hears happens frequently in common experience and in scientific studies of behavior (England, 1967; England, Dhingra, and Agarwal, 1974).

The model further shows that the impact of values on behavior must be considered in relation to other environmental influences and constraints before definite predictions of statements can be attempted regarding an individual's behavior at a specific time and

under specific conditions. However, personal values are one of many determinants of behavior in any given situation (England, 1967; England, Dhingra, and Agarwal, 1974).

Measurement Instruments

Four instruments are used in this study: The Personal Value Questionnaire (PVQ), Behavior Measurement Questionnaire (BMQ), Managerial Global Measurement of Job Satisfaction (GMJS), and Organizational Commitment Questionnaire (OCQ). Copies of these instruments are presented in Appendix A.

Personal Value Questionnaire (PVQ)

Development of the PVQ is based on the rationale that the meanings an individual attaches to a carefully specified set of concepts provide a useful description of his or her personal value system which, in turn, relates to his or her behavior in a systematic way. England's approach was influenced by the work of Osgood et al. (1957) and represents an adaptation of their methodology.

In order to measure personal values of managers, a final set of 66 concepts and certain modes of relevant valuation processes was developed. This final set was drawn from an initial pool of 200 concepts after considerable screening, experimentation, and revision by a panel of experts. The panel of experts reduced this initial pool to a set of 96 concepts, which was further reduced to the final 66 concepts based on preliminary findings with a pilot sample of managers. The PVQ concepts were selected from literature dealing with organizations, individual and group behavior, and ideological and philosophical concepts in order to represent a major belief system (England, 1975).

To provide a conceptual framework within which respondents could conveniently evaluate each concept of the PVQ, these concepts are categorized into five classes: goals of business organizations, personal goals of individuals, groups of people, ideas associated with people, and ideas about general topics. The PVQ also employs a dual scheme of valuation (primary and secondary modes) that are utilized with respect to the

sixty-six concepts of the PVQ. The *primary mode* is called the power mode of valuation (important-unimportant scale). The rationale behind the use of this scale is similar to that underlying most value measurements. The general value of objects or ideas to an individual is the *primary mode* of valuation utilizes results in the designation of a high, average, or low importance level.

In order to study the behavioral effect of values, three types of *secondary modes* of valuation were developed by England to determine why individuals consider certain concepts to be important or unimportant. The three secondary modes are:

1. *The pragmatic mode of valuation.* This mode is represented by a “*successful*” scale which suggests an evaluative framework guided by successful-failure consideration.

2. *The ethical-moral mode of valuation.* This mode is represented by a “*right*” scale which suggests an evaluative framework guided by ethical consideration influencing behavior toward actions and decisions judged to be right and separate from actions evaluated as wrong.

3. *The affect or feeling mode of valuation.* This mode is an indication of an evaluative framework guided by hedonism, behaving in a manner to increase pleasure and decrease pain. This mode is measured through a “*pleasant*” scale (England, 1967; England, Dhingra, and Agarwal, 1974).

In predicting the behavior of the individual, England (1975) reasoned that a *combination of primary and secondary modes of valuation* would be a better predictor of likely behavior than would either of the modes alone. If an individual is generally pragmatically oriented, he or she most often sees important things as successful rather than right or pleasant. Therefore, this individual’s behavior would be best predicted by viewing it as a joint function of concepts that he or she thought were important and successful (England, 1967; England, Dhingra, and Agarwal, 1974).

Value Orientation

England's methodology allows the classification of respondents into four primary value orientations: pragmatic, moralistic, affect, and mixed. The classification of an individual into one of these orientations is based on his or her evaluation of the 66 concepts in the PVQ according to the following guidelines:

1. *The pragmatic value orientation.* An individual who characterizes the majority of the PVQ concepts which he or she ranks *high in importance* and *successful* is classified as having a *pragmatic* value orientation.

2. *The moralistic value orientation.* An individual who characterizes the majority of the PVQ concepts which he or she ranks *high in importance* and *right* is classified as having a *moralistic* value orientation.

3. *The affect value orientation.* An individual who characterizes the majority of the PVQ concepts which he or she ranks *high in importance* and *pleasant* is classified as having an *affect* value orientation.

4. *The mixed value orientation.* An individual who *cannot be placed* in one of the above value orientations is classified as having a *mixed* value orientation (England, 1967; England et al., 1974). In terms of behavioral implications, only the first three value orientations (pragmatic, moralistic, and affect) are relevant (England, 1974).

Value Profile

Based on the primary value orientation of a manager, his or her value profile can be constructed. The value profile, unlike the value orientations, allows interpretation of responses to the sixty-six concepts of the PVQ in value terms with behavioral implications. The value profile includes four categories of values: operative, intended, adopted, and weak. England *operationally* defines these values as follows:

1. *Operative values.* Operative values are those concepts which are rated as "*high importance*" by an individual and *fit* his or her primary value orientation. For a *pragmatic individual*, this implies those concepts which he or she rates as "high importance" and

“successful.” For a *moralistic individual*, this implies those concepts which he or she rates as “high importance” and “right.” For an *affect individual*, this implies those concepts which he or she rates as “high importance” and “pleasant.” In terms of implications for behavior, operative values are likely to be the most influential.

2. *Intended values.* Intended values are those concepts which an individual rates as “high importance,” but which *do not fit* his or her primary orientation. These values are generally socioculturally induced. For a *pragmatic individual*, this implies those concepts which he or she rates as “high importance” and “right” or “pleasant.” For a *moralistic individual*, this implies those concepts which he or she rates as “high importance” and “successful” or “pleasant.” For an *affect individual*, this implies those concepts which he or she rates as “high importance” and “successful” or “right.” Intended values may imply a conflict between what one has learned to believe and what one sees rewarded in his or her organizational environment. These values are less likely to influence one’s behavior.

3. *Adopted values.* Adopted values are those concepts which fit the primary value orientation of an individual, but he or she does not rate them as “high importance.” Such values are situationally induced. They are generated by an individual’s organizational experience, but are difficult for the individual to internalize. For a *pragmatic individual*, this implies those concepts which he or she rates as either “average or low importance” and “successful.” For a *moralistic individual*, this implies those concepts which he or she rates as either “average or low importance” and “right.” For an *affect individual*, this implies those concepts which he or she rates as “either average or low importance” and “pleasant.” Adopted values exercise less influence on an individual’s behavior than operative and intended values.

4. *Weak values.* Weak values are those concepts which are *neither* highly important *nor* do they fit the primary value orientation of the individual. For a *pragmatic individual*, this implies those concepts which he or she rates as “average or low

importance” and “*right or pleasant*.” For a *moralistic individual*, this implies those concepts which he or she rates as “*average or low importance*” and “*successful or pleasant*.” For an *affect individual*, this implies those concepts which he or she rates as “*average or low importance*” and “*successful or right*.” Weak values are not expected to influence an individual’s behavior to a great extent.

Given the above definitions of the four types of values, a “*value profile*” can be constructed for all respondents by classifying the sixty-six concepts of the PVQ as operative, intended, adopted, and weak values. The overall value profile for all respondents as a group would then show a similar categorization for each of the PVQ concepts. Such value profile, unlike the value orientations, has behavioral implications.

In order to develop a value profile for all respondents, their responses to the sixty-six concepts will be assigned to one of the nine cells using England’s (1975) “mode frequency method” for the total of individuals as a group. In other words, any concept to be assigned to one particular cell of the total of managers must be assigned to that particular cell more than to any other cell.

When data are aggregated across all individuals as a group, the overall value profile will show the number of individuals as a proportion of the group for whom the concept is an operative, intended, adopted, or a weak value. In such aggregations, all “individuals” with a *mixed value orientation* are excluded. This exclusion is necessary because the probability scores for an individual with a mixed value orientation can’t be computed under this procedure. The value profile of individuals allows interpretation of their responses to the sixty-six concepts in value terms (England, Dhingra, and Agarwal, 1974).

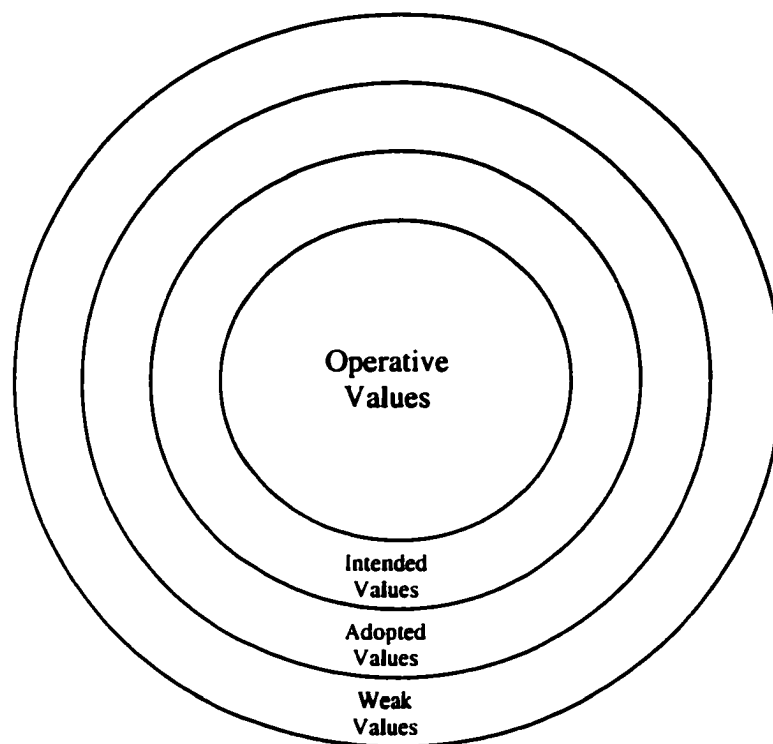
Given the above background related to England’s (1974) model and related works, scoring procedures and data analysis by person and by concept are found in Appendix B.

Behavioral Relevance of Different Types of Values

Rokeach (1968) developed the notion of centrality-peripheralness to interpret behaviorally one's belief or value systems. He argued and presented some data indicating that beliefs can be arranged in terms of their centralness or peripheralness to a person. The more central a belief is to a person, the more stable the belief, the more resistant it is to change, and the wider the domain over which it exercises influence.

England (1975) views the behavioral relevance of different types of values in a similar fashion as shown in Figure 2. England claims that the concepts making up an individual's *operative* values are the "most central" to him or her and have the greatest effect on his or her behavior. Concepts making up an individual's *intended* values and *adopted* values are respectively "less central" to him or her and would be expected to have decreasing general influence on his or her behavior. Those concepts forming a person's *weak* values are the least central (most peripheral) to him or her, and are not expected to influence his or her behavior to any considerable extent.

It is also possible to derive an overall value profile for each of the PVQ concepts by aggregating all responses of participating individuals. England, Dhingra, and Agarwal (1974) provide an example that can be prepared for each of the PVQ concepts. Their example in Table 4 implies that the concept "High Productivity" is an operative value for 62 percent, adopted value for 3 percent, intended value for 27 percent, weak value for 8 percent of a responding group of individuals. According to England, Dhingra, and Agarwal (1974), the value profile implies behavioral implications while the behavioral relevance scores provide more picture for each set of the PVQ concepts.



Source: George W. England, O.P. Dhingra, and N.C. Agarwal . *The Manager and the Mann: A Cross-Cultural Study of Personal Values*. (Cambridge, MA: Ballinger Publisher Company, 1974),24.

FIGURE 2. Behavioral Relevance of Different Types of Values

TABLE 4
A Matrix for High Productivity Concept

	High Importance	Average-Low Importance
Primary Orientation	(62%)	(3%)
Not Primary Orientation	(27%)	(8%)

Source: George W. England, O.P. Dhingra, and N.C. Agarwal . *The Manager and the Mann: A Cross-Cultural Study of Personal Values*. (Cambridge, MA: Ballinger Publisher Company, 1974), 23.

England, Dhingra, and Agarwal (1974) identifies two procedures to derive the behavioral relevance scores. The *first procedure* is to use a weighting scheme which weights the four value types in descending order from operative to weak values in terms of behavioral relevance for each of the PVQ concepts. This scheme gives a weight of three, two, one, and zero to operative, intended, adopted, and weak values, respectively.

When this weighting scheme is applied to a concept and divided by three, it generates a behaviorally relevance score which can range from zero to one hundred. England, Dhingra, and Agarwal (1974) use the concept of “High Productivity” as an example. This scoring procedure can be simply explained as follows:

Behavioral Relevance Score for High Productivity =

$$\frac{3(\text{operative value score}) + 2(\text{intended value score}) + 1(\text{adopted value score})}{3} =$$

$$\frac{3(0.62) + 2(0.27) + 0.03}{3} = 0.81$$

The *second procedure* for creating the behavioral relevance scores is to use operative values which are the percentages of the whole respondents who assign the PVQ concept as operative value or simply the percentage of the total group for whom the concept is an operative value. However, England, Dhingra, and Agarwal (1974) attest that the assigned two scores for the concept "High Productivity" obtained through the first and the second procedures (.81 and .62) are highly correlated (.99). This high correlation suggests that the researcher can use one of the two procedures.

In a subsequent study, England (1975) assigns weights to managers' responses in five countries as follows: four for operative values, three for intended values, two for adopted values, and one for weak values. This weighting scheme is followed in this study.

The validity of the PVQ is proven by (a) a pilot study (England, 1967); (b) a complete synthesis of the research on the PVQ as measured by its sixty-six concepts by England, who also discussed the construct validity from a number of dimensions; (c) a replication of England methodology by Lusk and Oliver (1974); (d) an internal validity test by Whitely (1980) through a cross-national test; (e) a report by Munson and Posner (1980) that the PVQ demonstrated acceptable levels of concurrent validity in its ability to discriminate management from non-management personnel; (f) Hofstede's (1980) test of the convergent validity of his instrument and seven other measures of values including the PVQ. Hofstede finds that the lowest correlation between any two instruments is .49, significant at the .001 level which is certainly acceptable.

Behavioral Measures **Questionnaire (BMQ)**

The previously mentioned theoretical model indicates that personal value systems are expected to influence both an individual's perceptions of problems and the decisions made in an attempt to resolve them. To examine the relationship between personal value systems and individual behavior, England, Dhingra, and Agarwal (1974) developed the BMQ which provides a measure of self-reported behavior of managers. The original BMQ questionnaire consisted of five job incidents, representing typical decision problems which many managers might face in performing their duties on the job. In this dissertation, five job incidents are selected and modified to better suit the environment in which CPA managers operate. Appendix A includes these five-job incidents.

With respect to the original BMQ questionnaire, the first job incident deals with a budget problem. It requires a choice between economic or financial cost or human relations cost. The second job incident is also about a budget problem. The concern here is loyalty and performance versus progress and technological changes that have made technical staff redundant. The third job incident concerns an ethically questionable procedure for obtaining research and development funds. The individual has to consider expediency versus ethical issues in the acquisition of funds to finance expansion. However, this job incident has been discarded as there are no unions in CPA firms.

The fourth job incident focuses on the selection of an assistant manager. This job incident entails a comparison between creativity, reasonable help, and unpopularity on one hand, and efficiency, excessive help, and reputation on the other hand. The final issue pertains to the delegation of authority. This job incident refers to the amount of discretion allocated to subordinates in decision making.

Individuals are asked to read the modified situations and make decisions by indicating the most appropriate statement from a list of suggested actions or solutions. Each respondent has to choose one action that best indicates his or her choice.

Measurement of Managerial Success

A major problem in dealing with this topic involves the definition and determination of success measurement. What is managerial success and how is it measured? Previous studies used various ways to measure managerial success. Some studies employ salary corrected by starting salary, seniority, or salary relative to peers (Bray and Katkousky 1967; Hinrichs 1967; and Laurent 1970). Other studies employ pay, organizational level, promotion, and promotion rates as success criteria (Patton 1965; Mitchell and Porter 1967; and Laurent 1970). Finally, a frequently used criterion measure of success is ratings, either of behavior or of global managerial effectiveness (Hinrichs, 1967; Dicken and Black, 1965 ; and Mahoney, Terdee, and Nash, 1961).

England and Lee (1974) define success as the manager's pay relative to his or her age. This success criterion is a relative measure of personal success within the total sample of managers and is not necessarily identical to organizational success or managerial effectiveness. However, it does provide a cross-organizational measure which is sufficiently accurate for the purposes of this study. England and Lee's (1974) procedure for developing a measure of success (personal success index) is as follows:

(1) Separate managers into eight age categories--20-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60 and over.

(2) Convert the distribution of monthly income received by each manager in each age category into a standard score with a mean of zero and a standard deviation of 1. Thus, a manager in any age category who receives a high salary compared to others in his or her age category would receive a high relative success score (approaching 3.0), while a manager whose salary is low relative to others in his age group would receive a low relative success score (approaching -3.0). Hence, each manager has a "personal success index" between -3.0 and +3.0, depending upon his or her relative salary position within his or her age group.

Measurement of Job Satisfaction:

Locke (1976) defines job satisfaction as “the degree of positive feelings that an individual experiences on his or her job.” Such individual feels good about specific work responsibilities and his or her ability to accomplish them. Job satisfaction is measured (operationalized) by using a 6-item global measure selected from the 18-item index developed by Brayfield and Rothe (1951). Participants indicate the degree of their agreement or disagreement with each of six statements based on a 5-point Likert response format. Following previous studies, the values for each item are summed to compute an overall job satisfaction score.

Reliability and validity of the global job satisfaction measure (GJSM) is established in previous studies (Agho, Price, and Mueller, 1992; Brooke, Russell, and Price, 1988). For example, Agho et al. (1992) achieved a reliability coefficient of .90, and discriminant validity was found when comparing job satisfaction to positive and negative effects.

Measurement of Organizational Commitment

Organizational commitment pertains to the organization itself and consists of three factors: (1) agreement and acceptance of organizational goals and values, (2) willingness to work on behalf of the organization, and (3) loyalty to the organization (Mowday et al., 1979). The 9-item Organizational Commitment Questionnaire (OCQ) developed by Mowday et al., (1979) assesses all three dimensions of organizational commitment. Scores on each item are summed and divided by nine for a reduced OCQ index. According to Lam (1998), the test-retest reliability of the 9 positive items is more stable than the 18-item measure developed by Meyer, Allen, and Smith (1993). Thus, the 9-item OCQ is used based on its stability and shorter scale length (see Appendix A).

The OCQ has been validated across a variety of research settings (Mowday et al., 1979; Mathieu and Zajac, 1990; Michael, Cron, Dubinsky, and Joachimsthaler, 1988). For example, Mowday et al. (1979) finds acceptable reliability scores of 0.82 to 0.93 for

the 9-item version of the OCQ as well as convergent, discriminant, and predicted validity. In addition, Mathieu and Zajac (1990) note an average coefficient alpha of .86 across nine samples in their meta-analysis. Thus, the nine-item OCQ represents a validated measure that is useful for assessing organizational commitment.

Research Design

Sample and Data Collection

A mailing list including 500 accounting managers of CPA firms and 500 managers of CPA Big Five firms was obtained from the American Institute of Certified Public Accountants (AICPA). This list was selected randomly and was stratified in terms of the CPA firm's departments (e.g., auditing, taxation, consultation, and/or information technology).

With respect to data collection, a cover letter, the survey questionnaire, and a postage-paid envelope was mailed to each manager of the CPA firms and each member of the Big Five CPA firms included in the obtained mailing list. On the cover letter, managers were requested to complete the survey questionnaire and return it through the mail. The cover letter also assured each participant that his or her individual responses would be confidential, and no one will see them other than the researcher. Two weeks later, a second mailing including the same material was sent to those who did not respond. The complete questionnaire is provided in Appendix A.

Research Propositions

Based on the objectives of this dissertation and the aforementioned background of this study derived from the review of literature, the following propositions are formulated:

P1: The primary value orientation of CPA firms' managers, as a group, is pragmatic, rather than moralistic, affect, or mixed.

- P2:** The majority of the personal value questionnaire (PVQ) concepts assigned by CPA firms' managers falls in the operative values cell in their constructed personal value profile.
- P3:** There is a significant relationship between the personal value system of a CPA firm's manager and his or her managerial decisions.
- P4:** There is a significant relationship between the personal value system of a CPA firm's manager and his or her job satisfaction.
- P5:** There is a significant relationship between the personal value system of a CPA firm's manager and his or her organizational commitment.
- P6:** There is a significant relationship between the personal value system of a CPA manager and his or her managerial success.
- P7:** There are significant differences between the personal value systems of CPA firms' female managers and the personal value systems of their male counterparts.
- P8:** There are significant differences between the personal value systems of CPA firms' older managers and the personal value systems of their younger counterparts.
- P9:** There are significant differences among the personal value systems of CPA firm's managers of auditing, taxation, consulting, information technology, and general administration departments.
- P10:** There are significant differences between the personal value systems of CPA firms' managers and the personal value systems of their counterparts in other industries.

Validation of Propositions

Proposition 1: The primary value orientation of CPA firms' managers, as a group, is pragmatic rather than moralistic, affect or mixed.

(1) Using the operational definition of England, each responding manager is *classified* as pragmatic, moralistic, affect, or mixed manager *based* on the majority of his/her scores assigned to each of the 66 concepts of the PVQ.

(2) *Descriptive statistics* are presented in a *tabular* form showing the *frequency and percentage* of managers, as a *group*, who have pragmatic, moralistic, affect, or mixed value orientations.

Analyzing data in such a table *determines* the supportive or non-supportive *statistical evidence* to this proposition. The chi-square goodness-of-fit test is used in this regard (Anderson, Sweenley, and Williams, 2000). This involves determining if the

observed frequencies in each of the 4 categories (pragmatic, moralistic, affect, or mixed) conform to the null hypothesis that the ratio in the 4 categories is 1:1:1:1. If H_0 is rejected, then using the subdivided chi-square analysis method one can determine which category or categories contribute to the deviation from equal proportions (1: 1: 1: 1). If the results support this hypothesis, it means that *the first value orientation of CPA firms' managers is pragmatic rather than moralistic, affect or mixed.*

Proposition 2: The majority of the Personal Value Questionnaire (PVQ) concepts assigned by CPA firms' managers falls in the operative values cell in their constructed personal value profile.

(1) Using the *operational definition* of England to the *operative, adopted, intended, and weak values*, scores assigned by each manager to the 66 concepts of the PVQ are derived from the manager's (his/her) completed and returned questionnaire.

(2) Each *concept* of the 66 PVQ concepts is *classified* as an operative, adopted, intended, or weak value *based on the majority of scores assigned by each responding manager to each of the 66 concepts in the PVQ.*

(3) *Descriptive statistics* are presented in a *tabular* form showing the *frequency and percentage* of concepts assigned by responding managers as operative, adopted, intended, and weak values. Here, we can use the same goodness- of- fit Chi-square test described in relation to proposition 1.

Data analysis of related table *determines* the supportive or non-supportive *statistical evidence* to the second proposition. If *the majority of the PVQ concepts assigned by managers of CPA firms fall in the operative values cell rather than adopted, intended or weak values*, the proposition is supported by the empirical evidence.

Proposition 3: There is a significant relationship between the personal value systems of a CPA firms' manager and his or her managerial decisions.

In order to analyze the relationship between the value systems of managers and their behavior (decision making), the responses of the sampled managers to the PVQ and the Behavior Measure Questionnaire (BMQ) are utilized. The validation procedure for the above proposition is composed of four steps.

All responses of responding managers across the 66 concepts of the PVQ is factor analyzed. In this regard, responses to each concept are classified as operative, intended, adopted, or weak values. According to England (1975), weights of 4, 3, 2, and 1 are assigned to operative, intended, adopted, and weak concepts respectively.

A factor analysis is performed on all 66 variables (x_1 – x_{66}) to reduce the dimensionality of the data through combining correlated variables into single orthogonal factors. This is advantageous for regression analysis where it is theoretically assumed that the predictor variables are independent. Several recommended methods (principle components, scree plots of eigenvalues, and maximum likelihood test, Johnson, 1998) are used in specifying the number of factors to run in the factor analysis. The correlation matrix shows very few correlations, and all of moderate size ($r < 0.6$), among the 66 variables. Since the original variables are fairly independent, the indication is that not many factors are isolated through the factor analysis. Indeed, this is the case. The factor analysis provided six factors. Factor 1 represents variables owners, my subordinate, stockholders, my boss, and my co-workers. Factor 2 represents variables blue collar workers, craftsmen, and laborers. Factor 3 represents variables growth, organizational stability, and organizational efficiency. Factor 4 represents variables obedience and conservatism. Factor 5 represents variables customers and employees. Factor 6 represents variables government and liberalism. Variables with loadings of 0.5 or larger are included in a factor. All variables associated with each factor have positive loadings. In addition to the six factors with more than one variable, there are 33 single variable factors. The six factors and the 33 variables accounted for 93% of the variability. A factor score for each of the six factors is computed as the sum of the values for the variables

associated with the factor. For example, the score for a factor related to variables blue collar workers, crafts men, and laborers is equal to the sum of their values. Therefore, each manager has a factor score that depends on the values of blue collar workers, crafts men, and laborers. The six factors along with the 33 single variables are used in the analysis (more details on the factor analysis are found in Appendix C).

Response to each job incident is envisioned to be influenced by the manager's personal value. That is, the choice of each answer (decision) to each job incident is expected to be influenced by the manager's value system. The decisions implied in job incidents are typical situations which managers might face in the performance of their duties. Issues of the job incidents include: 1. Economic or financial cost versus human relations cost; 2. Loyalty and performance versus progress and technological changes that have made technical staff redundant; 3. Creativity, reasonable help and unpopularity versus efficiency, excessive help, and reputation; 4. The degree of delegation of some of the manager's responsibilities to his or her subordinate; and 5. the confidential information about a client.

Since responses to job incident 1 through 5 are categorical, a logistic analysis with the stepwise procedure using SAS is performed to determine the variables, from the pool of variables and factors selected from the factor analysis, that have an effect on the probability of being in a response category or group of categories for each job incident. In the case of two response categories ($i=1,2$), logistic regression fits a linear regression to the log odds or the log of the ratio of the probability of being in one of the categories to the probability of being in the other category. This is given as

$$\log\left(\frac{p(\text{category 1})}{p(\text{category 2})}\right) = \beta_0 + \sum_{i=1}^k \beta_i x_i \quad (1)$$

From Eq. (1), it is seen that the odds is given by

$$\frac{p(\text{category 1})}{p(\text{category 2})} = \exp(\beta_0 + \sum_{i=1}^k \beta_i x_i) = \gamma_0 \prod_{i=1}^k \gamma_i^{x_i} \quad (2)$$

Where $\gamma_0 = e^{\beta_0}$ and $\gamma_i = e^{\beta_i}$.

It is seen from Eq. (2) that increasing x_i by one unit has the effect of multiplying the odds by e^{β_i} . Also, when x_i is increased by one unit the odds ratio, $\frac{odds_{xi+1}}{odds_{xi}}$ is equal to e^{β_i} . The odds ratio can be interpreted as the estimated increase ($\beta_i > 0$) or decrease ($\beta_i < 0$) in the probability of being in category one relative to being in category two associated with a one unit increase in the value of the predictor variable x_i .

For multiple response categories (say $i = 1, 2, 3, \dots, J$), logistic regression fits a linear regression to the log odds as follows:

$$\log\left(\frac{p(\text{categories } 1 \text{ through } j)}{p(\text{categories } j+1 \text{ through } J)}\right) = \alpha_j + \sum_{i=1}^k \beta_i x_i.$$

From Eq. (3), the odds are given by

$$\frac{p(\text{categories } 1 \text{ through } j)}{p(\text{categories } j+1 \text{ through } J)} = \exp(\alpha_j + \sum_{i=1}^k \beta_i x_i) = \gamma_j \prod_{i=1}^k \gamma_i^{x_i}. \quad (3)$$

Here, j takes values from 1 to $J - 1$. Note that the regressions in Eq. (3) have different intercepts but the same slopes implying that the lines are parallel. The intercepts in many regression models have no important interpretation. This is true also for the α_j intercepts in Eq. (3). The interpretation of the odds ratio is the same as for the two category case except that the probabilities may be associated with a group of categories instead of only one category. If j is taken to be 1, then the odds ratio is interpreted as the estimated increase or decrease in the probability of being in category one relative to being in any of the remaining categories associated with a one unit increase in the value of the predictor variable x_i .

The odds in the case of say four categories can be defined as (1) the ratio of probability of being in category one to the probability in being in categories 2, 3, or 4 or (2) the ratio of probability of being in category 1 or 2 to the probability of being in category 3 or 4, or (3) the ratio of the probability of being in category 1, 2, or 3 to the

probability of being in category 4. An odds ratio is the ratio of the odds given that is increased by one unit to the odds prior to the change (odds ratio = $\frac{\text{odds}_{xi+1}}{\text{odds}_{xi}} = e^{\beta_i}$). An odds ratio greater than one (say 1.3) means that an increase in the variable by one unit increases the odds by 0.3 or 30% (this implies that partial regression coefficient for x_i , β_i is positive). Also, an odds ratio of 0.80 for example, means that an increase of the variable by one unit decreases the odds by 0.2 or 20% ($\beta_i < 0$). An odds ratio of 1.0 implies that a change in the variable has no effect on the odds ($\beta_i = 0$).

A stepwise logistic regression analysis is run for job incidents 1 through 5. Stepwise regression allows a regressor variable to enter a model if it has a significant relation to the dependent variable. At each step of entry into the model the regressors that are in the model are reassessed and if a regressor becomes nonsignificant it is removed from the model.

Proposition 4: There is a significant relationship between the personal value system of a CPA firm's manager and his or her job satisfaction.

Each of the six job satisfaction items is measured on a five-point scale. The items are scored by giving a weight of one to the least favorable response on each item, a two to the next least favorable response, and so on up to a weight of five for the most favorable response of each item. As such, a manager could have a job satisfaction score from six (least satisfied) to thirty (most satisfied). A regression analysis with the stepwise option is used to determine the best subset of predictor variables that relate significantly to the job satisfaction score. To check the reliability of the scale measuring job satisfaction, Cronbach Coefficient Alpha is used (Peter, 1979). The dependent variable used is the sum of the six job satisfaction items and the regressors or independent variables are the 39 variables selected through the factor analysis as described above. In addition, the stepwise regression is also all 66 variables of the PVQ concepts.

Proposition 5: There is a significant relationship between the personal value system of a CPA firm's manager and his or her organizational commitment.

Similar analysis as for job satisfaction is performed with regard to organizational commitment. Each of the nine organizational commitment items is measured on a seven-point scale. To check the reliability of the scale measuring organizational commitment Cronbach Coefficient Alpha is used (Peter, 1979). The items are scored by giving a weight of one to the least favorable response on each item, a two to the next least favorable response, and so on up to a weight of seven for the most favorable response of each item. As such, a manager could have an organizational commitment score from nine (least satisfied) to sixty three (most satisfied). A regression analysis with the stepwise option is used to determine the best subset of predictor variables that relate significantly to the organizational commitment score. The dependent variable in this case is the sum of the 9 organizational commitment items and the regressors or independent variables are the 39 variables extracted through the factor analysis. In addition, the stepwise regression is also conducted using all 66 variables of the PVQ concepts.

Proposition 6: There is a significant relationship between the personal value systems of CPA firms' managers and their success.

The concepts for each individual are first classified as operative, intended, adopted, and weak values for low behavioral relevance. For example, assume one of the classification is 22 operative, 9 intended, 14 adopted, and 21 not relevant concepts. Then weight is given for every concept in each category [operative (4), intended (3), adopted (2), and not relevant concepts (1)].

The weighted average value (score S) for a manager is given by:

$$S = [22(4) + 9(3) + 14(2) + 21(1)] / 66$$

Within each age group, a measure of success is computed as the salary Z-score. For example, assume that there are n_1 managers belonging to the age group 20 – 29 years and their salaries are Y_1, Y_2, \dots, Y_{n_1} .

Hence, the standard deviation is computed as:

$$Sd = \sqrt{\left[\sum Y_i^2 - (\sum Y_i) / n_1 \right] / (n_1 - 1)} .$$

Then the success measure is the Z-score expressed as

$$\text{Success (Zi)} = \frac{Y_i - \bar{Y}}{Sd}, i = 1, 2, \dots, n_i.$$

For manager i: $i = 1, 2, \dots, n_i$, the data related to the dependent and independent variables would look as shown below.

<u>Dependent</u>	<u>Independent</u>
Success	Score value
Z1	S1
Z2	S2
-	--
-	--
Zn	Sn

A non-parametric statistic, Spearman correlation, shows that there is no significant correlation between success (Z) and the average score (S), $r = .054$, $p = .43$. As a second step in the analysis, managers are allocated to three categories based on their Z-scores. Category one includes all managers in the top 15% of the Z-scores over all age groups. This category represents the most successful managers. Category 2 includes managers between 15% and 75 % of the Z-scores. Category 3 includes managers in the bottom 15% of the z-scores, which represented the least successful managers. A stepwise logistic analysis is performed with the three categories as the dependent variables and the 33 variables and 6 factor scores as the independent variables. In addition, the stepwise regression is also conducted on all 66 variables of the PVQ concepts and the managerial success.

Proposition 7: There are significant differences in the personal value systems of female and male managers of CPA firms.

To examine this hypothesis a two-way (gender and class) multivariate analysis of variance is performed first. Gender is classified as male and female managers and class is classified as affect, moralistic, and pragmatic. In the multivariate analysis, the variables included are the 33 variables and the 6 factor scores. The multivariate analysis shows a significant F value for Wilk's lambda ($p = 0.0001$). Since the multivariate analysis is

significant it is followed by a two-way analysis of variance for each of the dependent variables separately. Since the gender by class data in the two-way ANOVA is unbalanced, least square means are computed and compared.

Proposition 8: There are significant differences in the personal value systems of younger and older managers of CPA firms.

In order to test this hypothesis, a two way (age by class) multivariate analysis of variance is performed first. The median and the mean for the age of managers are found to be 44 years and 44.1 years, respectively. As such, age is divided into two groups, one group equal or less than 44 (young) and the other group larger than 44 (old). Class is affect, moralistic, and pragmatic. In the multivariate analysis, the variables included were the 33 variables and the 6 factor scores. The multivariate analysis shows a significance F value for Wilk's lambda at $p=.0001$. Since the multivariate analysis is significant, a two-way analysis of variance is performed on each of the dependent variables separately. Since the age by class data in the two-way ANOVA is unbalanced, Least square means are computed and compared.

Proposition 9: There are significant differences among the personal value systems of CPA firms' managers of auditing, taxation, consulting, information technology, and general administration departments.

To examine this hypothesis, a multivariate and univariate analyses of variance are conducted sequentially. The outcomes of both statistical procedures indicate that there are significant differences in the personal value systems of CPA firms' managers among various departments (auditing, taxation, consulting, information technology, general administration, and other). For each of the dependent variables, the Duncan test is recommended for multiple comparison among means. Subsequently, the same procedure is applied on the moralistic and pragmatic classes.

Proposition 10: There are significant difference between the personal value systems of managers in the accounting industry (managers of CPA firms) and managers in other industries.

To shed light on the above proposition, a non-parametric Spearman correlation is performed on the high importance and successful responses for each of the PVQ concepts

classified in five categories (goals of business organization, personal goals of individuals, idea associated with people, idea about general topics, groups of people) including the data collected by this study and those of Oliver's (1995) data. Correlations in all five categories are relatively high and significant indicating general agreement between the two data sets for each category.

For the 1995 versus 2002 data, the highest association is within the Goals of Business Organization ($r_s = 0.8622$) and the lowest association is within the Personal Goals of Individuals ($r_s = 0.666$). In addition, the two data sets within each category are compared using the Wilcoxon non-parametric test. This test is analogous to the parametric two sample t-test. Both the Spearman and Wilcoxon analysis are used because the data in percentage cannot be safely assumed to be normally distributed. Results of the Wilcoxon test shows that the two data sets are not significantly different for any of the five categories. This result agrees with the fact that the two data sets are relatively highly correlated.

Chapter Summary

The first part of this chapter presents England's theoretical model and related measurement instruments. The measurement instruments discussed are the Personal Value Questionnaire (PVQ), the Behavioral Measurement Questionnaire (BMQ), the Global Measurement of Job Satisfaction (GMJS), and the Organizational Commitment Questionnaire (OCQ). To improve exposition, discussion of scoring procedures and associated data analysis is relegated to Appendix B.

The second part provides the research design including the sample, data collection procedures, and research propositions. Finally, the chapter elaborates on suggested statistical techniques for validating these propositions.

CHAPTER 5

PERSONAL VALUE SYSTEMS OF CPA FIRMS' MANAGERS

This chapter empirically examines the ten propositions of this study. The first two propositions include the value orientations and the value profile of responding managers of CPA firms as a group. The next four propositions concentrate on the relationship between the personal value systems of these managers and their managerial decisions, job satisfaction, organizational commitment, and their managerial success. The next three propositions focus on the differences in the personal value systems of these managers in terms of their gender, age, and affiliation with various departments of CPA firms (auditing, taxation, consulting, information technology, general administration, and others). The final proposition deals with the differences between the value systems of CPA firms' managers and the value systems of other managers in other industries.

The data used in this study are obtained from a national sample 212 of CPA firms' managers in the United States. The characteristics of the sample are discussed here briefly in regard to selected demographic and organizational information.

Sample Characteristics

Table 5 presents selected demographic (gender, marital status, age, race, education) and organizational variables (size of the firm, department, number of years in present position, number of years with present firm, and number of years of managerial experience).

TABLE 5
Sample Characteristics

Variable	Frequencies	Percentage
Gender		
Male	168	75.3
Female	55	24.7
Marital Status		
Single	48	21.5
Married	167	75.0
Divorced	8	3.5
Widowed	0	0
Age in Year		
< 30	18	8.1
30-39	55	24.7
40-49	78	35.0
>49	72	32.2
Racial/Ethnic		
White, non-Hispanic	194	87.0
Black, non-Hispanic	11	4.9
Hispanic	12	5.4
Asian/Pacific Islander	6	2.7
Formal Education		
Bachelor	48	21.5
Bachelor plus grad credit hours	100	44.8
Master's degree	67	30.0
Doctorate	8	3.7
Size of your CPA Firm		
Small(4-9 employees)	110	49.3
Medium (10-49 employees)	25	11.6
Large (50-100 employees)	18	8.1
Very Large (Over 100 empls)	70	31.0
Present Department		
Auditing	51	22.9
Taxation	72	32.3
Consultation	16	7.1
Information technology	6	2.7
General Administration	7	3.1
Others	71	31.9
Number of Years in Present Position		
< 5	58	26
5 - 10	64	30.2
11- 15	32	14.3
16-20	28	15.6
> 20	41	14

TABLE 5 (Continued)

Variable	Frequencies	Percentage
Number of Years with Present Firm		
< 5	19	8.9
5 - 10	86	38.6
11- 15	33	14.7
16-20	35	15.6
> 20	50	22.2
Number of years of managerial experience		
< 5	24	11.3
5 - 10	68	30.5
11- 15	41	18.4
16-20	35	15.7
> 20	58	24.1

of the sampled managers of CPA firms. Descriptive data in Table 5 show that 168 (75.3%) are males and 55 (24.7%) are females. This indicates that the woman is still far behind the man in terms of managerial jobs. Data concerning the marital status of the responding managers show that while few of them are single(21.5%), divorced (3.5%), and widowed, (0.0%), the majority (75%) are married. There is a strong cultural consistency with previous studies in which the majority of managers are married, and few are single or divorced.

The average age of responding managers is 44 years old. Following the procedure of age comparison of Akers and Giacomino (1999), 68.4% managers are born before 1953 and 31.6% managers are born after 1952. These results suggest that the young generation is taking a leading role in current business organizations. Although there are few managers of various minorities, the majority of these managers are white. Of the 223 respondents, 194 (87%) are white, 11 (4.9%), 12 (5.4%), and 6 (2.7%) are African American , Hispanic, and other minorities, respectively.

The majority (30.5%) of these managers have managerial experience between five and ten years. However, 24.1% of these managers have managerial experience over twenty years and 34.1% have managerial experience between ten and twenty years. These

percentages reflect the trend of using relatively young managers as business leaders. The data in Table 5 reveal that the majority of respondents belong to CPA firms that are small or very large in size (70 and 110, or 31.1% and 49.3%, respectively). Very few of the managers belong to medium or large CPA firms.

It appears that the typical manager of a CPA firm has a bachelor degree plus graduate credit hours as required by AICPA. That is why relatively few managers (21.5%) have only a bachelor degree, less than 50% of the respondents (44.8%) have a bachelor degree plus graduate credit hours, and about a third (33.7%) have earned graduate degrees (Master or Doctorate). The qualifications of CPA firms' managers suggest that continuing professional education (CPE) and workshops offered by AICPA state societies and other membership organizations are contributing to improvement of the accounting profession. Currently, all CPAs must complete certain hours of CPE to retain their certification.

Slightly more than two quarters of the respondents (55.2%) are in auditing and taxation departments (22.9% and 32.3% respectively); about a third of respondents are affiliated with more than one department (31.9%); fewer respondents are in the consultation, information technology, and administration departments (7.1%, 2.7%, and 3.1% respectively). CPA firms concentrate largely on auditing and taxation activities. While consultation is growing, technology information is still at an early stage.

Furthermore, the majority of managers have 5-10 years in their present position (30.2%). In addition, the majority of managers have 5-10 years of service at their present firms (38.6%), or of managerial experience (30.5%).

Value Orientations

The first purpose of this study is to identify the personal value systems of the responding managers of CPA firms as a group. As discussed in the methodology chapter, respondents are classified into one of four categories (pragmatic, moralistic, affect, or mixed managers) based on their primary value orientations. England (1975) suggests that

the goal of this classification is to provide a means or way to eliminate some of the intentionality of values and to get closer to values that are behaviorally relevant.

As mentioned earlier, a pragmatic manager is identified as an individual who ranks most of the PVQ concepts as high importance and successful. A moralistic manager is one who ranks most of the PVQ concepts as of high importance and right. An affect manager is one who ranks most of the PVQ concepts as of high importance and pleasant. A mixed manager is one who can't be placed in any one of the above groups (England, 1975).

Based on England's (1975) decision rules described before, the analysis of the responses for each respondent across all the sixty-six concepts indicates that managers of CPA firms, as a group, seems to be more pragmatic than moralistic or affect as can be seen in Table 6. Of the 223 managers, 114 (51%) have pragmatic value orientation, 84 (38%) have moralistic value orientation, 14 (6%) have affect value orientation, and 11 (5%) have mixed value orientation. A chi-square test rejects the null hypothesis that the value orientations of CPA firms' managers are similar ($\chi^2 = 142.33 > \chi_{.05,3}^2 = 7.815$). Therefore, data analysis related to Table 6 support the first proposition, "The first value orientation of CPA firms' managers, as a group, is pragmatic, rather than moralistic, affect, or mixed value orientation."

TABLE 6
Primary Orientation of CPA Firms' Managers

Primary Values Orientation	Frequency	Percentage
Pragmatic	114	51.12
Moralistic	84	37.67
Affect	14	6.28
Mixed	11	4.93
Total	223	100.00

Based on England, Ghingra, and Agrawal (1974), managers of a mixed value orientation were excluded from further analysis. Therefore, responses from a total of 212 CPA managers are used to examine the remaining nine proposition.

Value Profile

The second task is to construct the value profile of a CPA firms' manager in order to allocate the PVQ concepts in the appropriate cells, and find out if most of the PVQ concepts are falling in the operative value cell, rather than in the adopted, intended, or affect value cells. The development of the value profile requires the by-concept analysis described in the methodology section.

The by-concept analysis in Table 7 generates the percentages of the responding managers who envision each of the PVQ concepts as an operative, intended, adopted, or weak value. The classification manifested in Table 7 is based on the operational definition of the four values by England, Dhingra, and Agrawal (1974). *Operative values* are those concepts rated by a manager as "high importance" and *fit* his or her *primary* value orientation (pragmatic, moralistic, or affective). *Intended values* are those concepts rated by a manager as "high importance," but which *do not fit* his or her *primary* orientation. *Adopted values* are those concepts rated by a manager as average or low in importance but *fit* his or her *primary* value orientation. *Weak values* are those concepts rated by a manager as average or low in importance but *do not fit* his or her *primary* value orientation.

A majority rule determines whether a value concept is located in an operative, adopted, intended, or weak value cell. For example, if the majority of respondents considered the concept "high productivity" as an operative value, it will be located in the operative value cell. The same procedure is implemented for the other cells. Table 7 shows the actual classifications of the PVQ concepts.

TABLE 7

Percentage of Responses for Value Concepts Assigned by Respondents
(Operative, Intended, Adopted, or Weak values)

Concept	Operative	Intended	Adapted	Weak
Employee welfare	13	59	16	12
High productivity	79	12	5	4
Industry leadership	51	18	21	10
Organizational efficiency	62	24	11	3
Organizational growth	54	21	17	8
Organizational stability	54	11	25	10
Profit maximization	67	10	18	5
Social welfare	23	5	5	67
Achievement	71	19	7	3
Autonomy	3	14	3	80
Creativity	59	26	9	6
Dignity	12	56	29	3
Individuality	26	19	47	8
Influence	26	14	53	7
Job satisfaction	68	5	18	9
Leisure	3	7	8	82
Money	49	16	27	8
Power	16	6	56	22
Prestige	12	4	8	76
Security	6	51	10	33
Success	58	26	10	6
Ability	69	16	8	7
Aggressiveness	8	14	56	22
Ambition	59	17	21	3
Compassion	20	9	4	67
Conformity	2	7	3	88
Cooperation	55	33	2	10
Honor	20	56	15	9
Loyalty	14	51	21	14
Obedience	21	10	15	54
Prejudice	6	13	54	27
Skill	7	10	3	12
Trust	20	54	9	17
Authority	18	21	24	37
Caution	17	24	20	39
Change	53	15	14	18
Competition	58	23	10	9
Compromise	25	4	53	18
Conflict	15	5	48	32
Conservatism	14	19	8	59
Emotions	2	19	18	85
Equality	12	53	20	15
Force	9	19	52	20
Liberalism	8	18	21	53
Property	7	51	25	17

TABLE 7 (Continued)

Rational	10	52	14	24
Religion	5	58	15	22
Risk	27	5	59	9
Blue collar workers	8	19	7	66
Craftsmen	6	20	14	60
Customers	76	17	2	5
Employees	72	16	6	6
Government	11	17	21	51
Laborers	17	13	19	49
Labor unions	1	3	2	94
Managers	57	12	25	6
Me	68	17	10	5
My boss	49	20	13	18
My company	78	13	3	6
My co-workers	74	14	2	10
My subordinate	64	11	16	9
Owners	64	15	9	12
Stockholders	56	15	18	11
Technical staff	52	21	18	9
White-collar employee	51	23	21	5

Table 8 depicts the distribution of the value profile of the sampled managers of the participating CPA firms (see Appendix B for details regarding the method used in allocating each concept within the value profile of managers as a group). Utilizing the by-concept classification in Table 7, the PVQ concepts are distributed as follows:

1. The operative or motive values (twenty-nine concepts) are viewed as highly important and fit the primary orientation (pragmatic) pattern of this group. These value concepts are likely to have a substantial possibility of being translated from intentional state to actual behavior.
2. The intended values (ten concepts) are considered to be of high importance, but do not fit the primary orientation to affect the manager's behavior more than any concepts in any other cell of the value profile. According to England, Dhingra, and Agrawal (1974), these values have organizations' experience. Unlike operative values, intended values have a moderate probability of being translated from the intentional state into behavior

TABLE 8
Value Profile of CPA Firms' Managers

	High importance	Average Importance	Low Importance
	High productivity	Risk	Aggressiveness
	My Company	Influence	Force
	Customers	Individuality	Prejudice
	Skill	Compromise	
	My co-workers	Conflict	
	Employees	Power	
	Achievement		
	Ability		
	Profit maximization		
	Job satisfaction		
	Me		
	My subordinate		
Success	Owners		
	Organization efficiency		
	Creativity		
	Ambition		
	Competition		
	Success		
	Managers		
	Stockholder		
	Cooperation		
	Organizational growth		
	Organizational stability		
	Change		
	Technical staff		
	White-collar employees		
	Industrial leadership		
	My boss		
	Money		
	Honor	Social welfare	Conservatism
	Trust	Obedience	Craftsmen
Right	Loyalty	Compassion	Blue collar workers
	Employee welfare	Tolerance	Liberalism
	Dignity	Authority	Government
	Equality	Caution	
	Rational	Laborers	
	Property	Prestige	
Pleasant	Security	Autonomy	Conformity
	Religion	Leisure	Labor Union
	Emotion		

situational or conditional factors. England, Dhingra, and Agrawal (1974) claims that these values are generally socioculturally termed induced. These values are also “professed” or “talking” values when there is a conflict between what an individual has learned to believe and what he or she experiences in his or her accepted environment.

3. Adopted values (nine concepts) are those concepts that are observed as being success in the surveyed CPA. However, it is difficult for these managers to internalize and view these values as being highly important. England, Dhingra, and Agrawal (1974) find that adopted values are situationally induced and are less likely to influence behavior like operative and intended values.

4. Weak values (eighteen concepts) are neither very important nor do they fit the primary value orientation (pragmatic) of the responding managers of CPA firms. England, Dhingra, and Agrawal (1974) indicate that weak values have low behavioral relevance. According to England (1975), the constructed value profile excludes the responses of managers having a mixed value orientation.

Table 9 summarizes the locations of the PVQ concepts. A chi-square test rejects the null hypothesis that concepts that lie in the operative, intended, adopted, and week cells for CPA firms’ managers are similar ($\chi^2 = 15.57 > \chi_{.05,3}^2 = 7.8154$). Therefore, data analysis related to Table 9 supports the second proposition, “The majority of the PVQ concepts (29 of the 66 PVQ concepts) fall in the operative value cell.”

TABLE 9

Location of the PVQ Concepts Assigned by CPA Firms' Managers

Primary Values Orientation	High Import. Ranked First	Average Import. Ranked First	Low Import. Ranked First	Total
	Operative	Adopted		
Successful Ranked First	29	6	3	38
	Intended	Weak		
Right Ranked First	8	8	5	21
Pleasant Ranked First	2	3	2	7
Total	39	17	10	66

**The Relationship between the Personal Value Systems
of CPA Firms' Managers and Their
Managerial Decisions**

England's theoretical model described in Chapter 4, indicated that the personal value systems are expected to influence an individual's behavior (e.g., decision-making process). Because the third objective is to examine and analyze the relationship between the value systems of CPA firms' managers and their managerial decisions, the responses of the sampled managers to the PVQ concepts and the five Job Incidents are utilized.

As mentioned in Chapter 4, a factor analysis is conducted on the responses of the sampled managers to the PVQ concepts. The factor scores of the significant factors obtained from the factor analysis process are used as the independent variables. The responses of the sampled managers to the five Job Incidents are the dependent variable. A forward stepwise logistic regression is conducted for Job Incidents 1 through 5. The stepwise regression allows a regressor variable to enter a model if it has a significant relation to the dependent variable. At each step of entry into the model, the regressors

that are in the model are reassessed. If a regressor becomes insignificant, it is removed from the regression model.

Tables 10 to 21 present response distributions and the stepwise logistic regression analysis results. Each table shows the personal value systems that have a significant effect on managerial decisions and their corresponding odds ratio. An odds ratio larger (less) than one means that an increase in the corresponding x_i by one unit will increase (decrease) the probability of being in a category. Results of the logistic analysis confirm the third proposition, "personal values can significantly influence managerial decisions".

Job Incident 1

Assume that you are the owner-manager of a CPA firm. Recently, your employees have been complaining about the flexible benefits plan offered by the firm. This plan was originated 25 years ago, and since then has had only minor changes. You know that the anticipated profits for the year are lower than usual. The concerns of Job Incident 1 are economic and financial cost versus human relations cost.

Table 10 presents the percentages of CPA's response distribution for Job Incident 1. While major responses are assigned to the third action of choice, the least responses are assigned to the first choice.

TABLE 10
Response Distribution for Job Incident 1

Actions	Percent Response
Creation of a new flexible benefits plan with expected cost twice the present cost.	7.547
Major modification of plan with an expected cost of 40% above the present cost.	39.150
Minor modification of plan with expected cost of 10% above the present cost.	42.940
Leave the plan as is.	10.363

Table 11 presents the results of stepwise logistic regression analysis for Job Incident 1. The model includes 16 factors. The first 14 factors consist of one variable each. These factors include loyalty, caution, security, skill, risk, religion, my company, rationale, employee welfare, prejudice, achievement, honor, cooperation, and force. The last two factors (factors 3 and 4) consist of multiple variables. Factor 3 includes organizational growth, organizational stability, and organizational efficiency. Factor 4 includes obedience and conservatism. Data analysis in Table 11 indicates that there are positive and significant (odds values > 1; $p < .0001$) relationships between Job Incident 1 and the following personal values: loyalty, security, religion, my company, rational, employee welfare, achievement, cooperation, force, organizational stability, organizational growth, and organizational efficiency.

TABLE 11
Analysis of Maximum Likelihood Estimates for Job Incident 1

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	PR > Chi-Square	Odds Ratio
INTERCP1	1	-11.5598	1.5631	54.691	0.0001	0.000
INTERCP2	1	-7.99191	0.4233	31.527	0.0001	0.000
INTERCP3	1	-4.13211	0.3225	9.762	0.0018	0.016
Loyalty	1	0.9006	0.1768	25.942	0.0001	2.461
Caution	1	-0.5813	0.1534	14.366	0.0002	0.559
Security	1	0.5613	0.1471	14.567	0.0001	1.753
Skill	1	-0.7964	0.1532	27.013	0.0001	0.451
Risk	1	-0.3411	0.1406	5.887	0.0153	0.711
Religion	1	0.5502	0.1618	11.568	0.0007	1.734
My Company	1	0.7472	0.1764	17.946	0.0001	2.111
Rational	1	0.7559	0.1455	27.013	0.0001	2.130
Employee welfare	1	0.5377	0.1521	12.494	0.0004	1.712
Prejudice	1	-0.7360	0.1725	18.193	0.0001	0.479
Achievement	1	0.6638	0.1655	16.093	0.0001	1.942
Honor	1	-1.0222	0.2074	24.285	0.0001	0.360
Cooperation	1	0.7147	0.1523	22.009	0.0001	2.044
Force	1	0.7978	0.2341	11.615	0.0007	2.221
Factor 3	1	0.1743	0.0595	8.578	0.0034	1.190
Factor 4	1	-0.4089	0.0957	18.252	0.0001	0.664

Job Incident 2

Assume that you are the manager of the information technology (IT) department at a CPA firm. In your section, there are ten IT specialists in areas in which there have been great break-through in knowledge. As a result, it is only those individuals who have graduated in the last few years who can be trained with respect to the new IT knowledge.

You, as the manager of this department, have been asked to make a recommendation about retraining the "obsolete" IT specialists or relieving them of the job and hiring recent graduates. You have found that retraining would take about six months of full time study on the part of the "obsolete" specialists, and it is not certain that all would successfully complete the training. You know that these ten IT specialists have made significant contributions to the firm in the past and have an average tenure of seven years. The issue of this job incident is loyalty and performance versus progress and technological changes that have made technical staff redundant.

Table 12 presents the percentages of CPA's response distribution for Job Incident 2. The majority of respondent is chosen the third action of choice while the least number of respondents is selected the fifth choice.

TABLE 12
Response Distribution for Job Incident 2

Response	Percent Responding
Retrain all the IT specialists and have the firm pay all retraining costs.	15.57
Retrain all the IT specialists and have the costs of retraining shared equally by the firm and the individual.	16.98
Retrain only those IT specialists who are judged to be "trainable" and have the firm pay all retraining costs.	51.88
Retrain only those IT specialists who are "trainable" and have the cost of retraining shared equally by the firm and the individual.	13.68
No retraining. Keep only those IT specialists who can continue to make significant contributions to the firm.	1.89

Table 13 presents the results of stepwise logistic regression analysis for Job Incident 2. The model includes 4 factors; 2 of these factors consist of one variable each. These variables are tolerance, and prejudice. The other 2 factors (factors 1 and 3) consist

of several variables. While factor 1 includes owners, stockholders, my subordinate, and my boss, factor three includes organizational growth, organizational stability, and organizational efficiency. Factor 1, factor 3, and prejudice have positive and significant (odds values > 1; $p < .0001$) effects on managerial decisions except tolerance.

TABLE 13

Analysis of Maximum Likelihood Estimates for Job Incident 2

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	PR > Chi-Square	Odds Ratio
Intercept1	1	-4.8870	0.8375	34.046	0.0001	0.008
Intercept2	1	-3.8018	0.8124	21.899	0.0001	0.022
Intercept3	1	-1.0378	0.7721	1.806	0.1789	0.354
Intercept4	1	1.3802	0.8823	2.447	0.1177	3.976
Tolerance	1	-0.2958	0.1147	6.653	0.0099	0.744
Prejudice	1	0.2958	0.1147	18.540	0.0001	1.797
Factor 1	1	0.0936	0.0349	7.185	0.0073	1.098
Factor3	1	0.1399	0.0479	8.537	0.0035	1.150

Job Incident 3

Assume you are a manager in a CPA firm, and you are evaluating two senior accountants for a managerial position just below your position. Both accountants have worked for you for the past five years and are equally competent. However, the two differ in the following ways.

Mr. George is a very creative person who has been constantly making suggestions for improvement. Although not all of his ideas are practical ones, you have adopted some of his suggestions in the past. Mr. George is also sincere and hard working. He is helpful to others when asked for help. However, he is not very popular in the department because other employees do not like procedural changes and extra pressures which they think are sometimes unnecessary.

On the other hand, Mr. Sam, is equally efficient as Mr. George, but he is not "an ideas person." However, Sam is very congenial and well liked. Mr. Sam goes out of his way to help others whenever they have problems. Mr. Sam is definitely contributing to the good morale of your department. Mr. Sam enjoys the reputation of being kind. This job incident focuses on creativity, reasonable help and unpopularity versus efficiency, excessive help, and reputation.

Table 14 shows the percentages of CPA's response distribution for Job Incident

3. It is seen that major responses support the first candidate .

TABLE 14
Response Distribution for Job Incident 3

Response	Percent Responding
Mr. George	52.36
Mr. Sam	47.64

Table 15 presents the results of stepwise logistic regression analysis for Job Incident 3. The model includes 10 factors consisting of one variable each and one factor (factor 5) which includes two variables. Factors of individual variables include individuality, success, competition, job satisfaction, tolerance, creativity, money, emotions, and me. Factor 5 encompasses customers and employees. These variables have a significant effect on influencing managerial decisions and their corresponding odds ratios. Out of these 11 variables, 4 of them (individuality, success, competition, and creativity) have positive and significant (odds values > 1; $p < .001$) relationships with job incident 3.

TABLE 15
Analysis of Maximum Likelihood Estimates for Job Incident 3

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	PR > Chi-Square	Odds Ratio
INTERCP1	1	5.3788	1.7134	9.854	0.0017	216.77
Individuality	1	0.8619	0.1881	20.996	0.0001	2.368
Success	1	0.5860	0.1724	11.554	0.0007	1.797
Competition	1	1.0481	0.1956	28.702	0.0001	2.852
Job satisfaction	1	-0.6306	0.1796	12.334	0.0004	0.532
Tolerance	1	-0.6109	0.1851	10.894	0.0010	0.543
Creativity	1	0.5200	0.1658	9.839	0.0017	1.682
Money	1	-1.0119	0.2166	21.826	0.0001	0.364
Emotions	1	-1.2088	0.3247	13.858	0.0002	0.299
Me	1	-0.7905	0.2060	14.724	0.0001	0.454
Factor 5	1	-0.3608	0.1357	7.064	0.0079	0.697

Job Incident 4

Your client is in the early stage of negotiating an acquisition of another advertising company. For this reason, the client wants you, as a CPA, to

review the internal control system (ICS) of the acquisition commodity. The decision to accomplish the acquisition will be based on the results of your analysis of the ICS.

Assume that you are a partner, manager, or representative of the CPA firm, and you want to delegate the responsibility of the implementation of this project to your subordinate, who is a senior CPA and is qualified to conduct the required analysis. The issue of this job incident is the degree of delegation of some of the manager's responsibilities to his or her subordinate.

Table 16 presents the percentages of CPA's response distribution for Job Incident 4. Most respondents favor the fourth action of choice where the least number of responses is assigned to the fifth choice to emphasize managerial delegation to subordinates.

Data analysis in Table 17 shows the results of stepwise logistic regression analysis for Job Incident 4. The model includes 13 factors consisting of a single variable each. These factors include caution, individuality, security, risk, equality, religion, rational, prejudice, honor, change, force, emotions, laborers. Table 17 also includes two factors consisting of several variables. Factor 1 involves owners, stockholders, my subordinate,

TABLE 16
Response Distribution for Job Incident 4

Respondents recommending	Percent Responding
Retain control over all important decisions.	6.60
Require the subordinate to obtain approval at each stage of the project.	16.98
Simply assign a list of certain tasks of the project for your subordinate.	12.27
Allow the subordinate to take the required actions of the project, but require him or her to stay in touch throughout the assignment.	61.79
Permit the subordinate to take the required actions for the project without requiring him or her to report to you at each stage of the implementation process.	2.36

and my boss. Factor 2 includes blue collar workers, crafts men, and laborers. Out of these 17 variables, 8 variables (caution, security, religion, rational, prejudice, honor, force, laborers) have positive and significant (odds values > 1; $p < .001$; .05) effects on managerial decisions and their corresponding odds ratios.

TABLE 17
Analysis of Maximum Likelihood Estimates for Job Incident 4

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	PR > Chi-Square	Odds Ratio
INTERCP1	1	-7.7764	1.2835	36.710	0.0001	0.000
INTERCP2	1	-5.3961	1.2093	19.911	0.0001	0.005
INTERCP3	1	-4.3346	1.1857	13.365	0.0003	0.013
INTERCP4	1	3.4144	1.1393	8.981	0.0027	30.40
Caution	1	0.6357	0.1698	14.820	0.0001	1.923
Individuality	1	-0.3559	0.1508	5.567	0.0183	0.701
Security	1	0.8888	0.1784	24.812	0.0001	2.432
Risk	1	0.8691	0.1881	21.351	0.0001	0.419
Equality	1	-0.4085	0.1524	7.181	0.0074	0.665
Religion	1	0.7763	0.1813	18.329	0.0001	2.173
Rational	1	0.3247	0.1511	4.618	0.0316	1.384
Prejudice	1	1.2682	0.1997	40.327	0.0001	3.555
Honor	1	0.7110	0.2246	10.019	0.0015	2.036
Change	1	-0.3593	0.1601	5.035	0.0248	0.698
Force	1	1.0926	0.2726	16.067	0.0001	2.982
Emotions	1	-0.5470	0.2353	5.404	0.0201	0.579
Laborers	1	1.6242	0.3067	28.051	0.0001	5.075
Factor 1	1	-0.1484	0.0454	10.710	0.0011	0.862
Factor 2	1	-0.7348	0.1271	33.401	0.0001	0.480

Job Incident 5-A

While visiting in the client's office of a manufacturing company, Lisa Dennis, a CPA at your firm, noticed by accident a report which indicated that the manufacturing company just won a tremendous contract. Lisa glanced over the document while she was alone in the office. She discovered that the contract would allow this manufacturing company to have reported earnings substantially higher in the future than the company had reported in the past. However, information about this company's contract is still very confidential. The bottom line here concerns confidential information about a client.

Job Incident 5 has two sets of questions. Consequently, this job incident has two sets of responses. The first part of questions concentrates on what the respondents would advise Lisa to take from the proposed actions.

Table 18 presents the percentages of CPA's response distribution for the first version of Job Incident 5-A. Slightly less than three-quarters (74.1%) of responses are given to the fourth action of choice for that version suggesting that Lisa should not buy stocks because she has access to confidential information from a client's company. On the other hand, less than one percent (0.94%) advise her to buy a huge amount of stocks as implied by the first choice.

TABLE 18
Response Distribution for the First Part of Job Incident 5-A

Response	Percent Responding
Buy a large quantity of stock in this manufacturing company.	0.94
Buy a reasonable quantity of stock in this manufacturing company to cover her access to the confidential information about the contract.	3.30
Wait until the confidential information about the contract is public, then she can buy stock from this company.	21.66
Not buy stock from this company since she has access to confidential information by accident.	74.1

Table 19 presents the results of stepwise logistic regression analysis for the first part of responses to Job Incident 5. This model includes 9 factors consisting of one variable each. These factors include caution, aggressiveness, tolerance, my company, dignity, honor, cooperation, money, and me. In addition, 4 factors consisting of several variables are included in this model. Factor 1 involves owners, stockholders, my

subordinate, and my boss. Factor3 includes organizational growth, organizational stability, and organizational efficiency. Factor 4 includes obedience and conservatism. Factor 7 involves government and liberalism. These variables significantly influence managerial decisions and their corresponding odds ratios. Out of the 9 single variables, 4 variables (tolerance, my company, honor, and money have positive and significant (odds values > 1; $p < .0001$) relationships with the responses to the first part of Job Incident 5. Moreover, there are positive and significant (odds values > 1; $p < .0001$) relationships between the same responses and the entire variables include in factor 1, factor 3, factor4, and factor 7.

TABLE 19

Analysis of Maximum Likelihood Estimates of Job Incident 5-A

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	PR > Chi-Square	Odds Ratio
INTERCP1	1	-18.8579	2.9880	39.830	0.0001	0.000
INTERCP2	1	-16.7952	2.8071	35.797	0.0001	0.000
INTERCP3	1	-13.0878	2.5478	26.387	0.0001	0.000
Caution	1	- 1.2345	0.2804	19.382	0.0001	0.291
Aggressiveness	1	- 0.9659	0.2621	13.583	0.0002	0.381
Tolerance	1	0.9159	0.2256	16.483	0.0001	2.499
My Company	1	1.0145	0.3386	8.979	0.0027	2.758
Dignity	1	- 0.8413	0.2244	14.055	0.0002	0.431
Honor	1	0.9734	0.3101	9.852	0.0017	2.647
Cooperation	1	- 0.9780	0.2231	19.208	0.0001	0.376
Money	1	1.0708	0.2183	24.054	0.0001	2.918
Me	1	- 0.6607	0.2317	8.134	0.0043	0.516
Factor 1	1	0.2530	0.0728	12.086	0.0005	1.288
Factor 3	1	0.2348	0.0987	5.660	0.0174	1.265
Factor 4	1	0.5869	0.1420	17.088	0.0001	1.798
Factor 7	1	0.8296	0.1497	30.702	0.0001	2.292

The second version of Job Incident 5 -B deals with what most people would choose from the proposed actions if they are in Lisa's position. Table 20 presents the percentages of CPA's response distribution for the second version of Job Incident 5-B. Similar responses are seen in this table. Major responses are also assigned to the fourth action of choices whereas the least number of responses is assigned to the first choice.

TABLE 20
Response Distribution for the Second Part of Job Incident 5–B

Response	Percent Responding
Buy a large quantity of stock in this manufacturing company.	8.96
Buy a reasonable quantity of stock in this manufacturing company to cover her access to the confidential information about the contract.	22.64
Wait until the confidential information about the contract is public, then she can buy stock from this company.	16.98
Not buy stock from this company since she has access to confidential information by accident.	51.42

Table 21 presents the results of stepwise logistic regression analysis for the second part of Job Incident. This model includes 13 factors consisting of one variable each. These variables are loyalty, aggressiveness, individuality, security, conflict, compassion, rational, profit maximization, change, cooperation, force, money, laborers. This model also includes factor 2 which consist of 3 variables (blue collar workers, craftsmen, and laborers). These variables significantly influence managerial decisions and their corresponding odds ratios. Out of the 13 variables, 10 variables (loyalty, aggressiveness, individuality, security, compassion, rational, profit maximization, force, money, laborers) have positive and significant (odds values > 1; $p < .05$) relationships with the responses to the second part of Job Incident 5–B.

Data analysis in Tables 10 though 21 support the third proposition, “There is a significant relationship between the personal value system of a CPA firm’s manager and his or her managerial decisions.”

TABLE 21

Analysis of Maximum Likelihood Estimates for Job Incident 5-B

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	PR > Chi-Square	Odds Ratio
INTERCP1	1	-9.3472	1.2667	54.452	0.0001	0.000
INTERCP2	1	-7.0997	1.1888	35.669	0.0001	0.001
INTERCP3	1	-6.0332	1.1580	27.669	0.0001	0.002
Loyalty	1	0.6621	0.1717	14.868	0.0001	1.939
Aggressiveness	1	0.3867	0.1555	6.182	0.0129	1.472
Individuality	1	0.4886	0.1337	13.363	0.0003	1.630
Security	1	0.3696	0.1386	7.107	0.0077	1.447
Conflict	1	-0.8577	0.2015	18.116	0.0001	0.424
Compassion	1	0.5659	0.1419	15.895	0.0016	1.761
Rational	1	0.4357	0.1384	9.906	0.0226	1.546
Profit maximization	1	0.3088	0.1354	5.202	0.0213	1.362
Change	1	-0.3227	0.1401	5.305	0.0108	0.724
Cooperation	1	-0.3907	0.1533	6.496	0.0435	0.677
Force	1	0.4545	0.2251	4.076	0.0001	1.575
Money	1	0.6103	0.1488	16.824	0.0004	1.841
Laborers	1	1.1396	0.3247	12.319	0.0004	03.126
Factor 2	1	-0.4480	0.1144	15.337	0.0001	0.639

In addition, the stepwise logistic regression is used including the entire responses for the sixty-six concepts of the PVQ. The analysis in Appendix D confirms the same conclusion.

The Relationship between the Personal Value Systems of CPA Firms' Managers and Their Job Satisfaction

The fourth assertion is to test the relationship between the personal value systems of CPA firms' managers and their job satisfaction. A regression analysis with the stepwise option is utilized to determine the best subset of predictive variables that relate significantly to job satisfaction of a CPA firm's manager. The dependent variable in this case is the sum of the six job satisfaction items. The independent variables are the 33 single variable factors and the 6 factors consisting of multiple variables which are determined by the factor analysis conducted in this study.

The regression model presented in Table 22 produces eight single variable factors and factor five that have significant relationships with job satisfaction on a CPA firm's

manager. The 9 single variable factors include security, competition, job satisfaction, conflict, my company, prejudice, achievement, ability, and force. Factor 5 includes customers and employees. Data analysis in Table 22 shows that 7 of the 10 personal values (Job satisfaction, conflict, my company, achievement, force, customers, and employees) have positive and significant ($F= 11.48$; $p< 0.0001$) relationships with job satisfaction of the CPA firm's manager. The reliability of the multi-item scale of job satisfaction, measured by Cronbach Coefficient Alpha, is found to be 0.81 which is considered satisfactory (Peter, 1979).

The R-square value for the regression model is 0.363 which is not high. This indicates most likely that other variables not in the data set have an influence on job satisfaction. The variables in the model have a significant effect, but are not sufficient by themselves to give highly reliable predictions. These results support the fourth proposition, "there is a significant relationship between the personal value system of the CPA firm's manager and his or her job satisfaction."

TABLE 22
Regression Analysis For Job Satisfaction

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	10	1382.9949	138.2994	11.48	0.000
Error	201	2421.8918	12.0492		
Total	211	3804.8867			

Variable	Parameter Estimate	Standard. Error	Sum of Squares	F	Prob>F
INTERCP1	-12.4274	2.1428	405.2532	33.63	0.000
Security	-0.6334	0.2126	106.9519	8.88	0.003
Competition	-0.6509	0.2172	108.1691	8.98	0.003
Job Satisfaction	0.5070	0.2266	60.3161	5.01	0.026
Conflict	0.8159	0.2509	127.3482	10.57	0.001
My Company	1.2888	0.2685	277.5397	23.03	0.000
Prejudice	-0.6939	0.2546	89.4989	7.43	0.007
Achievement	1.0390	0.2426	220.8761	18.33	0.000
Ability	-0.5164	0.2177	67.7690	5.62	0.018
Force	1.2643	0.3728	138.5788	11.50	0.000
Factor 5	0.5053	0.1584	122.6197	10.18	0.001

**The Relationship between the Personal Value Systems
of CPA Firms' Managers and Their Job
Organizational Commitment**

The fifth objective is to test the relationship between the personal value systems of CPA firms' managers and their organizational commitment. The same statistical procedure used for job satisfaction is performed on the responses to organizational commitment. The reliability of the multi-item scale of job organizational commitment, measured by Cronbach Coefficient Alpha, is found to be 0.85 which is considered satisfactory (Peter, 1979). The dependent variable here is the sum of the 9 organizational commitment items. The independent variables are the 33 single variable factors and the 6 factors of multiple variables which were determined by the factor analysis conducted in this study.

The stepwise regression procedure produces the outcomes that appear in Table 23. It is seen that some of the personal values have a significant effect on organizational commitment. The regression model generates 8 single variable factors and factors 3 and 5. The 8 single variable factors encompassed success, security, conflict, my company, employee welfare, prejudice, cooperation, and ability. Factor 3 involves organizational growth, organizational stability, and organizational efficiency, and factor 5 includes customers and employees.

Data analysis in Table 23 indicates that 4 (conflict, creativity, my company, employee welfare) of the 8 single variable factors have positive and significant ($F= 13.52$; $p < 0.0001$) relationships with the organizational commitment. In addition, the five variables represented by factors 3 and 5 have the same positive and significant effects on organizational commitment. These results support the fifth proposition, "there is a significant relationship between the personal value systems of CPA firms' managers and their organizational commitment."

TABLE 23
Regression Analysis for Job Commitment

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	11	5051.3091	459.2099	13.52	0.000
Error	200	6791.2710	33.9563		
Total	211	11842.5801			

Variable	Parameter Estimate	Standard. Error	Sum of Squares	F	Prob>F
INTERCP1	-36.3779	3.2051	4372.2155	128.82	0.000
Success	- 1.5312	0.3703	580.5973	17.10	0.000
Security	- 0.9910	0.3630	253.0793	7.45	0.006
Conflict	1.1630	0.4287	249.8810	7.36	0.007
My Company	3.0304	0.4829	1337.2744	39.38	0.000
Employee Welfare	1.7121	0.4375	519.8928	15.31	0.000
Prejudice	-1.3485	0.4142	359.8057	10.60	0.001
Cooperation	-0.8655	0.3919	165.6174	4.88	0.028
Ability	-1.050	0.4204	211.9995	6.24	0.013
Factor 3	0.4558	0.1452	334.6127	9.85	0.002
Factor 5	0.9103	0.2744	373.5336	11.00	0.001

**The Relationship between the Personal Value Systems
of CPA Firms' Managers and Their
Managerial Success**

The sixth task is to test the relationship between the personal value systems of CPA firms' managers and their managerial success. To achieve this objective, managers are allocated into three categories based on their z-scores for all age groups. The first category includes all managers in the top 15% of the z-scores. This category represents the most successful managers. The second category includes managers between the bottom 15% and 70% of the z-scores. This category represents those managers between the least and most successful managers. The third category includes managers in the bottom 15% of the z-scores, which represents the least successful managers.

A stepwise logistic analysis is performed by using the three categories as the dependent variables, and the scores of the 33 single variable factors and the 6 multiple factors as the independent variables. The model presented in Table 24 generate three single variable factors and four multiple factors. The four multiple variable factors are 1,

3, 4, and 6. The three single variable factors are success, profit maximization, and ability. Factor 1 includes owners, stockholders, my subordinate, and my boss. Factor 3 involves organizational growth, organizational stability, and organizational efficiency. Factor 4 represents obedience and conservatism. Factor 6 represents government and liberalism. Out of the 3 single variable factors, 2 variables (success and profit maximization) have positive and significant (odds values > 1; $p < .05$) influences on managerial success. Moreover, factors 1 and 6 have positive and significant (odds values > 1; $p < .05$) influences on managerial success. These results support the sixth propositions, “there is a significant relationship between the personal value system of a CPA firm’s manager and his or her managerial success.”

In addition, the stepwise regression procedure for job satisfaction, job organizational commitment, and managerial success is used including the entire responses for the sixty-six concepts of the PVQ . The analysis in Appendix D confirms the same conclusions.

TABLE 24
Analysis of Maximum Likelihood Estimates for Success

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	PR > Chi-Square	Odds Ratio
INTERCP1	1	-4.703	1.1530	16.6431	0.0001	0.009
INTERCP2	1	0.0588	1.0768	0.0030	0.9565	1.061
Success	1	0.4170	0.1463	8.1241	000044	1.573
Profit maximization	1	0.4527	0.1268	12.7549	0.1177	1.573
Ability	1	0.2880	0.1446	3.970	0.0463	1.150
Factor 1	1	0.1458	0.0421	11.9900	0.0099	1.157
Factor3	1	-0.2848	0.0617	21.2800	0.0001	0.679
Factor 4	1	0.3869	0.0903	18.3420	0.0073	1.797
Factor6	1	0.6171	0.1086	32.2606	0.0035	1.853

**Differences in the Personal Value Systems
of Male and Female Managers
of CPA Firms**

The seventh purpose is to test differences in the personal value systems of male-female managers of CPA firms. To examine this issue, two-way (gender and class) multivariate analysis of variance is performed first. Gender is classified as male and female managers and class is classified as affect, moralistic, and pragmatic. In the multivariate analysis, the variables included are the 33 variables and the 6 factor scores. The multivariate analysis shows a significant F-value for Wilk's lambda ($p= 0.0001$). Since the multivariate analysis is significant, an analysis of variance is performed on each of the dependent variables separately. Since the gender by class data in the two-way ANOVA is unbalanced (sample sizes in different cells are unequal), least square means are computed and compared. Table 25 presents the result of least square means for gender. The results suggest that there is a gender effect (at the 5% level of significance) with regard to the following personal values: ability, dignity, change, emotions, laborers, individuality, conflict, money, and emotion.

Moreover, the analysis indicates significant differences among the class means. Least square means for class are presented in Table 26. Data analysis in this table reports a class effect in relation to the following personal values: individuality, success, skill, equality, conflict, tolerance, religion, profit maximization, achievement, honor, force, money, emotions, ability, industrial leadership, factor 3, factor 4, and factor 5. Means with different letters are significantly different at the 5% level. Furthermore, there are significant differences in the gender by class interaction in seven variables and one factor as seen in Table 27. A comparison between two means is significant if the related p-value is less than .05. Here 0 represents female, 1 represent male, A is affect, M is moralistic, and P is pragmatic.

TABLE 25

LS Means for Nine Concepts of Female and Male Managers of CPA Firms

Concept	Female	Male
Ability	2.5749	2.8187
Dignity	2.5091	2.6458
Change	2.5173	2.2174
Emotions	2.3164	1.5880
Laborers	1.7632	2.2401
Individuality	1.5512	1.9136
Conflict	2.5884	2.1176
Money	2.6135	1.5828
Emotions	1.2652	2.3143
	n=55	n=168

TABLE 26

The Means for Eighteen Values of Affect, Moralistic, and Pragmatic Managers

CLASS	LSMEAN AFFECT	LSMEAN MORALISTIC	LSMEAN PRAGMATIC
PVS			
Individuality	1.6666a	2.3467a	1.6309b
Success	2.8333a	2.3373a	2.9196b
Skill	2.8333a	2.5324b	3.3325c
Equality	3.7222a	2.8228a	2.9676b
Conflict	2.8333a	1.8869b	1.5742c
Tolerance	1.9444a	2.6847a	1.9309b
Religion	1.4444a	2.4630b	1.9234c
Profit			
Maximization	1.6666a	2.0702a	2.7688b
Achievement	3.0555a	2.8246a	3.3487b
Honor	3.0555a	3.3666a	2.7956b
Force	1.5555a	1.5849a	1.2789b
Money	1.8333a	1.5205a	2.3214c
Emotions	3.0555a	1.5913b	1.2098c
Ability	3.0555a	2.2502a	3.3006b
Industry			
leadership	1.6666a	1.8246a	2.3238c
F3	6.3333a	7.0724b	9.1248c
F4	2.2777a	4.5253b	3.4548c
F5	5.4444a	7.2391a	7.0096b
	n = 14	n = 84	n = 114

*Means with the same letter designation are not significantly different and those with different letter designation are significantly different.

TABLE 27

P-Values for Differences Among Means in Gender by Class Interaction

Concept: Success						
LSMEAN	0A	0M	0P	1A	1M	1P
	3.0000	2.3913	2.3333	2.6666	2.2833	2.5060
0A	3.0000	0.4341	0.3872	0.6861	0.3451	0.5128
0M	2.3913		0.8428	0.5069	0.6765	0.0001
0P	2.3333			0.4061	0.8321	0.0001
1A	2.6666				0.3099	0.0242
1M	2.2833					0.0001
1P	2.5060					

Concept: Dignity						
LSMEAN	0A	0M	0P	1A	1M	1P
	3.0000	2.2608	2.2666	2.8888	3.4000	2.6144
0M	3.0000	0.3382	0.3375	0.8919	0.5947	0.6065
0P	2.2608		0.9840	0.1277	0.0001	0.1524
1A	2.2666			0.1186	0.0001	0.1196
1M	2.8888				0.1725	0.4549
1M	3.4000					0.0001
1P	2.6144					

Concept: Change						
LSMEAN	0A	0M	0P	1A	1M	1P
	4.0000	1.6521	1.9000	1.7777	2.2000	2.6746
0A	4.0000	0.0069	0.0140	0.0153	0.0323	0.1125
0M	1.6521		0.4424	0.7836	0.0559	0.0002
0P	1.9000			0.7822	0.2495	0.0020
1A	1.7777				0.3150	0.0290
1M	2.2000					0.0168
1P	2.6746					

Concept: Emotions						
LSMEAN	0A	0M	0P	1A	1M	1P
	4.000	1.7826	1.1666	2.1111	1.4000	1.2530
0A	4.000	0.0001	0.0001	0.0001	0.0001	0.0001
0M	1.7826		0.0011	0.2159	0.0215	0.0010
0P	1.1666			0.0003	0.1226	0.5477
1A	2.1111				0.0035	0.0004
1M	1.4000					0.1990
1P	1.2530					

TABLE 27 (Continued)

Concept: Laborers						
LSMEAN	0A	0M	0P	1A	1M	1P
	1.0000	1.9565	2.3333	1.8888	2.7833	2.0481
0A 1.0000		0.2484	0.1049	0.3116	0.0280	0.1927
0M 1.9565			0.2265	0.8782	0.0030	0.7289
0P 2.3333				0.2980	0.0741	0.2338
1A 1.8888					0.0267	0.6859
1M 2.7833						0.0001
1P 2.0481						

Concept: Risk						
LSMEAN	0A	0M	0P	1A	1M	1P
	1.0000	2.0869	1.5666	1.6666	1.8333	2.2409
0A 1.000		0.2020	0.5013	0.4600	0.3154	0.1338
0M 2.0869			0.1047	0.3547	0.3704	0.5711
0P 1.5666				0.8196	0.3018	0.0065
1A 1.6666					0.6861	0.1570
1M 1.8333						0.0380
1P 2.2409						

Concept: Tolerance						
LSMEAN	0A	0M	0P	1A	1M	1P
	1.0000	2.8695	2.0666	2.8888	2.5000	1.7951
0A 1.0000		0.0274	0.2022	0.0355	0.0609	0.3315
0M 2.8695			0.0119	0.9657	0.1883	0.0001
0P 2.0666				0.0595	0.0911	0.2655
1A 2.8888					0.3417	0.0069
1M 2.5000						0.0003
1P 1.7951						

Factor: F3						
LSMEAN	0A	0M	0P	1A	1M	1P
	7.0000	6.4782	9.4666	5.6666	7.6666	8.7831
0A 7.000		0.7930	0.2114	0.5274	0.7310	0.3561
0M 6.4782			0.0001	0.4444	0.0735	0.0004
0P 9.4666				0.0003	0.0032	0.2350
1A 5.6666					0.0391	0.0012
1M 7.6666						0.0153
1P 8.7831						

**Differences in the Personal Value Systems of CPA
Firm's Younger and Older Managers**

The eighth assertion is to test differences in the personal value systems of CPA firm's older managers and the personal value systems of their younger counterparts. In order to shed light on this issue, a two way (age and class) multivariate analysis of variance is performed first. The median and the mean of the age of managers are found to be 44 years and 44.1 years, respectively. Age is classified as 44 years or older in one category and less than 44 in the second category. Class was affect, moralistic, and pragmatic. In the multivariate analysis, the variables included are the 33 variables and the 6 factor scores. The multivariate analysis shows a significance F value for Wilk's lambda at $p=.0001$. Since the multivariate analysis is significant, an analysis of variance is performed on each of the variables dependent separately. Since the age by class data in the two-way ANOVA is unbalanced, least square means are computed and compared. Table 28 presents the results of least square means for age. The results indicate that there is an age effect (at the 5% level of significance) with regard to the following personal values: success, change, emotion, industrial leadership, me, factor 4, and factor 6.

Also, the analysis indicates significant differences among class means. Least square means for class are presented in Table 29. Data analysis in this table manifests that there is a class effect with regard to the following personal values: Loyalty individuality, success, skill, equality, conflict, tolerance, religion, my company, dignity, profit maximization, achievement, honor, change, force, money, emotions, industry leadership, ability, factor 3, factor 4, and factor 6. Means with different letters are significantly different at the 5% level. Finally, there is significant age by class interaction for the following personal values: success, skill, dignity, change, money, industrial leadership, and factor 4. Table 30 presents the mean differences among the six age-class least square means with p-values. A comparison between two means is significant if the

p-value is less than .05. Here 0 represents (age \geq 44), 1 represent (age < 44), A is affect, M is moralistic, and P is pragmatic.

TABLE 28
LS Means for Seven Values of Younger and Older
Managers of CPA Firms

Concept	Age \geq 44	Age < 44
Success	2.7901	2.8661
Change	2.0038	2.6860
Emotion	1.6790	1.9567
Industrial Leadership	1.7746	2.7589
Me	2.7571	3.4843
F4	3.5755	3.6944
F6	1.7746	2.6589
	n=138	n= 85

TABLE 29
LS Means for Ten Values of Affect, Moralistic,
and Pragmatic Managers

CLASS	LSMEAN	LSMEAN	LSMEAN
PVS	AFFECT	MORALISTIC	PRAGMATIC
Loyalty	3.1190a	3.2326a	2.6863b
Individuality	1.9286a	2.4494a	1.7172b
Success	2.9524a	2.3328a	3.1994b
Skill	2.8095a	2.6274a	3.3259c
Equality	2.2381a	2.7763b	1.9681c
Conflict	2.4286a	1.7649a	1.5234b
Tolerance	2.7619a	2.6376b	1.9100b
Religion	1.5743a	2.2708b	1.8450c
My Company	4.0000a	3.3920a	3.5744b
Dignity	3.1190a	3.1063a	2.5663b

TABLE 29 (Continued)

CLASS	LSMEAN	LSMEAN	LSMEAN
PVS	AFFECT	MORALISTIC	PRAGMATIC
Profit			
maximization	1.9048a	2.0025b	2.7763c
Achievement	2.7619a	2.8505a	3.3709b
Honor	3.1904a	3.5396a	2.8063b
Change	2.5476a	2.0249b	2.4622c
Force	1.0714a	1.5534b	1.3728c
Money	2.1429a	1.6830a	2.3184b
Emotions	2.7143a	1.5166b	1.2228c
Industry			
leadership	2.4286a	1.8217b	2.4000c
Ability	2.7619a	2.6816a	3.2959b
F3	6.2857a	7.3344b	9.0344c
F4	2.8571a	4.6506b	3.3972c
F6	3.4523a	4.1523b	3.5584c
	n = 14	n = 84	n=114

* Means with the same letters designation are not significantly different and those with different letter designation are significantly different at the 5% level.

TABLE 30
P- Value Differences Among Means in Age by Class Interaction

Concept: Success						
LSMEAN	0A	0M	0P	1A	1M	1P
	2.5714	2.6190	3.1800	3.3333	2.0465	3.2188
0A 2.5714		0.9156	0.1718	0.2145	0.2429	0.1408
0M 2.6190			0.0157	0.1383	0.0173	0.0066
0P 3.1800				0.7473	0.0001	0.8521
1A 3.3333					0.0078	0.8075
1M 2.0465						0.0001
1P 3.2188						

Concept: Skill						
LSMEAN	0A	0M	0P	1A	1M	1P
	2.2857	2.9523	3.4800	3.3333	2.3023	3.1719
0A 2.2857		0.1345	0.0070	0.0847	0.9701	0.4818
0M 2.9523			0.0214	0.4228	0.0064	0.3103
0P 3.4800				0.7551	0.0001	0.1346
1A 3.3333					0.0306	0.7282
1M 2.3023						0.0001
1P 3.1719						

TABLE 30 (Continued)

Concept: Dignity							
LSMEAN	0A	0M	0P	1A	1M	1P	
	2.5714	3.1429	2.8200	3.6667	3.0698	2.3125	
0A	2.5714	0.1944	0.5673	0.0685	0.2567	0.5459	
0M	3.1429		0.1529	0.2656	0.7543	0.0001	
0P	2.8200			0.0698	0.2653	0.0132	
1A	3.6667				0.2041	0.0035	
1M	3.0698					0.0004	
1P	2.3125						

Concept: Change							
LSMEAN	0A	0M	0P	1A	1M	1P	
	1.4256	2.1429	2.4400	3.6667	1.9070	2.4844	
0A	1.4256	0.1406	0.0353	0.0008	0.3221	0.0260	
0M	2.1429		0.2314	0.0035	0.3590	0.1474	
0P	2.4400			0.0173	0.0314	0.8426	
1A	3.6667				0.0008	0.0202	
1M	1.9070					0.0141	
1P	2.4844						

Concept: Money							
LSMEAN	0A	0M	0P	1A	1M	1P	
	2.2857	1.7380	1.8400	2.0000	1.6279	2.7969	
0A	2.2857	0.2433	0.3364	0.6546	0.1606	0.2640	
0M	1.7380		0.6715	0.6012	0.6582	0.0001	
0P	1.8400			0.7470	0.3747	0.0001	
1A	2.0000				0.4572	0.1050	
1M	1.6279					0.0001	
1P	2.7969						

Concept: Industry leadership							
LSMEAN	0A	0M	0P	1A	1M	1P	
	1.8571	1.6667	1.8000	3.0000	1.9767	3.0000	
0A	1.8571	0.6706	0.8973	0.0622	0.7890	0.0094	
0M	1.6667		0.5615	0.0058	0.1934	0.0001	
0P	1.8000			0.0120	0.4387	0.0001	
1A	3.0000				0.0332	1.0000	
1M	1.9767					0.0001	
1P	3.0000						
	2.7143	4.9524	3.0600	3.0000	4.3488	3.7343	
0A	2.7143	0.0022	0.6281	0.7715	0.0242	0.1483	
0M	4.9524		0.0001	0.0120	0.1167	0.0006	
0P	3.0600			0.0974	0.0006	0.0443	
1A	3.0000				0.0811	0.3312	
1M	4.3488					0.0791	
1P	3.7343						

Differences in the Personal Systems of Managers in Different Departments

The ninth task is to test differences in the personal value systems of CPA firm's managers across the various departments of the surveyed CPA firms. A multivariate and univariate analyses of variance are conducted sequentially. The outcomes of both statistical procedures indicate that there are significant differences in the personal value systems of CPA firms' managers of various departments (auditing, taxation, consulting, information technology, general administration, and other). The significant differences included seventeen variables and one factor which are shown in Table 31. These differences include loyalty, caution, aggressiveness, individuality, security, skills, equality, job satisfaction, creativity, my company, rational, dignity, employee welfare, achievement, honor, cooperation, force, money, emotions, owners, stockholders, my subordinate, and my boss.

For each of these dependent variables, the Duncan test is recommended for multiple comparison among means. Comparisons among the six department means for each of the above value systems are presented in Table 31. Means with the same letter designation are not significantly different and those with different letter designations are significantly different. These results support the ninth proposition, "there are significant differences among the personal value systems of CPA firms' managers of auditing, taxation, consulting, information technology, and general administration departments."

Subsequently, the same procedure is applied on the moralistic and pragmatic classes as appears in Tables 32, and 33 respectively. Data analysis depicted in these tables support the ninth proposition.

TABLE 31

Means Differences between Six Departments

Personal Values	auditing	taxation	consulting	information Technology	general Admin.	others
Loyalty	2.826 ^{ab}	2.666 ^{ab}	3.571 ^a	2.500 ^b	3.500 ^a	3.121 ^{ab}
Caution	0.913 ^{ab}	2.305 ^a	2.000 ^{ab}	1.000 ^b	1.000 ^b	2.090 ^a
Aggressiveness	2.347 ^a	2.111 ^a	2.142 ^a	2.500 ^a	1.000 ^b	1.697 ^{ab}
Individuality	1.652 ^{bc}	1.777 ^{bc}	2.214 ^{bc}	4.000 ^a	1.250 ^c	2.424 ^b
Security	2.282 ^b	2.694 ^{ab}	3.357 ^a	1.000 ^c	2.000 ^b	2.282 ^b
Skill	3.173 ^{ab}	3.055 ^{ab}	2.571 ^{bc}	4.000 ^a	2.000 ^c	2.939 ^{bc}
Equality	2.195 ^{ab}	2.375 ^{ab}	2.714 ^a	1.500 ^b	2.250 ^{ab}	2.363 ^{ab}
Job satisfaction	2.695 ^b	3.097 ^{ab}	2.571 ^b	4.000 ^a	3.500 ^{ab}	3.045 ^{ab}
Creativity	2.021 ^{ab}	2.486 ^{ab}	1.857 ^{bc}	3.000 ^a	1.000 ^c	2.363 ^{ab}
My Company	3.434 ^{ab}	3.416 ^{ab}	3.571 ^{ab}	3.500 ^{ab}	3.000 ^b	3.818 ^a
Rational	2.826 ^{ab}	2.527 ^{ab}	2.428 ^{ab}	3.000 ^a	1.750 ^b	2.575 ^{ab}
Dignity	2.369 ^b	2.583 ^b	3.000 ^b	4.000 ^a	3.250 ^{ab}	3.121 ^{ab}
Employee welfare	2.782 ^{ab}	2.694 ^{ab}	3.500 ^a	1.5000 ^c	2.500 ^{ab}	3.060 ^{ab}
Achievement	3.239 ^a	3.111 ^{ab}	2.285 ^b	3.500 ^a	3.500 ^a	3.151 ^{ab}
Honor	2.847 ^b	2.972 ^b	3.857 ^a	2.500 ^b	3.2500 ^{ab}	3.333 ^{ab}
Cooperation	2.891 ^a	3.055 ^a	2.928 ^a	1.500 ^b	1.750 ^b	2.697 ^a
Force	1.391 ^b	1.4167 ^b	1.357 ^b	1.000 ^b	2.000 ^a	1.424 ^b
Money	2.173 ^a	2.361 ^a	1.571 ^{ab}	2.500 ^a	2.500 ^b	1.969 ^{ab}
Emotions	1.804 ^a	1.388 ^{ab}	1.0714 ^b	1.000 ^b	1.2500 ^{ab}	1.363 ^{ab}
F1	16.217 ^a	16.347 ^a	18.500 ^a	9.500 ^b	16.750 ^a	16.606 ^a

TABLE 32

Means Differences between Six Departments
for Moralistic Managers

Personal Values	auditing	taxation	consulting	information Technology	general Admin.	others
Loyalty	2.9583 ^{ab}	3.3000 ^{ab}	3.6667 ^{ab}	2.5000	4.0000 ^a	3.2500 ^{ab}
Aggress.	2.3750 ^a	1.8500 ^{ab}	2.0833 ^{ab}	2.5000 ^a	1.0000 ^b	1.6389 ^{ab}
Individ.	2.0833 ^b	2.5500 ^{ab}	2.4167 ^b	4.0000 ^a	1.0000 ^a	2.3611 ^b
Success	2.2917 ^{ab}	2.2000 ^{ab}	2.5833 ^a	2.0000 ^{ab}	1.0000 ^b	2.6667 ^a
Security	2.3750 ^a	2.9000 ^a	3.2500 ^a	1.0000 ^b	1.0000 ^b	2.6667 ^a
Skill	2.9583 ^{ab}	2.5500 ^b	2.5000 ^b	4.0000 ^a	1.0000 ^c	2.4722 ^b
Risk	1.6250 ^{ab}	2.1000 ^{ab}	2.1667 ^{ab}	2.5000 ^a	1.0000 ^b	1.6667 ^{ab}
Equality	2.7500 ^{ab}	2.5000 ^{ab}	2.8333 ^{ab}	1.5000 ^b	4.0000 ^a	2.8056 ^{ab}
Job satisfaction	2.5833 ^b	3.3500 ^{ab}	2.5833 ^b	4.0000 ^a	4.0000 ^a	2.8333 ^{ab}
Conflict	2.1667 ^{ab}	2.3500 ^a	1.6667 ^{ab}	1.0000 ^b	2.0000 ^{ab}	1.6667 ^{ab}
Leisure	2.1667 ^{ab}	2.3500 ^a	1.1667 ^{ab}	1.0000 ^b	2.0000 ^{ab}	1.6667 ^{ab}
Tolerance	2.9167 ^{ab}	2.0000 ^b	2.1667 ^b	2.0000 ^b	4.0000 ^a	3.0000 ^{ab}
Creativity	2.4167 ^{ab}	2.3000 ^{ab}	2.0000 ^{ab}	3.0000 ^a	1.0000 ^b	2.1111 ^{ab}
My Company	3.1250 ^a	3.7500 ^a	3.5000 ^a	3.0000 ^a	1.0000 ^b	3.0000 ^a
Rational	2.9167 ^a	2.2000 ^a	2.5000 ^a	3.0000 ^a	1.0000 ^b	3.0000 ^a
Profit maxi.	2.2083 ^{ab}	2.6500 ^a	1.6667 ^{ab}	2.0000 ^{ab}	1.0000 ^b	1.6389 ^{ab}
Employee welfare	2.5833 ^a	2.9006 ^a	2.4167 ^a	1.5000 ^b	3.0000 ^a	3.3611 ^a
Achievement	2.0833 ^{ab}	2.7500 ^{ab}	2.2500 ^{ab}	3.5000 ^a	2.0000 ^b	2.8889 ^{ab}
Honor	3.3333 ^{ab}	3.5000 ^{ab}	3.8333 ^a	2.5000 ^b	4.0000 ^a	3.5833 ^a
Change	2.5000 ^a	1.9500 ^{ab}	2.6667 ^a	2.0000 ^{ab}	1.0000 ^b	1.7500 ^{ab}
Cooperation	3.1250 ^a	2.9000 ^a	2.9167 ^a	1.5000 ^b	2.0000 ^{ab}	2.7500 ^{ab}
Force	1.5417 ^{ab}	1.4500 ^{ab}	1.4167 ^{ab}	1.0000 ^b	2.0000 ^a	1.5278 ^{ab}
Money	1.8750 ^{ab}	1.8500 ^{ab}	1.6667 ^{ab}	2.5000 ^a	1.0000 ^b	1.5833 ^{ab}
Emotions	2.1667 ^a	1.7000 ^{abc}	1.0833 ^c	1.0000 ^c	2.0000 ^{ab}	1.5833 ^{abc}
Ability	2.2083 ^a	3.2000 ^a	2.2500 ^a	2.5000 ^a	1.0000 ^b	3.0000 ^a
Industry leadership	2.2917 ^{ab}	1.5000 ^{ab}	2.4167 ^a	2.5000 ^a	1.0000 ^b	1.6667 ^{ab}
F1	15.985 ^{ab}	16.900 ^{ab}	18.250 ^a	9.500 ^c	13.000 ^{bc}	15.694 ^{ab}
F6	4.4583 ^{ab}	4.0000 ^{ab}	5.0000 ^a	4.5000 ^{ab}	3.0000 ^b	3.5000 ^{ab}

TABLE 33

Means Differences between Six Departments
for Pragmatic Managers

Personal Values	auditing	taxation	consulting	information Technology	general Admin.	others
Loyalty	2.8400 ^a	2.4444 ^a	3.0000 ^a	1.000 ^b	3.3333 ^a	3.0556 ^a
Individuality	1.2800 ^b	1.4630 ^b	1.0000 ^b	4.000 ^a	1.3333 ^b	2.3333 ^b
Security	2.4000 ^b	2.6296 ^{ab}	4.0000 ^a	1.000 ^b	2.3333 ^b	2.0278 ^b
Skill	3.3600 ^{ab}	3.2407 ^{ab}	3.0000 ^{ab}	4.000 ^a	2.3333 ^b	3.2778 ^{ab}
Risk	2.0000 ^{bc}	2.0370 ^{bc}	3.5000 ^{ab}	4.000 ^a	1.6667 ^c	1.8333 ^c
Creativity	1.7200 ^b	2.5000 ^{ab}	1.0000 ^a	4.000 ^a	1.000 ^a	2.6389 ^{ab}
Dignity	2.0000 ^{bc}	2.4259 ^{bc}	1.5000 ^c	4.000 ^a	3.333 ^{ab}	3.0278 ^{ab}
Employee welfare	3.0000 ^{ab}	2.6296 ^{ab}	4.0000 ^a	2.000 ^b	2.333 ^b	2.8333 ^{ab}
Achievement	3.2000 ^{ab}	3.2407 ^{ab}	2.5000 ^b	4.000 ^a	4.0000 ^a	3.3611 ^{ab}
Honor	2.5200 ^b	2.7778 ^{ab}	4.0000 ^a	1.000 ^c	3.0000 ^{ab}	3.1389 ^{ab}
Change	2.1600 ^b	2.7407 ^{ab}	4.0000 ^a	3.000 ^{ab}	2.000 ^b	2.3056 ^{ab}
Cooperation	2.6000 ^a	3.1111 ^a	3.0000 ^a	1.000 ^b	1.666 ^{ab}	2.6111 ^{ab}
Money	2.3600 ^{ab}	2.5000 ^{ab}	1.0000 ^b	4.0000 ^a	1.0000 ^b	2.4167 ^{ab}
Laborers	2.2000 ^{ab}	2.0370 ^{ab}	3.0000 ^a	1.0000 ^b	1.3333 ^{ab}	2.2778 ^{ab}
Industry Leadership	2.8400 ^{ab}	2.7037 ^{ab}	1.5000 ^{bc}	4.0000 ^a	1.0000 ^c	1.9722 ^{bc}
Me	3.4800 ^a	3.4074 ^{ab}	4.0000 ^a	4.0000 ^a	2.0000 ^b	3.1944 ^{ab}
F1	16.520 ^a	16.056 ^a	20.000 ^a	5.000 ^b	18.000 ^a	17.194 ^a
F2	6.2000 ^{ab}	6.426 ^{ab}	9.0000 ^a	3.000 ^b	4.0000 ^b	7.167 ^{ab}
F6	3.080 ^b	3.759 ^{ab}	5.0000 ^{ab}	6.0000 ^a	3.0000 ^b	3.417 ^b

**The Comparison of the Personal Value Systems
of CPA Firms' Managers and Their
Counterparts in Other Industries**

The tenth objective is to find out if there are significant differences between the personal value systems of CPA firms' managers and their counterparts in other industries. To attain this objective, a non-parametric Spearman correlation is performed on the high importance and successful responses for the PVQ concepts pertaining to each of five category classifications (goals of business organization, personal goals of individuals, idea associated with people, idea about general topics, groups of people) including the data collected by this study and those of Oliver's (1995) data. Correlations in all five categories are relatively high and significant indicating general agreement between the two data sets for each category.

For the 1995 versus 2002 data, the highest association is within the Goals of Business Organization ($r_s = 0.898$) and the lowest association is within the Idea About General Topics ($r_s = 0.654$). Further analysis is conducted to confirm these results. The two data sets within each category are compared using the Wilcoxon non-parametric test. This test is analogous to the parametric two sample t-test. Both the Spearman and Wilcoxon analyses are used because the data in percentage cannot be safely assumed to be normally distributed. Results of the Wilcoxon test show that the two data sets are not significantly different in ranking for any of the five categories.

TABLE 34
Goals of Business Organization

	% high important first rank		%successful first rank		%high important/ successful first rank	
	1995	2002	1995	2002	1995	2002
High productivity	78	91	81	89	65 (1)	79 (1)
Profit maximization	57	77	77	71	44 (3)	67 (2)
Organizational efficiency	68	86	72	74	49 (2)	62 (3)
Organizational growth	43	75	68	65	31 (5)	54 (4.5)
Organizational stability	48	65	56	50	29 (6)	54 (4.5)
Industry leadership	46	69	79	54	40 (4)	51 (6)
Employee welfare	63	72	25	27	17 (7)	13 (7)
Social welfare	11	24	11	9	4 (8)	3 (8)

WILCOXON 2 SAMPLE TEST

YR	N	SUM OF SCORES	EXPECTED UNDER HO	STD DEV UNDER HO	MEAN SCORE
1	8	55.0	68.0	9.51490060	6.8750000
2	8	81.0	68.0	9.51490060	10.1250000

Z= - 1.31373

PROB> / Z| = 0.1889

TABLE 35

Personal goals of individuals

	% high important first rank		%successful first rank		%high important/ successful first rank	
	1995	2002	1995	2002	1995	2002
Achievement	78	90	90	85	64 (1)	71 (1)
Job satisfaction	86	73	70	70	44 (4)	68 (2)
Creativity	63	85	43	65	46 (3)	59 (3)
Success	69	84	66	59	55 (2)	58 (4)
Money	40	65	49	76	29 (5)	49 (5)
Influence	26	31	72	64	17 (8.5)	26 (6.5)
Individuality	50	17	23	54	17 (8.5)	26 (6.5)
Power	15	22	58	66	10 (11)	16 (8)
Dignity	69	68	16	18	15 (10)	12 (9)
Prestige	21	16	24	7	8 (12)	12 (10)
Security	47	39	14	12	17 (8.5)	6 (11)
Autonomy	32	18	8	12	17 (8.5)	3 (12)
Leisure	18	17	27	10	3 (13)	3 (13)

WILCOXON 2 SAMPLE TEST

YR	N	SUM OF SCORES	EXPECTED UNDER HO	STD DEV UNDER HO	MEAN SCORE
1	13	178.500000	175.500000	19.4465935	13.5307692
2	13	172.500000	175.500000	19.4465935	13.5307692

Z= 0.128557

PROB> | Z| = 0.8977

TABLE 36

Ideas Associated with People

	% high important first rank		%successful first rank		%high important/ successful first rank	
	1995	2002	1995	2002	1995	2002
Skill	71	85	85	80	60 (2.5)	75 (1)
Ability	81	85	75	72	60 (2.5)	69 (2)
Ambition	71	76	87	76	63 (1)	59 (3)
Cooperation	71	88	54	34	41 (4)	55 (4)
Honor	74	76	17	22	14 (8)	20 (6)
Trust	96	74	19	25	18 (6)	20 (6)
Loyalty	74	65	24	18	6 (10)	20 (6)
Compassion	42	29	9	15	18 (6)	14 (8)
Tolerance	33	28	17	8	18 (6)	8 (9)
Obedience	30	31	13	9	8 (9)	6 (10.5)
Conformity	2	9	22	9	2 (12)	6 (10.5)
Aggressiveness	21	13	79	68	4 (11)	5 (12)
Prejudice	13	9	28	54	1 (13)	3 (13)

WILCOXON 2 SAMPLE TEST

YR	N	SUM OF SCORES	EXPECTED UNDER HO	STD DEV UNDER HO	MEAN SCORE
1	13	165.0	175.500000	19.4499357	12.6923077
2	13	186.0	175.500000	19.4499357	14.3076923

Z= -.514141 PROB> | Z| = 0.6072

TABLE 37

Idea About General Topics

	% high important first rank		%successful first rank		%high important/ successful first rank	
	1995	2002	1995	2002	1995	2002
Competition	57	81	77	58	46 (1)	58 (1)
Change	60	68	65	60	43 (2)	53 (2)
Risk	40	33	72	79	29 (4)	27 (3)
Compromise	33	31	52	62	21 (5.5)	25 (4)
Authority	33	43	45	48	15 (7)	18 (5)
Conservatism	29	35	33	42	11 (8)	16 (6)
Equality	46	65	20	20	10 (9)	12 (7.5)
Liberalism	6	18	23	32	2 (15)	12 (7.5)
Rational	61	52	48	20	32 (3)	10 (9)
Conflict	9	20	43	57	6 (11)	9 (10.5)
Force	4	13	54	39	3 (14)	9 (10.5)
Caution	13	33	30	33	6 (11)	8 (12)
Property	38	58	47	25	21 (5.5)	7 (13)
Religion	38	63	11	24	4 (13)	5 (14)
Emotions	16	15	25	23	6 (11)	4 (15)

WILCOXON 2 SAMPLE TEST

YR	N	SUM OF SCORES	EXPECTED UNDER HO	STD DEV UNDER HO	MEAN SCORE
1	15	223.0	232.50000	24.0849789	14.86666
2	15	242.0	242.50000	24.0849789	16.13333

Z= -0.373

PROB> | Z | = 0.7086

TABLE 38
Groups of People

	% high important first rank		%successful first rank		%high important/successful first rank	
	1995	2002	1995	2002	1995	2002
My Company	87	91	75	91	62 (2)	78 (1)
Customers	92	93	69	80	63 (1)	76 (2)
My co-workers	70	88	43	75	30 (12)	74 (3)
Employees	81	88	56	79	46 (3)	72 (4)
Me	75	85	57	87	43 (4)	68 (5)
My subordinate	76	75	55	76	42 (5)	64 (6.5)
Owners	56	79	54	76	32 (11)	64 (6.5)
Mangers	60	69	65	39	39 (6.5)	57 (8)
Stockholders	50	71	50	53	28 (13)	56 (9)
Technical Staff	58	73	62	48	39 (7)	52 (10)
White-Collar						
Employees	37	74	58	62	25 (14)	51 (11)
My Boss	61	69	65	52	39 (7)	49 (12)
Laborers	45	30	46	31	24 (15.5)	18 (13)
Government	16	28	34	33	9 (15)	11 (14)
Blue Collar						
Workers	43	18	48	6	24 (15.5)	8 (15)
Crafts Men	48	22	57	25	33 (10)	6 (16)
Labor Unions	6	2	31	18	3 (17)	1 (17)

WILCOXON 2 SAMPLE TEST

YR	N	SUM OF SCORES	EXPECTED UNDER HO	STD DEV UNDER HO	MEAN SCORE
1	17	242.5	297.500000	29.0197164	14.2352941
2	17	353.0	297.500000	29.0197164	20.7647059

Z= -1.89526 PROB> / Z/ = 0.0581

Chapter Summary

The first part of this chapter describes the sample characteristics. The second part identifies the value orientations and the value profile of CPA managers as a group. The third part assesses the relationships between the personal value systems of these managers and their managerial decisions, job satisfaction, organizational commitment, and managerial success. The third part examines the differences in the personal value systems of younger-older managers, male-female managers, and the value systems of managers

in different CPA firms' departments. Finally, the value systems of CPA firms' managers are compared to the value systems of their counterparts in other industries. Using a variety of statistical methodologies for data analysis, the results provide support to nine propositions out of the ten propositions depicted in Chapter 1.

CHAPTER 6

DISCUSSIONS AND IMPLICATIONS

This chapter includes a restatement of the dissertation main objectives, research propositions, summary of related empirical findings, and limitations of the study. Implications, conclusions and contributions of the findings are also discussed. Finally, directions for future research on personal value systems are highlighted.

Research Objectives

The main objectives, as outlined in Chapter I, of this study are (1) to identify the personal value systems of CPA firms' managers, (2) to investigate the value profile of CPA firms' managers, (3) to examine the relationship between the personal value systems of CPA firms' managers and their managerial decisions, (4) to study the relationship between the personal value systems of CPA firms' managers and their job satisfaction, (5) to examine the relationship between the personal value systems of CPA firms' managers and their organizational commitment, (6) to examine the relationship between the personal value systems of CPA firms' managers and their managerial success, (7) to find out if there are significant differences in the personal value systems of CPA firms' female managers and the personal value systems of CPA firms' male managers, (8) to assess if there are significant differences in the personal value systems of younger CPA firms' managers and the personal value systems of CPA firms' older managers, (9) to find out if there are significant differences among the personal values systems of CPA managers of auditing, taxation, and consultation departments, and (10)

to illustrate if there are significant differences between the personal value systems of CPA firms' managers and the personal value systems of managers in other industries.

To achieve these objectives, four instruments are utilized: England's (1967) Personal Value Questionnaire (PVQ), England's (1975) Behavioral Measurement Questionnaire (BMQ), Brayfield and Rothe's (1951) Global Measure Questionnaire (GMQ) of Job satisfaction, and Mowday et al's. (1979) Organizational Commitment Questionnaire (OCQ). A national sample of 1,000 CPA firms' managers (500 managers of small and medium size CPA firms and 500 managers of the Big-five CPA firms) are randomly selected from the AICPA list of members. The assistance of James Foster, the director of the AICPA membership, who provided the mailing list and randomly selected the sample from the fifty states, is appreciated. Responses were received from 231 CPA firms' managers, yielding a response rate of 23.1 percent. Because 8 of the returned questionnaires were incomplete, 223 questionnaires were usable.

Propositions and Empirical Findings

This study investigates ten propositions presented in Chapter 4. The propositions are restated in this section along with the empirical findings that support or refute each of them. Descriptive statistics and Chi-square tests are used to assess the validity of propositions 1 and 2. Factor analysis and a stepwise logistic regression are used to examine propositions 3, 4, and 5. A stepwise logistic regression analysis is used to attest the validity of proposition 6. A two-way (gender and class) multivariate analysis, analysis of variance, and least square means are used to examine propositions 7 and 8. A multivariate and univariate analyses of variance, and the Duncan test are utilized to assess proposition 9. Non-parametric Spearman correlation coefficients, and Wilcoxon non-parametric test are used to examine the validity of proposition 10.

Proposition 1: The primary value orientation of CPA firms' managers, as a group, is pragmatic, rather than moralistic, affect, or mixed.

As a group, the responding managers of the surveyed CPA firms appeared to have a more pragmatic than moralistic or affect orientation. This conclusion is based on the descriptive statistics presented in Table 6. This table indicates that 114 CPA managers (51%) are found to have a pragmatic value orientation, 84 (38%) are found to have value a moralistic orientation, 14 (6%) are found to have an affect value orientation, and the remaining 11 (5%) are found to have a mixed value orientation.

The results of this study support the continuing pragmatism of American managers in other industries reported in previous research conducted by England (1967), England, Dhingra, and Agarwal (1974), England (1975), Rokeach (1973), Rokeach and Ball-Rokeach (1989), Lusk and Oliver (1972), Inglehart (1985), Posner and Schmidt (1992), Gable and Wolf (1993), and Oliver (1999).

England, Dhingra, and Agarwal (1974) assert that the primary value orientation helps in determining which concepts are more behaviorally relevant for an individual. Similar value orientation, however, does not necessarily suggest similar behavior. El-Baruni (1980) supports this assertion. Although he finds that the primary value orientation of the sampled Libyan managers is pragmatic rather than moralistic or affect, he reports differences between the personal value systems of Libyan managers and the value systems of American managers whose primary value orientation is also pragmatic rather than moralistic or affect.

In addition, Nomikos (1984) finds that the primary value orientation of Greek managers is pragmatic rather moralistic or affect. However, he discovers differences in the personal value systems of Greek managers and American manages whose primary value orientation is also pragmatic rather than moralistic or affect value. Sokoya (1992) reports similar results.

Proposition 2: The majority of the Personal Value Questionnaire (PVQ) concepts assigned by CPA firms' managers falls in the operative values cell in their constructed personal value profile.

England, Dhingra, and Agarwal (1974) require that all individuals with a *mixed value orientation* to be excluded from further analysis (see Appendix B). Excluding 11 managers of a mixed value orientation, reduces the sample to 212 managers.

The value profile depicted in Figure 3 consists of 29 concepts classified as operative values, 9 concepts classified as intended values, 10 concepts classified as adopted values, and 18 concepts classified as weak values. Table 9 summarizes the locations of the PVQ concepts. The descriptive statistics presented in Figure 3 and Table 9 suggests that the number of operative values is significantly larger than those of intended, adopted or weak values.

This result supports the continuing dominance of operative values rather than intended, adopted or weak values among the PVQ concepts. For example, England (1967), England, Dhingra, and Agarwal (1974), England (1975), Lusk and Oliver (1972), Posner and Schmidt (1992), and Oliver (1999) provides results confirming the dominance of the operative values of American managers.

Proposition 3: There is a significant relationship between the personal value system of a CPA firm's manager and his or her managerial decisions.

Managerial decisions are measured by five Job Incidents (see Tables 10, 12, 14, 16, 18, and 20). The results of reflected empirical analysis suggest significant relationships between the personal value systems of CPA firms' managers and their managerial decisions (see Tables 11, 12, 15, 17, 19, and 21). Across the five jobs incidents, predictions concerning actual behavior of CPA firms' managers are in the expected direction. Each job incident is influenced by certain value concepts.

The concerns of Job Incident 1 are economic and financial cost versus human relations cost. Data analysis reported in Table 11 indicates that Job Incident 1 is

significantly influenced by thirteen value concepts. These concepts are loyalty, caution, security, religion, my company, rational, employee welfare, achievement, cooperation, force, organizational stability, organizational growth, and organizational efficiency.

The issue of Job Incident 2 is a comparison between loyalty and performance versus progress and technological changes that have made technical staff redundant. Data analysis in Table 13 reveals that Job Incident 2 is significantly influenced by eight value concepts. These concepts are owners, stockholders, my subordinate, my boss, organizational growth, organizational stability, organizational efficiency, and prejudice.

Job Incident 3 focuses on creativity, reasonable help and unpopularity versus efficiency, excessive help, and reputation. The findings in Table 15 indicates that Job Incident 3 is affected by four value concepts. These concepts are individuality, success, competition, and creativity. Job Incident 4 concentrates on the degree of delegation of some of the manager's responsibilities to his or her subordinates. Data analysis presented in Table 17 reveals that Job Incident 4 is significantly influenced by eight value concepts. These concepts are caution, security, religion, rational, prejudice, honor, force, laborers.

Finally, Job Incident 5 considers confidential information obtained accidentally by the CPA, regarding one of her clients, a manufacturing company. Job Incident 5 has two versions of questions and two sets of responses. The first version concentrates on what respondents would advise the CPA to choose from the proposed actions. The findings manifested in Table 19 show that the first version of Job Incident 5 is significantly affected by fifteen value concepts. These value concepts are tolerance, my company, honor, money, owners, stockholders, my subordinate, my boss, organizational growth, organizational stability, organizational efficiency, obedience, conservatism, government, and liberalism..

On the other hand, the second version of Job Incident 5 deals with what most people would choose from the proposed actions if they were in the CPA's position. Data analysis reported in Table 21 suggest that the second version of Job Incident 5 is

significantly affected by ten value concepts. These concepts are loyalty, aggressiveness, individuality, security, compassion, rational, profit maximization, force, money, and laborers.

This result supports findings reported in previous research. For example, England (1975) finds a significant relationship between the personal values systems of American, Japanese, Indian, and Australian managers and their managerial decisions. Bader (1979) confirms a significant relationship between the personal value of Egyptian managers and their managerial decisions. Sokoya (1992) reports a significant relationship between the personal value systems of Nigerian managers (in public and private organizations) and their managerial decisions. Finally, Finegan (1994) attests a relationship between the managers' personal values and their ethical decisions.

Proposition 4: There is a significant relationship between the personal value system of a CPA firm's manager and his or her job satisfaction.

The results of this study presented in Table 22 show that six of the PVQ concepts (conflict, my company, achievement, force, customers, and employees) have significant relationships with job satisfaction of CPA firm's manager. This finding contradicts the results of El-Baruni (1980) who replicates England's (1975) study and fails to find a relationship between the personal values of Libyan managers and their job satisfaction. Similarly, Eroglu (1985) does not find a significant relationship between the personal values of Turkish mid-level managers and their job satisfaction.

However, this study supports findings of previous studies such as England's (1975) who finds a relationship between the personal values and job satisfaction of managers in five countries (United States, Japan, Korea, India, and Australia). Apasu (1986) and Mottaz (1986) also finds similar results. Comparing corporate managers' personal values over three decades (1967-1995), Oliver (1999) finds that four attitude related questions concerning job satisfaction yields similar results. Finally, the results of

Kalliath and Bluedorn (1999) indicates that personal values of hospital employees have a significant impact on their job satisfaction.

Proposition 5: There is a significant relationship between the personal value systems of CPA firms' managers and their organizational commitment.

With respect to organizational commitment, several value concepts (see Table 23) such as success, security, conflict, my company, employee welfare, prejudice, cooperation, ability, organizational growth, organizational stability, organizational efficiency, customers and employees have significant effects on organizational commitment. This result supports findings demonstrated in previous research. For instance, Chatman (1989;1991, Cladwell and O'Reilly (1990), and O'Reilly, Chatman, and Cladwell (1991) emphasize a relationship between personal values and organizational commitment.

More recently, Meyer and Allen (1991; 1997) and Allen and Meyer (1996) asserts a relationship between personal values and organizational commitment. Similarly, Kalliath and Bluedorn (1999) find that personal values of hospital employees are important to their organizational commitment. Finally, Finegan (2000) finds that organizational commitment is predicted by the employees' values.

Proposition 6: There is a significant relationship between the personal value systems of CPA firms' managers and their success.

With respect to managerial success, it is found that the concepts of profit maximization, stockholders, my subordinate, success, my boss, organizational growth, organizational stability, organizational efficiency, obedience and conservatism, government and liberalism have positive influence on managerial success (see Table 24). This result supports findings of previous researchers. England, Dhingra, and Agarwal (1974) examine the relationship between personal values of Indian managers and their

success. It is found that there is a moderate relationship between the level of success achieved by Indian managers and their personal values. Successful managers appear to favor pragmatic, dynamic, achievement oriented values. In contrast, less successful managers emphasize more static and passive values. More successful managers possess achievement orientations and look for active and leadership roles. Less successful managers prefer values associated with protected environment in which they took relatively passive roles.

England and Lee (1974) examine the relationship between personal values of managers and their managerial success. The researchers find that values are significantly predictive of managerial success and can be used as a basis for selection and placement decisions. Singer (1975) also investigates the relationship between values and leadership and find that successful managers place a high priority on moral standards and personal integrity. In contrast, El-Baruni's (1980) does not find a significant relationship between personal values of Libyan managers and their managerial success.

Lindcamp (1981) conducts a study to examine the relationship between personal values and business success of small independent retailers. Results show a relationship between personal values and business success with consideration to situational variables (e.g., education, age, and others). Finally, in their ambitious study of over 6,000 managers, Posner, Kouzes, and Schmidt (1985) find that shared values are related to feelings of personal success. Nomikos (1985) finds similar results for a national sample of Greek managers.

Proposition 7: There are significant differences in the personal value systems of female and male managers of CPA firms.

The results of this study also manifest differences in the personal value systems of CPA firms' managers in terms of gender. Gender differences found in relation to the concepts of ability, dignity, change, emotions, laborers, individuality, conflict, money,

and emotions (see Table 25). This result supports findings of researchers observed in two exploratory studies in the Accounting discipline. Giacomino and Akers (1998) examine the differences between the personal values of female and male accountants. The authors find very few differences between the values of the two groups of students. Akers and Giacomino (1999) examine the personal values of certified internal auditors (CIAs). The findings of their study reveal that female and male certified internal auditors have very similar values and value systems. However, few differences exist between the two groups.

In addition, the findings of this study provide support to studies in other disciplines. Kreie and Cronan (1998) investigate the personal values of men and women managers in terms of what is ethically acceptable and what is unacceptable judgements about issues in the information systems activities. The results indicate that men and women managers are distinctly different in their assessments of what ethical and unethical behavior. For all five presented scenarios, men are less likely than women to consider a behavior as unethical. Women are more conservative in their judgements than men, and are affected more by their personal values than are men.

On the other hand, the results of our study are not in line with the results of other studies. Fagenson (1993) evaluates the relationship between the personal value systems of men and women, entrepreneurs and managers, on their decisions. It is find that the individual's gender has very little influence on the value systems. Chusmir and Parker (1991) found gender differences in values of men and women managers at work and home. Ryan et al. (1980) test the relationship between personal values and the success of male and female managers. They find a slight relationship between the personal values of each of the male-female managerial groups and their success as managers. The results of their study also indicate that female managers show a slight success-value difference from their male counterparts.

Proposition 8: There are significant differences in the personal value systems of younger and older managers of CPA firms.

There are differences between the personal value systems of CPA firms' younger managers and the personal value systems of their older counterparts. Age differences are found in relation to the value concepts of force, compassion, my company, profit maximization, change, emotions, obedience and conservatism (see table 28). This finding provides a partial support to the findings of a previous study in the Accounting discipline. Akers and Giacomino (1999) examine the personal values of certified internal auditors (CIA). The findings of the study suggest that there are only minor differences between younger and older surveyed certified internal auditors.

The findings of our study also support those of other studies conducted in other disciplines. Cavanaugh (1984) find that younger managers are more involved in their personal interests and less concerned with their business interests. Posner and Schmidt (1984) find somewhat similar findings. Hiley (1987) does not find a strong similar support.

Proposition 9: There are significant differences among the personal value systems of CPA firms' managers of auditing, taxation, consulting, information technology, and general administration departments.

There are differences in the personal value systems of CPA firms' managers across the six various department including auditing, taxation, consulting, information technology, generational administration, and others. Department differences are found to be related to the concepts of loyalty, caution, aggressiveness, individuality, security, skills, equality, job satisfaction, creativity, my company, rational, dignity, employee welfare, achievement, honor, cooperation, force, money, emotions, owners, stockholders, my subordinate, and my boss (see Table 31). To the author's knowledge, there are no previous research studies conducted to compare personal values among various CPA firms' departments or other departments of firms in other industries.

Proposition 10: There are significant differences between the personal value systems of CPA firms' managers and the personal value systems of their counterparts in other industries.

The comparison between the personal value systems of CPA firms' managers and their counterparts in other industries does not reveal significant differences between the personal value systems of the two groups. Non-parametric tests (see Tables 34, 35, 36, 37, and 38) are performed on the high importance and successful responses for the PVQ concepts pertaining to each of five category classifications (goals of business organization, personal goals of individuals, idea associated with people, idea about general topics, groups of people) including the data collected in this work and that of Oliver's (1995) study. Correlations in all five categories are relatively high and significant indicating general agreement between the two data sets for each category.

The findings pertaining to these behavioral relevance scores support those of Oliver (1999), England (1975), and Lusk and Oliver (1972). Moreover, these findings support the findings of Oliver (1999) related to the stability of personal values.

Contributions of Study

This study provides at least two main empirical contributions. Since no in-depth empirical research has been conducted on the personal value systems of CPA firms' managers, this study could provide empirical evidence to supplement the literature on human values as they relate to the management of CPA firms and a data base for future research on the personal value systems of CPA firms' managers. Knowledge of individual values can help in crafting the matching process of individual personal values with organizational values. If an individual's values match those of the employer, the organization has a better chance to have more cooperation from such an individual.

The second contribution is in the role of a cross-sectional study which addresses the question of personal value differences in terms of gender, age, department, and different industries. While researchers have conceptually suggested differences in the

personal value systems of individuals, empirical research aiming to explain the sources of such variation is scarce. Cross-sectional studies such as this one can help in understanding some of the differences in the personal value systems of individuals and the personal values that contribute to differing perceptions of reality and the resulting differences in individual behavior.

Limitations of Study

There are some limitations related to this study that need to be addressed. Each limitation is discussed below.

One limitation is that the sample is confined to managers of CPA firms who are members of the American Institute of Certified Public Accountants (AICPA). Another limitation is that a few managers may not have participated in this study due to their companies' policies prohibiting such participation. To deal with this issue, phone calls to approximately ninety-percent of the obtained list were made to learn whether this issue could be of concern. However, no useful responses were provided. Given the impact of the Anthrax issue on the mail delivery system performance, the subject of non-response bias could not be effectively addressed.

A second limitation is the external validity of the results of the study. The findings of this study cannot be generalized without future replication conducted on the personal value systems of CPA firms' managers.

Discussions of Research Propositions

An empirical investigation of the first proposition reveals that about 90% of CPA firms' managers have either a pragmatic orientation or a moralistic orientation, with the majority of such managers (about 50%) having a pragmatic orientation. The distinction between pragmatic and moralistic managers is important in a number of ways.

First, pragmatists have an economic and organizational competence orientation as opposed to a humanistic and bureaucratic orientation for moralists. Second,

pragmatists are apt to be influenced more by training, persuasion and leadership approaches which focus on the notion of whether or not a particular act or decision will work or is likely to be successful. Moralists, on the other hand, would be more influenced by positions and approaches utilizing philosophical and moral justifications.

Third, pragmatists probably have more “situational anchors” to guide their behavior, and seem to be more responsive to external rewards and controls while moralists are more responsive to internal rewards and controls.

An empirical investigation of the second proposition indicates that the value profile of the responding CPA firms’ managers consists of 29, 9, 10 and 18 value concepts as operative, intended, adopted, and weak values respectively. This finding implies the dominance of operative values. Knowledge about PVQ concepts that are operative enables CPA firms to gain insight into the drivers of their managers’ behavior. Operative concepts include achievement, success, creativity, ambition, ability, job satisfaction, skills, organizational productivity, and organizational efficiency. The choice of such value concepts as operative values by CPA firms managers implies that these managers emphasize competency as a detrimental factor of their managerial behavior. In addition, they demonstrate that dedication is instrumental to success within their CPA firms.

An empirical investigation of the third proposition provides a significant relationship between the personal value systems of CPA firms’ managers and their managerial decisions. The actual behavior of CPA firms’ managers is in the predicted direction across the five job incidents. The results of the five job incidents imply (1) human relations cost is valued highly by the responding managers over financial and economic cost, (2) progress and on the job training with regard to current technology is preferred over loyalty of employees, (3) efficiency, effective cooperation, and reputation of employees exceed creativity, normal cooperation and unpopularity of employees at CPA firms, (4) managerial delegation of certain responsibilities are preferred over

centralized management, and (5) confidential information about customers of CPA firms should be kept confidential and should not be abused .

An empirical investigation of the fourth proposition yields a significant relationship between the personal value systems of CPA firms' managers and their job satisfaction. The fact that the predictor PVQ concepts (my company, customers, employees, force, conflict and achievement) do not include the concepts of money or profit maximization, implies that compensation is surely not the only factor, or not the most substantial factor that affect job satisfaction of managers of CPA firms. Also, the significant relationship between the personal value systems of CPA firms' managers and their job satisfaction is encouraging. This finding implies that CPA firms should consider a match between the personal values of managers and the values of CPA firms to enhance job satisfaction.

An empirical investigation of the fifth proposition confirms a significant relationship between the personal value systems of responding managers of participating CPA firms and organizational commitment. Significant concepts include security, my company, employee welfare, cooperation, and employees. This finding implies that when an organization is perceived by its employees and managers to be concerned about their welfare and security, such employees and managers are likely to be deeply committed to this organization. In addition, the matching process between personal and organizational values is expected to enhance employee commitment to their organizations.

An empirical investigation of the sixth proposition attests a significant relationship between the personal value systems of CPA firms' managers and their managerial success. This finding implies that certain value concepts (e.g., profit maximization, success, my boss, organizational growth, organizational stability, and efficiency) are predictors of managerial success.

Therefore, more successful managers prefer and choose active and vital roles in achieving the objectives and goals of their organizations. In contrast, less-successful

managers follow tradition and morality in their personal value systems. This assertion suggests that more successful managers take risks in achieving their objectives, and less-successful managers prefer and favor safe positions that provide them with security and seniority in their organizational positions. Consequently, organizations must provide financial and non financial incentives to their managers. Another implication for this finding is that businesses and organizations operating or intend to operate in foreign countries must recognize the issue of pragmatic and moralistic orientation of managers with regard to managerial success. For example, if a CPA firm is operating into a country where moralistic values have considerable emphasis, what should the managers of these firms do? An appropriate suggestion is that such firm must establish management systems that pertain significantly to these values in order to be effectively successful in carrying out their operations in that country.

An empirical investigation of the seventh proposition shows differences in the personal value systems between male and female managers of CPA firms. The differences in the personal values systems of the two groups of managers are attributed to nine of the sixty-six PVQ concepts. Knowledge about these value concepts helps in managing gender diversity that could lead as a result in more women entering CPA firms in the future.

The differences in the personal value systems of these managers suggest that the dual hierarchy varies according to gender. This duality of preferred modes of conduct (values) for these men and women managers implies additional support to social learning theory, which suggests that the situation is a better predictor of behavior than personality. At CPA firms, male-female managers have been assigned managerial roles that are not always similar. Society also assigns women and men different social roles within the context of their personal lives. Since the personal roles are different, it is not surprising that their sets of values are also different.

An empirical examination of the eighth proposition reveals differences in the personal value systems between younger and older managers. Differences between the personal value systems of both groups are attributed to eight of the sixty-six PVQ concepts. This finding implies that younger respondents place more emphasis on certain values while older respondents put more emphasis on other values. For example, younger managers put more emphasis on value concepts such as force, profit margin, and change. On the other hand, older managers put higher emphasis on other certain values such as obedience, emotions, and conservatism. The type of emphasis on certain values by each of the two groups implies that younger managers have higher degree of pragmatic orientation while older managers have higher degree of moralistic orientation. The implication concerning age in this study supports previous implications reported in previous research.

An empirical investigation of the ninth proposition confirms differences in the personal value systems of CPA firms' managers belonging to different departments. These value differences involve twenty three of the PVQ concepts. This finding implies that value differences in the personal value systems of these managers are the results of various patterns of translation of values into behavior across the five departments. This value patterns may be an outcome of different rules and regulations applied in each department. Although the departments are in one firm, the rules and regulations in taxation, information technology, or the general administration are not entirely similar. In addition, the gender and age differences in each department may have a role to play.

An empirical investigation of the tenth proposition does not yield significant differences in the personal value systems of the responding CPA firms' managers and the personal value systems of their counterparts in other industries. While there are differences in the personal value systems of the CPA firms' managers in terms of gender, age, and departments, contrary to our prediction, there are high correlations between the five categories of the PVQ concepts of both groups. This finding implies that the

personal value systems of managers are not only stable over time, but also stable across various industries.

Practical Implications of Personal Values

Practical implications of the research on personal values with respect to functional activities in CPA firms are evident. These implications are discussed at the individual and organizational levels.

Individual Level

At the individual level, there are extensive practical implications for the use of information concerning personal values in managerial decisions such as employment selection procedures, motivation and compensation plans, transfers of managers, training and development programs, and other managerial activities.

1. Information on personal values can be helpful in improving employment selection procedures through matching individual values with the value profile of any job, position, or career. Information about personal values also can be helpful to determine the approximate match of prospective managers and their subordinates in CPA firms. For example, if approximate match is achieved before employment, serious conflicts between subordinates and superiors could be possibly avoided.

2. Information on personal values can be helpful in designing motivation and compensation plans. For example, financial and non-financial compensation plans can be tailored to satisfy different groups of CPA firms' managers. Work responsibility, promotional opportunities, and similar factors can be more important for some individuals than others who would prefer more of a financially-oriented incentive program.

3. Understanding the personal values of CPA firms' managers can be helpful in task assignments and interdepartmental transfers of managers. This is very important,

especially in some sectors where some managers are not necessarily placed in their area of expertise and interest.

4. Information about individual personal values can be helpful in providing more insight into managerial problems such as labor-management conflict, communication barriers, poor morale, failures in superior-subordinate relations, and declines in performance standards.

5. Identification of individual personal values can be of great importance in designing training programs at every managerial level. The task of designing and implementing a training program for managers with different values is very complex.

The major step in this training program is to identify the primary value orientations of participating managers. For instance, it can be said that ethical standards as to what is considered "right" are highly subjective for moralistic managers, and therefore allow great manager-to-manager variability. In contrast, the pragmatic managers' perceptions of what they consider "successful" is likely to be more objective. It may also be argued, as England (1975) indicates, that ethical norms are more firmly ingrained in the individual's personality than success standards, thereby rendering the former less amenable to change. In such cases, it is easier to modify the behavior patterns of pragmatic managers than those of moralistic managers. Not only would a more individualistic program of behavior modification be required for moralistic managers, but such a program would also be on a more intensified scale.

It is also expected that the primary value orientation of managers would make them sensitive to training and educational programs utilizing different underlying rationales and methods of reasoning. While pragmatists would be more influenced by pragmatical arguments, moralists would likely be more influenced by approaches utilizing philosophical and moral justifications.

For a training program to be successful, it should take into account the following consideration:

1. It should emphasize and develop dimensions of competence values (achievement, ability, creativity, ambition, cooperation, and change). Emphasis on these values would be expected to influence a manager's behavior as well as the way he or she judges and evaluates others.

2. A multivalue communication technique should be developed considering existing managers, employees, workers, and departmental values. For example, to secure obvious channels of upward communication, managers of CPA firms should clearly demonstrate that they would listen to employees' opinions and consider expressions of personal values which might conflict with their own values. This implies that employees do not have to tell their supervisors only what they always want to hear.

3. Considerable attention should be considered to the following:

(a) managers are entitled to have their own opinions. However, if two managers have different emphasis on a value concept, it does not necessarily mean that one of them is wrong or right. It is just that their points of view are different or inconsistent.

(b) most managerial issues are not absolutely black or white, but have some gray areas.

Organizational Level

At the organizational level there are two important implications concerning the conflict in human values among individuals in organizations in one hand, and the conflict between the values of individuals and their organizations in the other hand.

1. Analysis of personal value systems of CPA firms managers correlates with variations in the value patterns of responding managers. Thus, some individual managers may value organizational goals more than personal goals. Other managers may not only have inter-category differences in values, but they could also differ in values within each category of concepts. Thus while two managers may assign greater relevance to organization goals, one of them may consider organizational stability and organizational efficiency to be more important while the other manager may regard employee welfare to be more important.

This means that such conflict might lead to a situation where management in CPA firms could face troublesome areas such as communication problems, poor employee morale, decline in performance standards, and failures in superior-subordinate relationships. In addition, different value profiles could create a gap between how an organization runs and the way it should run. This implication suggests that team members of similar values would most likely work together.

2. The conflict between individuals' values and their organizations' values is serious. This implies that efforts to clarify and merge personal and organizational values would have significant results for both managers and their organizations in CPA firms. Incompatible values between managers and their organizations in CPA firms might take its toll on both personal effectiveness and organizational productivity. This implication requires establishing shared values through management training programs to solve value conflict between managers and their organizations in CPA firms.

If conflict between individuals' values and their organizations' values is not resolved, it is reasonable to assume that potential negative elements may outweigh the positive ones such as disagreements on goals and approaches. For example, such disagreements could cause serious and negative impact on the individual and organizational goals and approaches. In addition, conflict between individuals' values and their organizations' values might have considerable consideration on overall organizational survival.

Directions for Further Research

Several recommendations for future research are presented. These recommendations would be directed towards CPA firms' managers in particular, and other managers in general. With respect to CPA firms, the following recommendations are presented:

1. The aforementioned limitations of this research work require the replication of this study in order to observe possible changes in managerial values and value systems

over time. Replication would provide the possibility of underscoring the findings of this study.

2. Further research may be conducted to examine and analyze the relationship between managers' personal value systems and other aspects of behavior such as managerial leadership styles.

3. An avenue of future research would be to examine the relationships between managers' personal values systems and CPA firms' structure and performance.

4. Further research may be conducted in conjunction with CPA firms to investigate the relationships between additional demographic and organizational variables on managers' personal value systems.

With respect to universal management and organizational behavior theory, the following suggestions for future research are presented:

1. Further research on personal value systems with a primary focus on longitudinal studies may be conducted. The stability of value systems is a debatable issue, and it could be examined further. Lusk and Oliver (1974) supported the permanence of personal value systems as a perceptual framework. A moderate support for these findings came from Posner and Schmidt (1984). Moreover, Oliver (1999) also provided similar support to these studies.

It is important to study the value systems of a group of respondents over a period of time, while these individuals pass through different stages of their careers. Such studies would be valuable, for instance, in determining whether the individuals' value systems change at different levels of managerial responsibility or with changes in specific demographic variables.

2. Additional research on personal value systems would focus on how the optimal level of values congruency can be derived. Several researchers (Hunger and Wheelen, 2000) suggest that the more congruent are the personal values and organizational goals, the more efficient and effective is the organization.

APPENDIX A-1
RESEARCH INSTRUMENTS

RESEARCH INSTRUMENTS

Consent statement for participants in M. Hassan's survey research.

___ By checking, I confirm that I wish to participate in the following survey, recognizing that individual responses will be confidential in regard to a particular respondent.

ANSWER SHEET

Please place your responses on the following pages and return only these pages in the prepaid envelop.

DIRECTIONS

First step: Decide whether a topic of **"high importance," "medium importance," or low importance"** to you. Then mark **"X"** in the line below your appropriate choice.

Second step: Specify which of the three descriptions (**pleasant, right, successful**) best indicates how you feel about the topic. Then indicate your choice by marking **"X"** in the line below your selection.

Pleasant suggests an evaluative framework guided by hedonism, behaving in a manner to increase pleasure and decrease pain.

Right suggests an evaluative framework guided by ethical consideration.

Successful suggests an evaluative framework guided by successful-failure consideration.

Examples:

As an example, take the topic **intelligence**. If you felt that it is of **high importance**, you would mark an **"X"** in the line below high importance. Then, if the description **successful** best indicates the significance of the topic to you mark an **"X"** in the line below successful.

As a second example, take the topic **dishonesty**. If you feel that it is of **low importance**, you would mark an **"X"** in the line below low importance. Then, if the description **pleasant** best indicates the significance of the topic to you mark an **"X"** in the line below pleasant.

As a third example, for the topic **peace**. If you feel that it is of **medium importance**, you would mark **"X"** in the line below medium importance. Then, if the description **right** best indicates the significance of the topic to you mark an **"X"** in the line below right.

Concept	High Importance	Medium Importance	Low Importance	Pleasant	Right	Successful
Intelligence	<u>X</u>	_____	_____	_____	_____	<u>X</u>
Dishonesty	_____	_____	<u>X</u>	<u>X</u>	_____	_____
Peace	_____	<u>X</u>	_____	_____	<u>X</u>	_____

GOALS OF BUSINESS ORGANIZATIONS

Concept	High Import.	Medium Import.	Low Import.	Pleasant	Right	Successful
Employee welfare	_____	_____	_____	_____	_____	_____
High productivity	_____	_____	_____	_____	_____	_____
Industry leadership	_____	_____	_____	_____	_____	_____
Organizational efficiency	_____	_____	_____	_____	_____	_____
Organizational growth	_____	_____	_____	_____	_____	_____
stability	_____	_____	_____	_____	_____	_____
Profit maximization	_____	_____	_____	_____	_____	_____
Social welfare	_____	_____	_____	_____	_____	_____

PERSONAL GOALS OF INDIVIDUALS

Concept	High Import.	Medium Import.	Low Import.	Pleasant	Right	Successful
Achievement	_____	_____	_____	_____	_____	_____
Autonomy	_____	_____	_____	_____	_____	_____
Creativity	_____	_____	_____	_____	_____	_____
Dignity	_____	_____	_____	_____	_____	_____
Individuality	_____	_____	_____	_____	_____	_____
Influence	_____	_____	_____	_____	_____	_____
Job satisfaction	_____	_____	_____	_____	_____	_____
Leisure	_____	_____	_____	_____	_____	_____
Money	_____	_____	_____	_____	_____	_____
Power	_____	_____	_____	_____	_____	_____
Prestige	_____	_____	_____	_____	_____	_____
Security	_____	_____	_____	_____	_____	_____
Success	_____	_____	_____	_____	_____	_____

IDEAS ASSOCIATED WITH PEOPLE

Concept	High Import.	Medium Import.	Low Import.	Pleasant	Right	Successful
Ability	_____	_____	_____	_____	_____	_____
Aggressiveness	_____	_____	_____	_____	_____	_____
Ambition	_____	_____	_____	_____	_____	_____
Compassion	_____	_____	_____	_____	_____	_____
Conformity	_____	_____	_____	_____	_____	_____
Cooperation	_____	_____	_____	_____	_____	_____
Honor	_____	_____	_____	_____	_____	_____
Loyalty	_____	_____	_____	_____	_____	_____
Obedience	_____	_____	_____	_____	_____	_____
Prejudice	_____	_____	_____	_____	_____	_____
Skill	_____	_____	_____	_____	_____	_____
Tolerance	_____	_____	_____	_____	_____	_____
Trust	_____	_____	_____	_____	_____	_____

IDEAS ABOUT GENERAL TOPICS

Concept	High Import.	Medium Import.	Low Import.	Pleasant	Right	Successful
Authority	_____	_____	_____	_____	_____	_____
Caution	_____	_____	_____	_____	_____	_____
Change	_____	_____	_____	_____	_____	_____
Competition	_____	_____	_____	_____	_____	_____
Compromise	_____	_____	_____	_____	_____	_____
Conflict	_____	_____	_____	_____	_____	_____
Conservatism	_____	_____	_____	_____	_____	_____
Emotions	_____	_____	_____	_____	_____	_____
Equality	_____	_____	_____	_____	_____	_____
Force	_____	_____	_____	_____	_____	_____
Liberalism	_____	_____	_____	_____	_____	_____
Property	_____	_____	_____	_____	_____	_____
Rational	_____	_____	_____	_____	_____	_____
Religion	_____	_____	_____	_____	_____	_____
Risk	_____	_____	_____	_____	_____	_____

GROUPS OF PEOPLE

Concept	High Import.	Medium Import.	Low Import.	Pleasant	Right	Successful
Blue Collar Worker	_____	_____	_____	_____	_____	_____
Craftsman	_____	_____	_____	_____	_____	_____
Customers	_____	_____	_____	_____	_____	_____
Employees	_____	_____	_____	_____	_____	_____
Government	_____	_____	_____	_____	_____	_____
Laborers	_____	_____	_____	_____	_____	_____
Labor Unions	_____	_____	_____	_____	_____	_____
Managers	_____	_____	_____	_____	_____	_____
Me	_____	_____	_____	_____	_____	_____
My boss	_____	_____	_____	_____	_____	_____
My Company	_____	_____	_____	_____	_____	_____
My Co-workers	_____	_____	_____	_____	_____	_____
My Subordinate	_____	_____	_____	_____	_____	_____
Owners	_____	_____	_____	_____	_____	_____
Stockholders	_____	_____	_____	_____	_____	_____
Technical Staff	_____	_____	_____	_____	_____	_____
White-Collar empl	_____	_____	_____	_____	_____	_____

Following is a set of five job incidents which a manager of a CPA firm may encounter in performing his/her duties. Below each job incident is a number of statements of action that he/she could take to solve the problem presented in the incident. **Please read each incident carefully, then decide which statement of action you would take to solve the problem.**

Job Incident 1

Assume that you are the owner-manager of a CPA firm. Recently your employees have been complaining about the flexible benefits plan offered by the firm. This plan was originated 25 years ago, and since then has had only minor changes. You know that the anticipated profits for the year are lower than usual. (The issue here is economic or financial cost versus human relations cost). **Which one of the following actions would you take?**

- _____ Creation of a new flexible benefits plan with expected cost twice the present cost.
- _____ Major modification of plan with an expected cost of 40% above the present cost.
- _____ Minor modification of plan with expected cost of 10% above the present cost.
- _____ Leave the plan as is.

Job Incident 2

Assume that you are the manager of the information technology (IT) department at a CPA firm. In your section, there are ten IT specialists in areas in which there has been great break-through in knowledge. As a result, it is only those individuals who have graduated in the last few years who can be trained with respect to the new IT knowledge.

You, as the manager of this department, have been asked to make a recommendation about retraining the "obsolete" IT specialists or relieving them of the job and hiring recent graduates. You have found that retraining would take about six months of full time study on the part of the "obsolete" specialists, and it is not certain that all would successfully complete the training. You know that these ten IT specialists have made significant contributions to the firm in the past and have an average tenure of seven years. (The issue here is loyalty and performance versus progress and technological changes that have made technical staff redundant). **Which one of the following would you recommend?**

- _____ Retrain all the IT specialists and have the firm pay all retraining costs.
- _____ Retrain all the IT specialists and have the costs of retraining shared equally by the firm and the individual.
- _____ Retrain only those IT specialists who are judged to be "trainable" and have the firm pay all retraining costs.
- _____ Retrain only those IT specialists who are "trainable" and have the cost of retraining shared equally by the firm and the individual.
- _____ No retraining. Keep only those IT specialists who can continue to make significant contributions to the firm.

Job Incident 3

Assume you are a manager in a CPA firm, and you are evaluating two senior accountants for a managerial position just below your position. Both accountants have worked for you for the past five years and are equally competent. However, the two differ in the following way:

Mr. George is a very creative person who has been constantly making suggestions for improvement. Although not all of his ideas are practical ones, you have adopted some of his suggestions in the past. Mr. George is also sincere and hard working. He is helpful to others when asked for help. However, he is not very popular in the department because other employees do not like procedural changes and extra pressures which they think are sometimes unnecessary.

On the other hand, Mr. Sam, is equally efficient as Mr. George, but he is not "an ideas person." However, Sam is very congenial and well liked. Mr. Sam goes out of his way to help others whenever they have problems. Mr. Sam is definitely contributing to the good morale of your department. Mr. Sam enjoys the reputation of being kind. (The issue here is creativity, reasonable help and unpopularity versus efficiency, excessive help, and reputation).

Whom would you recommend?

Mr. George _____

Mr. Sam _____

Job Incident 4

Your client is in the early stage of negotiating an acquisition of another advertising company. For this reason, the client wants you, as a CPA, to review the internal control system (ICS) of the acquisition commodity. The decision to accomplish the acquisition will be based on the results of your analysis of the ICS.

Assume that you are a partner, manager, or representative of the CPA firm, and you want to delegate the responsibility of the implementation of this project to your subordinate, who is a senior CPA and is qualified to conduct the required analysis.

Which one of the following actions would you take? (The issue here is the degree of delegation of some of the manager's responsibilities to his or her subordinate).

- Retain control over all important decisions.
- Require the subordinate to obtain approval at each stage of the project.
- Simply assign a list of certain tasks of the project for your subordinate.
- Allow the subordinate to take the required actions of the project, but require him or her to stay in touch throughout the assignment.
- Permit the subordinate to take the required actions for the project without requiring him or her to report to you at each stage of the implementation process.

Job Incident 5

While visiting in the client's office of a manufacturing company, Lisa Dennis, a CPA at your firm, noticed by accident a report which indicated that the manufacturing company has just won a tremendous contract. Lisa glanced over the document while she was alone in the office. She discovered that the contract would allow this manufacturing company to have reported earnings substantially higher in the future than the company had reported in the past. However, information about this company's contract is still very confidential.

Which one of the following actions would you advise Lisa to take? (The issue here is confidential information about a client).

- Buy a large quantity of stock in this manufacturing company.
- Buy a reasonable quantity of stock in this manufacturing company to cover her access to the confidential information about the contract.
- Wait until the confidential information about the contract is public, then she can buy stock from this company.
- Not buy stock from this company since she has access to confidential information by accident.

Which one of the following actions do you think most people in Lisa's position would take?

- _____ Buy a large quantity of stock in this manufacturing company.
- _____ Buy a reasonable quantity of stock in this manufacturing company to cover her access to the confidential information about the contract.
- _____ Wait until the confidential information about the contract is public, then she can buy stock from this company.
- _____ Not buy stock from this company since she has access to confidential information by accident.
-

Global Measure of Job Satisfaction

Each of the statements below is something that a person might say about his or her job. Please indicate to what extent you agree or disagree with each of the following statement.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

- _____ 1. I find real enjoyment in my job.
- _____ 2. I like my job better than the average person.
- _____ 3. I am seldom bored with my job.
- _____ 4. I would not consider taking another kind of job.
- _____ 5. Most days I am enthusiastic about my job.
- _____ 6. I feel fairly well satisfied with my job.
-

Organizational Commitment Questionnaire

Using the following scale, please indicate to what extent you agree or disagree with each of the following statements.

Strongly Disagree 1	Slightly Disagree 2	Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
___ 1.	I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.					
___ 2.	I talk about this organization to my friends as a great organization to work for.					
___ 3.	I would accept almost any type of job assignment in order to keep working for this organization.					
___ 4.	I feel that my values and the organization's values are very similar.					
___ 5.	I am proud to tell others that I am part of this organization.					
___ 6.	This organization really inspires the very best in me in the way of job performance.					
___ 7.	I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.					
___ 8.	I really care about the fate of this organization.					
___ 9.	For me, this is the best of all possible organizations for which to work.					

DEMOGRAPHIC AND ORGANIZATIONAL DATA

The following are demographic and organizational questions that will only be used to categorize the results of this study. This information is extremely important to the analysis. Please respond to each of the following items:

1. Your gender:
 - a) Male
 - b) Female
2. Your Marital Status:
 - a) Single
 - b) Married
 - c) Divorced
 - e) Widowed
 - f) Other
3. Your age: _____ years
4. Racial/Ethnic:
 - a) White, non-Hispanic
 - b) Black, non-Hispanic
 - c) Hispanic
 - d) Asian/Pacific Islander
 - e) American Indian/Alaskan Native
5. Your formal education (please check the highest one)
 - a) Bachelor
 - b) Bachelor plus graduate credit hours
 - c) Master's degree
 - d) Doctorate
 - f) Other (please specify) _____
6. Your annual salary or income from the accounting profession:
 (\$) _____ (Thousands)

(Remember that confidentiality will be continued)
7. Your job title: _____
8. Your present department in your CPA firm:
 - a) Auditing
 - b) Taxation
 - c) Consulting
 - d) Information technology
 - e) General Administration
 - f) Other (Please specify) _____
9. Number of years in present position: _____ years
10. Number of years with present firm: _____ years
11. Number of years of managerial experience _____ years
12. Size of your CPA Firm (if it does not have more than one office):
 - a) Small (4-9 employees)
 - b) Medium (10-49 employees)
 - c) Large (50-100 employees)
 - d) Very Large (Over 100 employees)

APPENDIX A-2
CPA MANAGER'S COVER LETTER

LOUISIANA TECH
UNIVERSITY

Dear Mr./Mrs.-----:

I am conducting a study to develop a greater understanding of personal values and how they affect an individual's behavior of CPA managers. Your help is kindly requested in making this a meaningful study.

I have enclosed a questionnaire that contains several statements regarding goals of business organizations, personal goals of individuals, ideas associated with people, ideas about general topics, groups of people, and behaviors. You are kindly requested to respond to each statement and return the questionnaire within two weeks.

The information from this questionnaire will be used to complete my dissertation at Louisiana Tech University. Please be assured that all individual responses are completely confidential and anonymous.

In order to make the process of returning the questionnaire as easy and convenient as possible, I have enclosed a postage-paid reply envelope. When finished, you may seal your questionnaire in the envelope and drop it in the mail. I would be appreciative if the completed set of questionnaires would be returned within two weeks.

Your participation is very important to me and to this study. Without the information you provide, I cannot complete my dissertation. Please take some time to complete this questionnaire and return it to me as quickly as possible. An executive summary concluding the study will be mailed to you upon the completion of my dissertation.

Thank you in advance for your valuable time. I look forward to hearing from you.

Sincerely,

M. Hassan
Doctoral Student

APPENDIX B
SCORING AND DATA ANALYSIS
PROCEDURES

INTERPRETATION AND SCORING PROCEDURES

The first step in this scoring procedure is to construct a response matrix including the total number of concepts scored for each individual. Each of the sixty-six concepts of the PVQ is constructed for each respondent according to the selected primary mode ratings (i.e., the concept importance rating as high, average, or low) and the selected secondary mode (i.e., successful, right, or pleasant). Although there are various ways in which many probabilities can be obtained from the matrix, England (1975) highlights the following conditional probabilities for such analysis:

P (right)	or P (R)
P (successful)	or P (S)
P (pleasant)	or P (P)
P (high importance)	or P (HI)
P (average or low importance, or not high importance)	or P (\bar{HI})
P (right given high importance)	or P (R/HI)
P (successful given high importance)	or P (S/HI)
P (pleasant given high importance)	or P (P/HI)
P (right given not high importance)	or P (R/ \bar{HI})
P (successful given not high importance)	or P (S/ \bar{HI})
P (pleasant given not high importance)	or P (P/ \bar{HI})
P (right and high importance)	or P (R \cap HI)
P (successful and high importance)	or P (S \cap HI)
P (pleasant and high importance)	or P (P \cap HI)

The PVQ data are analyzed in two ways: (a) by-person analysis where individuals are examined across concepts, and (b) by-concept analysis where concepts are examined across individuals.

By Person Analysis

An individual is classified into one of the following primary orientations: pragmatic, moralistic, affect, or mixed. The following three steps, as stated by England (1975), is followed in this classification:

Step One: Among the concepts an individual reports as being of high importance, identify the proportion classified as successful, right, or pleasant. More precisely, the following conditional probabilities are computed:

$$\begin{array}{c} \text{Respondents} \\ P(S/HI) \\ P(R/HI) \\ P(P/HI) \end{array}$$

where terms inside parentheses are S = successful, R = right, P = pleasant, and HI = high importance. Thus, the first step is to identify the largest conditional probability for an individual.

Step Two: Compare the value of “largest conditional probability” to its “complement.” For example, if the outcome of the first step was $P(S/HI)$, its complement is the probability of responding “successful,” given a rating of average importance or low importance: that is, $P(S/\bar{HI})$, where \bar{HI} refers to “average importance or low importance.” If $P(S/HI)$ is greater than its complement $P(S/\bar{HI})$, then the individual’s primary orientation would be *pragmatic*. However, if the complement probability is greater, it would imply a *mixed* value orientation.

In step one, if the two highest conditional probabilities are tied, the *difference* between each of these conditional probabilities and its complement is calculated. The primary orientation is then represented by the conditional probability having the largest difference between the conditional probability and its complement.

Step Three: After the “primary orientation” has been determined, calculate the magnitude of the “joint probability” of the cell which constitutes the “individual’s operative value cell.” If this “joint probability” is less than .15,

implying that less than 15 percent of the total concepts in the PVQ are operative values for the individual, his or her primary orientation is reclassified as *mixed*. For example, if the “primary orientation” is *pragmatic*, the “joint probability” of the “operative value cell” is the probability of responding “successful” and “high importance”, that is, $P(S \cap HI)$. This can be calculated as follows:

$$P(S \cap HI) = \frac{\text{Number of concepts rated “successful” and “high importance”}}{\text{Total number of concepts}}$$

Essentially, steps one and two provide the decision rules for determining primary orientation by utilizing the conditional probabilities of the cells in the “high importance” column. Step three provides a means for determining whether or not this primary orientation should be reclassified by utilizing the joint probability of the operative cell. The summary of England’s (1975) decision rules is presented in Table B.1.

England (1975) provides examples to illustrate the application of these decision rules. England’s examples are presented below.

Example 1: The response matrix in Table B.1 represents a frequency distribution of the PVQ concepts for a *moralistic* individual. Of the 44 concepts evaluated as being of “high importance column,” .68 (30/44) are classified as being *right*, .30 (13/44) are classified as being *successful*, and .02 (1/44) are classified as being *pleasant*. Since $P(R/HI)$ is the largest (.68) of these conditional probabilities, it is compared with its complement, which is the probability of responding *right* given “average or low importance” $P(R/AI \cup LI)$, or .18 (4/22). It appears that the “largest conditional probability” (.68) is greater than its “complement” (.18). Therefore, this individual is classified as a *moralist*.

Next, the “joint probability” of the operative cell is examined. Since the individual in this example is a moralist, the “joint probability” of the operative cell is the probability of responding *right* and “high importance,” $P(R \cap HI)$, is .45 (30/66).

As the “joint probability” (.45) is greater than the “minimal probability” value of .15 established by England’s (1975) decision rules, this individual will not be reclassified.

TABLE B.1

Decision Rules for Primary Orientation Classification

Primary Orientation Classification	Decision Rule
Pragmatic	$P(S/HI)$ is the largest $P(S/HI) > P(S/\bar{HI})$, and $P(S \cap HI) \geq 0.15$
Moralistic	$P(R/HI)$ is the largest $P(R/HI) > P(R/\bar{HI})$, and $P(R \cap HI) \geq 0.15$
Affect	$P(P/HI)$ is the largest $P(P/HI) > P(P/\bar{HI})$, and $P(P \cap HI) \geq 0.15$

Source: George W. England. *The Manager and His Values: An International Perspective*. (Cambridge, MA: Ballinger Publishing Company, 1975), 160.

TABLE B.2

Response Matrix for a Moralistic Individual

1 st Ranked	High Importance	Average Importance	Low Importance	Total
Successful	13	15	0	28
Right	30	4	0	34
Pleasant	1	3	0	4
Total	44	22	0	66

Source: George W. England. *The Manager and His Values: An International Perspective*. (Cambridge, MA: Ballinger Publisher Company, 1975), 161.

Example 2: The response matrix in Table B.3 presents a frequency distribution of the PVQ concepts for a *mixed* individual. The largest frequency in the

“high importance” column of this table includes 15 concepts. So the largest conditional probability, $P(R/HI)$, is .47 (15/32), and its complement is the probability of responding *right*, given “average or low importance,” $P(R/AI\cup LI)$, is .53 (18/34). Since the conditional probability (.47) is less than its complement (.53), the primary orientation is classified as a *mixed* individual.

Example 3: The response matrix in Table B.4 represents a frequency distribution of the PVQ concepts for an individual with a joint probability that is less than .15 established by England’s decision rules. The largest frequency in the “high importance” column in this table includes 6 concepts. Thus, the largest conditional probability of responding *successful*, given “high importance,” $P(S/HI)$, is .55 (6/11). Its complement is the probability of responding *successful*, given “average or low importance,” $P(S/AI\cup LI)$, is .51 (28/55).

Since the value of the largest conditional probability (.55) is greater than its complement (.51), the primary orientation of this respondent is initially classified as *pragmatic*. But the joint probability, $P(S \cap HI)$, is .09 (6/66) and less than the minimal probability value of .15. Hence, the “primary orientation” of this individual is *reclassified* from a *pragmatic individual* to a *mixed individual*.

TABLE B.3

Response Matrix for a Mixed Individual

Selected Secondary Mode	High Importance	Average Importance	Low Importance	Total
Successful	12	8	0	20
Right	15	16	2	33
Pleasant	5	7	1	13
Total	32	31	3	66

Source: George W. England. *The Manager and His Values: An International Perspective*. (Cambridge, MA: Ballinger Publisher Company, 1975), 163.

TABLE B.4

Response Matrix for an Individual with
A Joint Probability Less Than .15

1 st Ranked	High Importance	Average Importance	Low Importance	Total
Successful	6	28	0	34
Right	4	20	1	25
Pleasant	1	5	1	7
Total	11	53	2	66

Source: George W. England. *The Manager and His Values: An International Perspective*. (Cambridge, MA: Ballinger Publisher Company, 1975), 164.

Example 4: The response matrix in Table B.5 represents a frequency distribution of the PVQ concepts for an individual with *two tied or equal* “joint probabilities.” The largest frequencies in the “high importance” column in this table are 19 for *successful* and also 19 for *right*. Each of the two highest conditional probabilities of the cells in the “high importance” column is .41 (19/46). In such a case, the *differences* between *each* of these two “conditional probabilities” and “its complement” are calculated and compared in order to determine the *largest* difference. The primary orientation is then represented by the conditional probability having the largest difference between itself and its complement.

The individual evaluated 46 concepts as being of “high importance,” with .41 classified as *successful*, .41 as *right*, and .18 as *pleasant*. The complement of responding *successful* given “high importance” $P(S/HI)$ is the probability of responding *successful* given “average or low importance,” $P(S/AI \cup LI)$, is .25 (5/20). The complement of $P(R/HI)$ is $P(R/AI \cup LI)$, which is .30 (6/20). The differences between the conditional probabilities and their complements are .16 and .11, respectively. Since the “primary orientation” is represented by the “conditional probability” having the largest difference between itself and its complement, this individual is classified as being *moralist*. The joint probability of the operative cell,

$P(R \cap HI)$ is .29 (19/66), which is greater than the minimal value of .15, it is *not* necessary to reclassify this *moralistic* orientation.

TABLE B. 5
Response Matrix for an Individual with Two
Equal Conditional Probabilities

1 st Ranked	High Importance	Average Importance	Low Importance	Total
Right	19	5	0	24
Successful	19	6	0	25
Pleasant	8	8	1	17
Total	46	19	1	66

Source: George W. England. *The Manager and His Values: An International Perspective*. (Cambridge, MA: Ballinger Publisher Company, 1975), 162.

Similar to England's (1975) examples, the fifth and the sixth hypothetical examples are provided to complete England's (1975) decision rules for primary orientation classification. The fifth example concerns a hypothetical *pragmatic individual*. The sixth example pertains to a hypothetical *affect individual*.

Example 5: The response matrix in Table B.6 represents a frequency distribution of the PVQ concepts for a hypothetical *pragmatic individual*. Of the 32 concepts evaluated as being of "high importance column," .78 (25/32) are classified as being *successful*, .16 (5/32) are classified as being *right*, and .06 (2/32) are classified as being *pleasant*.

Since $P(S/HI)$ is the largest (.78) of these conditional probabilities, it is compared with its complement, which is the probability of responding *successful* given "average or low importance," $P(S/AI \cup LI)$, or .35 (12/34). Because the "largest

conditional probability" (.78) is greater than its "complement" (.35), this individual is classified as a *pragmatic*.

The individual in this example is proposed as a *pragmatic*. So the "joint probability" of the operative cell is the probability of responding *successful* and "high importance," $P(S_nHI)$, is .38 (25/66). As the "joint probability" (.38) is greater than the "minimal probability" value of .15, the primary orientation of this individual is not reclassified.

Example 6: The response matrix in Table B.7 represents a frequency distribution of the PVQ concepts for a hypothetical *affect* individual. Of the 37 concepts evaluated as being of "high importance column," .21 (8/37) are classified as being *successful*, .16 (6/37) are classified as being *right*, and .63 (23/37) are classified as being *pleasant*.

Since $P(P/HI)$ is the largest (.62) of these conditional probabilities, it is compared with its complement, which is the probability of responding *pleasant* given "average or low importance," $P(P/AIOLI)$, or .38 (11/29). Because the "largest conditional probability" (.62) is greater than its "complement" (.38), this individual is classified as an *affect*.

Since the individual in this example is an *affect*, the "joint probability" of the operative cell is the probability of responding *pleasant* and "high importance," $P(P_nHI)$, is .35 (23/66). As the "joint probability" (.35) is greater than the "minimal probability" value of .15, the primary orientation of this individual is still classified as *affect*.

TABLE B.6
Response Matrix for a Hypothetical Pragmatic Individual

1st Ranked	High Importance	Average Importance	Low Importance	Total
Successful	25	8	4	37
Right	5	13	4	22
Pleasant	2	4	1	7
Total	32	25	9	66

TABLE B.7
Response Matrix for an Affect Individual

Selected Secondary Mode	High Importance	Average Importance	Low Importance	Total
Successful	8	4	7	19
Right	6	2	5	13
Pleasant	23	3	8	34
Total	37	9	20	66

By Concept Analysis

According to England (1975), by-concept analysis of Personal Value Questionnaire data involves looking at responses to each concept across all respondents in the survey sample. A concept may represent an operative, intended, adopted, or weak value for an individual. When data aggregated across all individuals in a group, the results show the number of individuals as a proportion of group for whom the concept is an operative, intended, adopted, or a weak value. In such aggregations, all individuals with a mixed value orientation are excluded because it is not possible to get the needed scores for them.

According to England, a concept is classified as an operative value for an individual if it is rated as "high importance" and fits the individual's primary

orientation. Thus, different methods are used for identifying operative values for individuals with different primary orientations. The following scores are used for this purpose.

<u>Primary Orientation</u>	<u>Score</u>	
Pragmatic	$HI \cap S$] $HI \cap PO$
Moralistic	$HI \cap R$	
Affect	$HI \cap P$	

Intended values are those concepts which are viewed as being of high importance by individual but do not fit his primary orientation. The following scores are used in identifying these values.

<u>Primary Orientation</u>	<u>Score</u>	
Pragmatic	$HI \cap (R \text{ or } P)$] $HI \cap \overline{PO}$
Moralistic	$HI \cap (S \text{ or } P)$	
Affect	$HI \cap (S \text{ or } R)$	

Adopted values are those concepts which fit the primary orientation of an individual but which he regards as being of only average or low importance. The following scores identify such values for individuals having different primary orientation.

<u>Primary Orientation</u>	<u>Score</u>	
Pragmatic	$(AI \text{ or } LI) \cap S$] $\overline{HI} \cap PO$
Moralistic	$(AI \text{ or } LI) \cap R$	
Affect	$(HI \text{ or } LI) \cap P$	

Weak values are those concepts which are regarded as neither highly important by an individual nor fit his primary orientation. These concepts are identified by the following scores.

<u>Primary Orientation</u>	<u>Score</u>	
Pragmatic	$(AI \text{ or } LI) \cap @ \text{ or } P$] $\overline{HI} \cap \overline{PO}$
Moralistic	$(AI \text{ or } LI) \cap (S \text{ or } P)$	
Affect	$(AI \text{ or } LI) \cap (S \text{ or } R)$	

To illustrate the application of England's *operational definition* of operative, intended, adopted, and weak values, three hypothetical examples for the value profiles of pragmatic, moralistic, and affect respondents are provided.

Example 7: The response matrix in Figure B.1 represents a frequency distribution of the sixty-six concepts in the PVQ analysis for a *pragmatic* respondent. This individual's operative, intended, adopted, and weak values are defined in terms of his or her primary orientation and importance scale. The value profile of this *pragmatic* individual shows that he or she has assigned 22, 9, 14, and 21 concepts as his or her operative, intended, adopted, and weak values, respectively.

Example 8: The response matrix in Figure B.2 represents a frequency distribution of the sixty-six concepts in PVQ analysis for a *moralistic* respondent. His or her operative, intended, adopted, and weak values are also defined in terms of his or her primary orientation and importance scale. The value profile of this *moralistic* shown in Figure B.2 indicates that he or she has assigned 34, 7, 8, and 17 concepts as his or her operative, intended, adopted, and weak values, respectively.

Example 9: The response matrix in Figure B.3 presents a frequency distribution of the sixty-six concepts in the PVQ analysis for an *affect* respondent. Operative, intended, adopted, and weak values of this affect individual are similarly identified in terms of his or her primary orientation and the importance scale as identified in Figure B.3. The value profile of this *affect* person reveals that this individual has assigned 14, 22, 17, and 13 concepts as his or her operative, intended, adopted, and weak values, respectively.

	High Importance	Average Importance	Low Importance
Successful	N = 22 Operative Values	N = 9 Adopted Values Situationally Induced	N = 5
Right	N = 6 Intended Value Socio-culturally induced	N = 12 Values with Low Behavioral Relevance	N = 3
Pleasant	N = 3	N = 4	N = 2

FIGURE B.1. A Hypothetical Value Profile for a Pragmatic Individual

	High Importance	Average Importance	Low Importance
Right	N = 34 Operative Values	N = 5 Adopted Values Situationally Induced	N = 3
Successful	N = 5 Intended Value Socio-culturally induced	N = 10 Values with Low Behavioral Relevance	N = 2
Pleasant	N = 2	N = 4	N = 1

FIGURE B.2. A Hypothetical Value Profile for a Moralistic Individual

	High Importance	Average Importance	Low Importance
Pleasant	N = 14 Operative Values	N = 9 Adopted Values Situationally Induced	N = 8
Successful	N = 12 Intended Value Socio-culturally induced	N = 4 Values with Low Behavioral Relevance	N = 3
Right	N = 10	N = 2	N = 4

FIGURE B.3. A Hypothetical Value Profile for an Affect Individual

Given the scores for each individual in the group for each of the concepts in the Personal Value Questionnaire, the matrix in Table B.8 is derived by aggregation. England (1975) provides an example to illustrate the application of assigning a concept as operative, intended, adopted, or weak value. The High Productivity concept is used as an example.

In this matrix it appears that the concept High Productivity is an operative value for 63.4 percent, an adopted value for 9.6 percent, an intended value for 17.5 percent, and weak value for 9.5 percent of studied managers. Similar matrixes are prepared for each concept in the PVQ. The by concept is utilized manly for two purposes. The first involves the construction of an average value profile for the group being studied. Thus in the above example, High Productivity is classified as an operative value for the studied managers as a group. The second purpose for which these data have been utilized is for analyzing the behavioral relevance of each concept for a group of individuals. For this purpose, the proportion of the group for which a concept is an operative value is utilized, the contention here being that a higher proportion would imply higher behavioral relevance.

TABLE B.8

Matrix for Concept High Productivity

	High Importance (HI)	Average-Low Importance (HI)	Total
Primary Orientation (PO)	561 (63.4%)	85 (9.6%)	646 (73.0%)
Not Primary Orientation (PO)	155 (17.5%)	84 (9.5%)	239 (27.0%)
Total	716 (80.9%)	169 (19.1%)	885 (100%)

Source: George W. England. *The Manager and His Values: An International Perspective*. (Cambridge, MA: Ballinger Publisher Company, 1975), 166.

APPENDIX C
RESULTS OF FACTOR ANALYSIS

RESULTS OF FACTOR ANALYSIS

A major reason for employing factor analysis is to create a new set of uncorrelated variables (underlying factors) from a larger number of correlated variables. The new set of uncorrelated variables aims at explaining the relationships that exist among the original variables. Also, it has the advantage of being a reduced data set with uncorrelated variables which may be used in further analysis such as regression analysis where the independent variables are assumed to be uncorrelated.

Consider a multivariate population with a mean μ and variance-covariance matrix Σ . Consider a k -variate response vector (x_1, x_2, \dots, x_k) from this population. A factor model assumes that there are m underlying factors ($m < k$), denoted by F_1, F_2, \dots, F_m , with the relation $x_i = M_i + \lambda_{i1}F_1 + \lambda_{i2}F_2 + \dots + \lambda_{im}F_m + e_i, i=1, 2, \dots, k$ where

1. The F_j 's are independent and identically distributed with mean 0 and variance 1 for $j = 1, 2, \dots, m$.
2. The e_i 's are independently distributed with mean 0 and variance σ^2 for $i=1, 2, \dots, k$.
3. The F_j 's and e_i 's have independent distributions for all combinations of i and j .

The coefficients λ_{ij} ($i = 1, 2, \dots, k, j = 1, 2, \dots, m$) are called factor loadings. A factor loading λ_{ij} (loading of the i th response variable on the j th factor) measures the contribution of the j th factor to the i th response variable. It is said that λ_{ij} is the loading of the i th response variable on the j th factor. When the factor analysis is performed on the correlation matrix rather than the variance-covariance matrix, a factor loading λ_{ij} measures the correlation between the standardized value of the i th response variable and the j th factor (Johnson, 1998). Several methods are available to solve for the loading λ_{ij} . A statistical computing package such as SAS is required for the solution. Perhaps the best method for obtaining a solution is the maximum likelihood which was used in this analysis.

There are several methods that can be used for choosing the appropriate number of factors in the model. One method is to use principle component analysis to determine how many principle components would be required and used that for the number of factors. A principle component is chosen if its eigenvalue is larger than one. This implies that for a principle component to be of importance, it must account for more variation than a single variable by itself. When the analysis is done on the correlation matrix, the variance of a single variable is 1. Another method is to assume a number of factors and then perform a maximum likelihood test to test the null hypothesis that the number of factors chosen is adequate against the alternative that the number is not adequate. The number of factors chosen is modified until the null hypothesis is accepted. A third method involves using a SCREE plot. This requires plotting the pairs $(1, \lambda_1)$, $(2, \lambda_2)$, ..., (k, λ_k) , where the λ 's are the eigenvalues of the variance-covariance matrix. The number of factors are chosen where the points on the graph levels off. All three methods, along with the percent variability explained by the number of factors chosen, are used in selecting the number of factors in the present analysis. In performing the factor analysis, Varimax Rotation method was used. This technique leads to variables that load significantly on no more than one factor.

All responses of responding managers across the 66 concepts of the PVQ is factor analyzed . In this regard, responses to each concept is classified as operative, intended, adopted, or weak values. According to England (1975), weights of 4, 3, 2, and 1 are assigned to operative, intended, adopted, and weak values respectively. Data analysis reveals six factors that are extracted from the original data. A factor score for each of the six factors is computed as the sum of the values for the variables associated with the factor. For a given manager, the score for the factor associated with variables blue collar workers, crafts men, and laborers , for example, is equal to the sum of their values for that manager. The related factor loadings associated with six factors together with their meanings are shown in Table C.1. As recommended in

Johnson (1998), a variable was chosen to be included in the factor if the factor loading was 0.5 or more.

TABLE C.1
Factor Analysis Results for CPA Firms' Managers
(N=212)

Factor	Variable Name	Factor Loading
Factor 1 (organization)	Owners	0.88149
	My subordinate	0.77263
	Stockholders	0.65448
	My boss	0.57368
	My co-workers	0.53768
Factor 2 (workers)	Blue collar workers	0.88385
	Crafts men	0.82334
	Laborers	0.68557
Factor 3 (organization strength)	Organizational growth	0.79402
	Organizational efficiency	0.72076
	Organizational stability	0.70406
Factor 4 (personal characteristics)	Obedience	0.75909
	Conservatism	0.66488
Factor 5 (personal communication)	Customers	0.85022
	Employees	0.72628
Factor 6 (regulations)	Government	0.84727
	Liberalism	0.59666

It is important to recognize that 33 other factors are also found to represent one variable each. This set of 39 factors constituted 93% of the variability in the original 66 value concepts. It is known that variables within a factor are correlated and variables across factors are uncorrelated. Thus, data based on factor scores constitutes a set of independent variables for future analysis.

APPENDIX D
ADDITIONAL STATISTICAL RESULTS FOR
PROPOSITIONS THREE, FOUR,
FIVE, AND SIX

**ADDITIONAL STATISTICAL RESULTS OF
PROPOSITIONS THREE,
FOUR, FIVE, AND SIX**

A stepwise logistic regression analysis is conducted related to job incidents 1 through job incident 5-B, job satisfaction, job commitment, and job success using all 66 variables of the PVQ concepts. Stepwise regression allows a regressor variable to enter a model if it has a significant relation to the dependent variable. At each step of entry into the model, the regressors that are in the model are reassessed and if a regressor becomes nonsignificant it is removed from the model.

Tables D.1-D.5-B present the stepwise logistic regression analysis results. Each table shows the value concepts that have significant effects on influencing managerial decisions and their corresponding odds ratios. An odds ratio larger (less) than one means that an increase in the corresponding x_i by one unit will increase (decrease) the probability of being in a category or group of categories. Results of the logistic analysis confirm the assertion that personal values can significantly influence managerial decisions.

A regression analysis with the stepwise option was utilized to determine the best subset of predictive variables that relate significantly to job satisfaction of a CPA firm's manager. The dependent variable here is the sum of the six job satisfaction items. The independent variables are the 66 variables that have significant influences on job satisfaction of a CPA firms' manager. These results support the fourth proposition, "there is a significant relationship between the personal value systems of CPA firms and job satisfaction."

The same statistical procedure used for job satisfaction was performed on the responses to organizational commitment items. The dependent variable here is the sum of the 9 organizational commitments items. The independent variables are the 66

value concepts. The stepwise regression procedure produced the outcomes that appear in Table D.7. It can be seen that twenty-six of the personal values have significant influences on organizational commitment. These results support the fifth proposition, “there is a significant relationship between the personal value systems of CPA firm’s and organizational commitment.”

To examine the relationship between the personal value systems of CPA firms’ managers and their managerial success, two steps are implemented. Managers are first allocated into three categories based on their z-scores for all age groups. The first category includes all managers in the top 15% of the z-scores. The second category includes managers between the bottom 15% and 70% of the z-scores. The third category includes managers in the bottom 15% of the z-scores. Second, a stepwise logistic analysis was performed by using the three categories as the dependent variables, and the 66 concepts of the PVQ as the independent variables. The model presented in Table D.8 generates five variables that have significant (odds values > 1; $p < .05$) influences on managerial success. These results support the sixth proposition, “there is a significant relationship between the personal value systems of a CPA firm’s manager and his or her managerial success.”

TABLE D.1

Maximum Likelihood Estimates for Job Incident 1

Variables	DF	Parameter Estimates	Standard Error	Wald Chi-square	PR> Chi-square	Odds Ratio
INTERCP1	1	-20.0459	2.3789	71.0094	0.0001	0.000
INTERCP2	1	-15.8119	2.1740	52.8976	0.0001	0.000
INTERCP3	1	-11.1544	1.9322	33.3259	0.0001	0.000
Employee welfare	1	0.5484	0.1821	9.0713	0.0026	1.731
Organizational efficiency	1	0.6174	0.1882	10.7600	0.0010	1.854
Profit maximization	1	0.4577	0.1491	9.4214	0.0021	1.580
Achievement	1	0.6978	0.1826	14.6033	0.0001	2.009
Money	1	-0.9132	0.1822	25.1353	0.0001	0.401
Power	1	1.1635	0.2316	25.2304	0.0001	3.201
Prestige	1	-0.7483	0.1815	16.9957	0.0001	0.473
Security	1	1.0870	0.1838	34.9708	0.0001	2.965
Compassion	1	-0.3853	0.1547	6.2054	0.0127	0.680
Cooperation	1	0.5498	0.1627	11.4175	0.0007	1.733
Loyalty	1	0.8836	0.1791	24.3318	0.0001	2.419
Obedience	1	-0.4166	0.1751	5.6623	0.0173	0.659
Prejudice	1	0.6767	0.1934	12.2381	0.0005	0.508
Conservatism	1	1.0819	0.2025	28.3860	0.0001	0.339
Emotions	1	0.6690	0.2249	8.8456	0.0029	1.952
Force	1	1.5113	0.2837	28.3860	0.0001	4.533
Rational	1	0.7729	0.1592	23.5617	0.0001	2.166
Religion	1	0.4907	0.1727	8.0717	0.0045	1.633
Risk	1	-0.8794	0.1794	24.0225	0.0001	0.415
Employees	1	0.6195	0.2164	8.1984	0.0042	1.858
My company	1	0.6438	0.2142	9.0307	0.0027	1.904
Stockholders	1	0.7213	0.1387	18.2840	0.0001	2.057
Technical staff	1	-0.9898	0.1925	26.4488	0.0001	0.372

TABLE D.2

Maximum Likelihood Estimates for Job Incident 2

Variables	DF	Parameter Estimate	Standard Error	Wald Chi-square	Pr> Chi-square	Odds Ratio
INTERCEPT1	1	-6.0049	0.9133	43.2280	0.0001	0.002
INTERCEPT2	1	-4.7695	0.8829	29.1821	0.0001	0.008
INTERCEPT3	1	-1.3720	0.8161	2.8260	0.0928	0.254
INTERCEPT4	1	1.6427	0.9235	3.1636	0.0753	5.169
Organizational efficiency	1	0.5191	0.1398	13.7979	0.0002	1.681
Influence	1	-0.7015	0.1457	23.1905	0.0001	0.496
Leisure	1	0.2626	0.1190	4.8710	0.0273	1.300
Ambition	1	-0.3576	0.1194	8.9653	0.0028	0.699
Prejudice	1	0.5368	0.1448	13.7337	0.0002	1.710
Caution	1	0.3737	0.1337	7.8135	0.0052	1.453
Emotions	1	0.5125	0.1880	7.4321	0.0064	1.669
Labor unions	1	-0.8746	0.2020	18.7429	0.0001	0.417
Owners	1	0.4268	0.1393	9.3854	0.0022	1.532
White-collar employees	1	0.5194	0.1311	15.6879	0.0001	1.681

TABLE D.3

Maximum Likelihood Estimates for Job Incident 3

Variables	DF	Parameter Estimate	Standard Error	Wald Chi-square	Pr> Chi-square	Odds Ratio
INTERCEPT	1	31.5973	8.2572	14.6431	0.0001	999.000
High productivity	1	-2.3791	0.7698	9.5506	0.0020	0.093
Social welfare	1	-4.9385	1.3543	13.2968	0.0003	0.007
Autonomy	1	-5.5364	1.4871	13.8596	0.0002	0.004
Creativity	1	5.1336	1.2832	16.0048	0.0001	169.632
Individuality	1	7.0278	1.8056	15.1491	0.0001	999.000
Job satisfaction	1	-2.9292	0.8327	12.3738	0.0004	0.053
Money	1	-5.9772	1.5481	14.9075	0.0001	0.003
Power	1	2.4972	0.7281	11.7618	0.0006	12.148
Prestige	1	-2.4931	0.7313	11.6216	0.0007	0.083
Security	1	3.6000	0.9866	13.3148	0.0003	36.598
Ambition	1	-1.6744	0.4776	12.2897	0.0005	0.187
Compassion	1	-3.4194	0.9539	12.8498	0.0003	0.033
Conformity	1	-1.8007	0.5262	11.7091	0.0006	0.165
Loyalty	1	-2.3238	0.6569	12.5144	0.0004	0.098
Authority	1	2.6997	0.6949	15.0937	0.0001	14.875
Competition	1	5.5867	1.3595	16.8873	0.0001	266.860
Emotions	1	-6.0464	1.4608	17.1315	0.0001	0.002
Force	1	2.8137	1.0554	7.1071	0.0077	16.671
Government	1	-1.9099	0.6720	8.0767	0.0045	0.148
Me	1	-4.5652	1.1467	15.8483	0.0001	0.010
Owners	1	3.2295	0.9481	11.6042	0.0007	25.268

TABLE D.4

Maximum Likelihood Estimates for Job Incident 4

Variables	DF	Parameter Estimate	Standard Error	Wald Chi-square	Pr> Chi-square	Odds Ratio
INTERCP1	1	-9.7309	1.4388	45.7428	0.0001	0.000
INTERCP2	1	-7.3118	1.3566	29.0514	0.0001	0.001
INTERCP3	1	-6.1038	1.3200	21.3877	0.0001	0.002
INTERCP4	1	-2.4169	1.2316	3.8511	0.0497	11.211
Leisure	1	-0.8447	0.1807	21.8450	0.0001	0.430
Power	1	0.5430	0.1903	8.1441	0.0043	1.721
Security	1	0.9901	0.1879	27.7646	0.0001	2.692
Honor	1	1.1058	0.2292	23.2842	0.0001	3.022
Prejudice	1	1.1233	0.1907	34.6966	0.0001	3.075
Authority	1	0.7233	0.1726	17.5536	0.0001	2.061
Change	1	-0.4894	0.1578	9.6147	0.0019	0.613
Force	1	1.0611	0.2635	16.2150	0.0001	0.890
Risk	1	-0.9408	0.1995	22.2378	0.0001	0.390
Craftsmen	1	-1.1869	0.1724	35.8971	0.0001	0.305
Government	1	0.4547	0.1981	6.9530	0.0084	1.576
My subordinate	1	-0.6363	0.2091	9.2601	0.0023	0.529
White-collar employees	1	0.5640	0.1759	10.2792	0.0013	1.758

TABLE D.5-A*

Maximum Likelihood Estimates for Job Incident 5-A

Variables	DF	Parameter Estimate	Standard Error	Wald Chi-square	Pr> Chi-square	Odds Ratio
INTERCP1	1	-721.9	4.392E11	0.0000	1.0000	0.000
INTERCP2	1	-682.5	180510	0.0000	0.9970	0.000
INTERCP3	1	-630.2	510464	0.0000	0.9990	0.000
High productivity	1	-30.8911	146975	0.0000	0.9998	0.000
Organizational growth	1	17.2777	36766.0	0.0000	0.9996	999.000
Autonomy	1	14.8253	495220	0.0000	1.0000	999.000
Individuality	1	-33.6023	357974	0.0000	0.9999	0.000
Power	1	50.3305	230483	0.0000	0.9998	999.000
Ability	1	11.6194	204323	0.0000	1.0000	999.000
Aggressiveness	1	-20.6331	109645	0.0000	0.9998	0.000
Tolerance	1	27.9707	189428	0.0000	0.9999	999.000
Trust	1	31.2622	25128.4	0.0000	0.9990	999.000
Authority	1	-12.595	13133.2	0.0000	0.9992	0.000
Competition	1	13.3896	36484.7	0.0000	0.9997	999.000
Conflict	1	-18.068	342846	0.0000	1.0000	0.000
Conservatism	0	15.0089	.	.	.	999.000
Liberalism	0	26.0785	.	.	.	999.000
Customers	0	-19.800	.	.	.	0.000
Laborers	0	11.9187	.	.	.	999.000
Managers	0	-13.242	.	.	.	0.000
My co-workers	0	125.0	.	.	.	999.000
My subordinate	0	-99.900	.	.	.	0.000

* The maximum likelihood procedure did not converge. As a result, the estimates in the table and the odds ratios are meaningless in this situation.

TABLE D. 5-B

Maximum Likelihood Estimates for Job Incident 5-B

Variables	DF	Parameter Estimate	Standard Error	Wald Chi-square	Pr> Chi-square	Odds Ratio
INTERCP1	1	-9.3720	1.7764	27.8358	0.0001	0.000
INTERCP2	1	-6.5637	1.6891	15.1010	0.0001	0.001
INTERCP3	1	-5.1029	1.6609	9.4400	0.0021	0.006
High productivity	1	-0.8679	0.2014	18.5634	0.0001	0.420
Profit maximization	1	0.9999	0.1974	25.6493	0.0001	2.718
Autonomy	1	0.4571	0.1767	6.6928	0.0097	1.580
Dignity	1	0.4832	0.1745	7.6717	0.0056	1.621
Money	1	0.3797	0.1650	5.2960	0.0214	1.462
Security	1	0.7358	0.1625	20.4969	0.0001	2.087
Ambition	1	0.4937	0.1621	9.2754	0.0023	1.638
Conformity	1	-0.8056	0.2036	15.6611	0.0001	0.447
Cooperation	1	-0.3878	0.1684	5.3026	0.0213	0.679
Loyalty	1	1.3259	0.2383	30.9700	0.0001	3.766
Prejudice	1	0.4829	0.1958	6.0844	0.0136	1.621
Tolerance	1	0.3846	0.1638	5.5122	0.0189	1.469
Authority	1	0.9532	0.1777	28.7693	0.0001	2.594
Conflict	1	-0.8564	0.2180	15.4370	0.0001	0.425
Customers	1	-0.9070	0.2053	19.5201	0.0001	0.404
Laborers	1	0.5021	0.1735	8.3786	0.0038	1.652
Me	1	0.6015	0.1912	9.8903	0.0017	1.825
My Company	1	-0.7611	0.2512	9.1692	0.0025	0.467
Owners	1	0.9533	0.2281	17.4674	0.0001	2.594
Stockholders	1	-0.9649	0.1953	24.4002	0.0001	0.381
White-collar employees	1	-0.7636	0.1936	15.5505	0.0001	0.466

TABLE D.6

Regression Model for Job Satisfaction

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	14	1836.6593	131.1899	13.13	0.0001
ERROR	197	1968.2273	9.9910		
TOTAL	211	3804.8867			

Variable	Parameter Estimate	Standard Error	Sum of Squares	F	Prob>F
INTERCEP	10.4142	1.9906	273.4403	27.37	0.0001
High productivity	0.6352	0.2535	62.7038	6.28	0.0130
Organizational efficiency	0.8679	0.2282	144.4757	14.46	0.0002
Achievement	1.1330	0.2369	228.3808	22.86	0.0001
Autonomy	0.4783	0.1980	58.2853	5.83	0.0166
Success	-1.0144	0.2084	236.6296	23.68	0.0001
Prejudice	-0.9377	0.2450	146.2622	14.64	0.0002
Competition	-1.2673	0.2069	374.7453	37.51	0.0001
Emotions	0.8677	0.3044	81.1604	8.12	0.0048
Force	2.0221	0.3536	326.6863	32.70	0.0001
Liberalism	-1.0704	0.2735	152.9688	15.31	0.0001
Employees	1.5683	0.2609	360.8399	36.12	0.0001
My company	1.3714	0.2553	288.2348	28.85	0.0001
Stockholders	0.5041	0.2064	59.5946	5.96	0.0155
Technical staff	-1.2314	0.2204	311.8782	31.22	0.0001

All variables left in the model are significant at the 0.05 level.

TABLE D.7

Regression Model for Job Commitment

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	26	7827.0022	301.0385	13.87	0.0001
ERROR	185	4015.5779	21.7058		
TOTAL	211	11842.5801			

Variable	Parameter Estimate	Standard Error	Sum of Squares	F	Prob>F
INTERCEP	31.8588	3.2333	2107.2590	97.08	0.0001
Employee welfare High productivity	1.0565	0.4125	142.3989	6.56	0.0112
Organizational efficiency	2.4128	0.4001	789.0860	36.35	0.0001
Creativity	1.7570	0.3514	542.3734	24.99	0.0001
Leisure	0.6855	0.3048	109.7809	5.06	0.0257
Security	-0.6304	0.3097	89.9421	4.14	0.0432
Success	-2.073	0.3535	746.4565	34.39	0.0001
Conformity	-1.8224	0.3350	642.3674	29.59	0.0001
Honor	0.9565	0.3049	213.6353	9.84	0.0020
Prejudice	2.306	0.4754	535.1356	24.65	0.0001
Competition	-3.3088	0.3883	1575.9704	72.61	0.0001
Conflict	-1.7203	0.3267	601.8782	27.73	0.0001
Equality	1.1297	0.3763	195.5550	9.01	0.0031
Force	0.92389	0.3487	152.3070	7.02	0.0088
Religion	1.9478	0.5385	283.9224	13.08	0.0004
Craftsmen	-1.5049	0.3602	378.8676	17.45	0.0001
Employees	1.2122	0.3622	243.0849	11.20	0.0010
Government	1.01764	0.4206	127.0443	5.85	0.0165
Managers	-1.2837	0.3372	314.5044	14.49	0.0002
My boss	-0.8483	0.3519	124.7626	5.75	0.0175
My company	-1.0852	0.3424	217.9949	10.04	0.0018
My co-workers	3.1565	0.4434	1099.7598	50.67	0.0001
My subordinate	2.1783	0.5907	295.2810	13.60	0.0003
Stockholders	-1.9420	0.5307	290.6382	13.39	0.0003
Technical staff	1.2680	0.3523	281.0912	12.95	0.0004
White-collar employees	-2.3358	0.4156	685.3760	31.58	0.0001
	1.2816	0.3718	257.7956	11.88	0.0007

All variables are left in the model are significant at the 0.05 level.

TABLE D.8

Maximum Likelihood Estimates for Success

Variables	DF	Parameter Estimate	Standard Error	Wald Chi-square	Pr> Chi-square	Odds Ratio
INTERCP1	1	-4.1666	1.1807	12.4523	0.0004	0.016
INTERCP2	1	1.2027	1.1334	1.1260	0.2886	3.329
Industry leadership	1	0.4614	0.1574	8.5915	0.0034	1.586
Organizational growth	1	-0.5593	0.1529	13.3855	0.0003	0.572
Job satisfaction	1	-0.4734	0.1634	8.3958	0.0038	0.623
Power	1	-0.4322	0.1879	5.2917	0.0214	0.649
Ambition	1	1.0802	0.1809	35.6707	0.0001	2.945
Skill	1	-0.5653	0.1703	11.0159	0.0009	0.568
Authority	1	-0.6643	0.1534	17.6458	0.0001	0.525
Government	1	0.4008	0.1451	7.6332	0.0057	1.493
Me	1	0.4864	0.1836	7.0155	0.0081	1.626
Owners	1	0.6151	0.1628	14.2734	0.0002	1.850

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